

NUCLEAR REGULATORY COMMISSION ISSUANCES

OPINIONS AND DECISIONS OF THE NUCLEAR REGULATORY COMMISSION WITH SELECTED ORDERS

April 1, 2015 – June 30, 2015

Volume 81
Book II of II
Pages 481 - 893



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

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PREFACE

This is Book II of the eighty-first volume of issuances (481–893) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from April 1, 2015, to June 30, 2015. Book I covers the period from January 1, 2015, to March 31, 2015.

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).

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Issuances are referred to as follows: Commission (CLI), Atomic Safety and Licensing Boards (LBP), Administrative Law Judges (ALJ), Directors' Decisions (DD), and Decisions on Petitions for Rulemaking (DPRM).

The summaries and headnotes preceding the opinions reported herein are not to be deemed a part of those opinions or to have any independent legal significance.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
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William C. Ostendorff
Jeff Baran

In the Matter of

**Docket Nos. 52-012-COL
52-013-COL**

**NUCLEAR INNOVATION NORTH
AMERICA LLC
(South Texas Project, Units 3
and 4)**

April 14, 2015

FOREIGN OWNERSHIP, CONTROL, OR DOMINATION

The prohibition on foreign ownership, control, and domination is primarily concerned with safeguarding the national defense and security.

FOREIGN OWNERSHIP, CONTROL, OR DOMINATION

While nuclear safety and security are not the only considerations in determining whether an applicant is under foreign ownership, control, or domination, they are the most significant considerations.

FOREIGN OWNERSHIP, CONTROL, OR DOMINATION

Board did not err in factual finding that applicant was not under foreign ownership, control, or domination.

FOREIGN OWNERSHIP, CONTROL, OR DOMINATION

Where the record did not show any means for foreign minority owner of applicant to control applicant's decisions, nor any attempts by the foreign owner to do so, the Board could permissibly conclude that the foreign minority owner did not "control" the applicant.

MEMORANDUM AND ORDER

The Sustainable Energy and Economic Development Coalition, the South Texas Association for Responsible Energy, Public Citizen, and Susan Dancer (together, Intervenor) seek review of the Atomic Safety and Licensing Board's third partial initial decision in this combined license proceeding.¹ The Board resolved Intervenor's Contention FC-1 in favor of the applicant, Nuclear Innovation North America LLC (NINA) and held that NINA is not subject to impermissible foreign ownership, control, or domination. We find that Intervenor has not met the standards for review, and we accordingly deny review.

I. BACKGROUND

A. Prohibitions on Foreign Ownership, Control, or Domination

Section 103d of the Atomic Energy Act of 1954, as amended (AEA), prohibits the NRC from issuing a utilization or production facility license to any "alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government."² The NRC regulation implementing this provision, 10 C.F.R. § 50.38, provides:

Any person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity which the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license.³

The Staff has also developed a Standard Review Plan on foreign ownership and

¹ LBP-14-3, 79 NRC 267 (2014).

² Atomic Energy Act of 1954, § 103d, 42 U.S.C. § 2133(d). A parallel provision, section 104d, imposes the same restriction on licenses for medical therapy and research and development facilities. *Id.* § 2134(d).

³ 10 C.F.R. § 50.38.

control issues, which the Commission approved in 1999, for use in its review of reactor license applications and license transfer applications.⁴ The Standard Review Plan provides that “the foreign control determination is to be made with an orientation toward the common defense and security.”⁵ It also states that while “exertion of control over the ‘safety and security aspects’ of reactor operations . . . can be an important factor in the foreign ownership or control analysis . . . it may not be the only important factor.”⁶

Intervenors claim that a foreign minority owner of NINA has effectively taken control of the project because it has loaned NINA the funds necessary to complete the final stages of licensing (but not construction) for the proposed South Texas Project, Units 3 and 4. In LBP-14-3, the Board concluded that NINA had demonstrated that these loans do not give the minority partner, Toshiba America Nuclear Energy Corporation (TANE), improper control over NINA.⁷

B. License Application Revisions and Contention FC-1

Intervenors first proposed Contention FC-1 in 2011.⁸ The third partial initial decision in this adjudication, LBP-14-3, resolved Contention FC-1, its last active contention.⁹ Because the Board’s decision fully describes the complicated cir-

⁴ Ex. NRC000106, “Final Standard Review Plan on Foreign Ownership, Control, or Domination,” 64 Fed. Reg. 52,355 (Sept. 28, 1999) (Standard Review Plan). In the Staff Requirements Memorandum (SRM) on SECY-12-0168, the Commission directed the Staff to “provide a fresh assessment on issues relating to foreign ownership including recommendations on any proposed modifications to guidance or practice on foreign ownership, domination, or control that may be warranted.” Staff Requirements — SECY-12-0168 — Calvert Cliffs 3 Nuclear Project, LLC & UniStar Nuclear Operating Services, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), Docket No. 52-016-COL, Petition for Review of LBP-12-19 (Mar. 11, 2013) (ADAMS Accession No. ML13070A150) at 1. The Commission is currently considering the Staff’s fresh assessment, which is found in SECY-14-0089. As the hearing below was conducted under the existing Standard Review Plan and our decision is limited to the specific facts of this case, we are not committing ourselves to any outcome with respect to the Staff’s fresh assessment.

⁵ 64 Fed. Reg. at 52,357.

⁶ *Id.*

⁷ LBP-14-3, 79 NRC at 272.

⁸ See Intervenors’ Motion for Leave to File a New Contention Based on Prohibitions Against Foreign Control (May 16, 2011) (Motion for New Contention).

⁹ Two other contentions were resolved in favor of the Staff and NINA following evidentiary hearings. See LBP-11-38, 74 NRC 817 (2011) (First Partial Initial Decision); LBP-12-5, 75 NRC 227 (2012) (Second Partial Initial Decision). A proposed “waste confidence” contention was dismissed pursuant to our direction in CLI-14-8, 80 NRC 71 (2014). See LBP-14-14, 80 NRC 144 (2014). Subsequently, the Sustainable Energy and Economic Development Coalition joined in two petitions, filed in multiple dockets, relating to the continued storage of spent fuel. See Petition to Suspend
(Continued)

cumstances leading to the evidentiary hearing on Contention FC-1, we need only briefly summarize them here.¹⁰

In 2007, NINA's predecessor, South Texas Project Nuclear Operating Company (STPNOC), applied for a combined license to build and operate South Texas Project Units 3 and 4 on the Matagorda County, Texas site where South Texas Project Units 1 and 2 are currently operating.¹¹ NINA replaced STPNOC as the lead applicant for the project in January 2011.¹² The license application now contemplates that NINA will construct and, indirectly through its subsidiaries, own a 92.375% interest in each of the two proposed units, while STPNOC will be the operator.¹³ NRG Energy, Inc. (NRG Energy), a U.S. corporation, owns 90% of NINA through its wholly owned subsidiary, Texas Genco Holdings, Inc., another U.S. corporation.¹⁴ The remaining 10% of NINA is owned, ultimately, by the Japanese Toshiba Corporation (Toshiba), through its subsidiary TANE, a U.S. corporation.¹⁵

After the accident at Fukushima Dai-ichi in March 2011, NRG Energy announced that it would no longer finance NINA's efforts to license and build South Texas Project Units 3 and 4 and that it would write down its investment

Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings (Sept. 29, 2014); Petition to Supplement Reactor-Specific Environmental Impact Statements to Incorporate by Reference the Generic Environmental Impact Statement for Continued Spent Fuel Storage (Jan. 28, 2015); *see also* Petitioners' Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Licensing Proceeding at South Texas Project Units 3 & 4 Nuclear Power Plant (Sept. 29, 2014); Motion to Reopen the Record for South Texas Project 3 & 4 Nuclear Power Plant (Sept. 29, 2014). We recently addressed the "Waste Confidence Safety Findings" filings. *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221 (2015). The "Petition to Supplement the Reactor-Specific Environmental Impact Statements" is pending before us and will be resolved separately.

¹⁰ *See* LBP-14-3, 79 NRC at 272-76.

¹¹ "STPNOC is a Texas nonprofit corporation and is controlled by a board of four directors. Three of the four directors are appointed by the City of Austin, CPS Energy, and NRG South Texas LP, an indirect wholly owned subsidiary of NRG Energy, Inc." *See* Ex. NRCR00101, Prefiled Direct Testimony of Anneliese Simmons on Contention FC-1 (July 1, 2013) at 14 (Staff Direct Testimony).

¹² *See* Order (Revising Case Caption) (Feb. 7, 2011) (unpublished). STPNOC remains an applicant.

¹³ NINA is the sole parent company of NINA Investments Holdings LLC, which is in turn the parent company of NINA Texas 3, LLC and NINA Texas 4, LLC. NINA Texas 3, LLC will own 92.375% of South Texas Project Unit 3, and NINA Texas 4, LLC will own 92.375% of South Texas Project Unit 4. The remaining 7.625% of each reactor is to be owned by CPS Energy, a Texas municipal utility, which has no stake in NINA itself. *See* Ex. STP000036, Direct Testimony of Applicant Witness Mark A. McBurnett Regarding Contention FC-1 (July 1, 2013), at 15-17 (McBurnett Direct Testimony).

¹⁴ *Id.* at 17.

¹⁵ Toshiba is the parent of the U.S. corporation, Toshiba America, Inc., which is the parent of TANE. The Board adopted the phrase "Toshiba, through TANE" to clarify that the actual issue before it was whether the foreign parent, Toshiba, is exerting control over NINA through its U.S. subsidiary, TANE. *See* LBP-14-3, 79 NRC at 271 n.3. We adopt the Board's nomenclature here.

in NINA.¹⁶ According to an NRG Energy press release, NINA would focus its efforts on obtaining the combined license from the NRC and a loan guarantee from the U.S. Department of Energy for construction costs.¹⁷ TANE would fund ongoing costs to continue the licensing process.¹⁸ Since 2011, NINA's sole source of funds has been a \$20 million capital contribution from NRG Energy and loans from TANE.¹⁹

In response to NRG Energy's announcement, Intervenor proposed a new contention in which they argued that the application violated AEA § 103d.²⁰ Intervenor argued that Toshiba, through TANE, controlled NINA because it was, at that point, the only "contributing" member of the joint venture and the combined license application would allow TANE to increase its ownership interests in proportion to its financial contributions.²¹ The NRC Staff did not oppose admission of the contention, and it requested information on the issue of foreign control from the applicant.²² The Board admitted the contention as follows:

Contention FC-1: Applicant, [NINA], has not demonstrated that its STP Units 3 and 4 joint venture with Toshiba, is not owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government contrary to 42 U.S.C. § 2133(d) and 10 C.F.R. § 50.38.²³

Between 2011 and 2013, NINA attempted to resolve the Staff's concerns about potential foreign control. In response to several Staff requests for additional information, NINA adopted a Negation Action Plan designed to limit TANE's control over the South Texas Project 3 and 4 joint venture.²⁴ In December 2011,

¹⁶ Ex. STP000078, NRG Press Release, "NRG Energy, Inc. Provides Greater Clarity on the South Texas Nuclear Development Project (STP 3&4)" (Apr. 19, 2011).

¹⁷ *Id.*

¹⁸ *Id.*

¹⁹ Ex. STP000036, McBurnett Direct Testimony, at 10-11.

²⁰ See Motion for New Contention.

²¹ *Id.* at 5-6.

²² NRC Staff's Answer to Intervenor's Motion for Leave to File a New Contention Based on Prohibitions Against Foreign Control (June 10, 2011); NRC Staff's Brief on Applicant's Filing Related to the Foreign Control Contention (July 29, 2011); see also E-mail from Joseph, Stacy, Project Manager, Office of New Reactors, NRC, to Richard Sheide, STPNOC (July 19, 2011), attaching Joseph, Stacy, Letter to Scott Head, Manager, Regulatory Affairs, Nuclear Innovation North America LLC (July 13, 2011), attaching in turn Request for Additional Information No. 5856 Rev. 5 (ADAMS Accession No. ML11203A211).

²³ LBP-11-25, 74 NRC 380 (2011).

²⁴ The Standard Review Plan provides that a Negation Action Plan may effectively negate control. See Ex. NRC000106, Standard Review Plan § 4.4, 64 Fed. Reg. at 52,359. NINA's first proposed
(Continued)

the Staff notified NINA that its first Negation Action Plan was insufficient to negate foreign control.²⁵ NINA revised the Negation Action Plan several more times.²⁶ In its ninth revision to its application, NINA included commitments in its Negation Action Plan to ensure at least 50% of the construction funding would be U.S. sourced.²⁷ NINA also revised its application to ensure that TANE's ownership share of NINA would not exceed its current 10% without the NRC's prior approval.²⁸

None of NINA's proposed measures, however, resolved the Staff's concerns. In April 2013, the Staff issued a second formal determination, informing NINA that the ninth combined license application revision was insufficient to negate TANE's control and domination of NINA.²⁹ The Staff's April 2013 determination concluded that Toshiba, through TANE, could exert significant control over NINA because it was at that time the project's sole source of funding.³⁰ The Staff also found that the proposed Negation Action Plan was not sufficient to neutralize Toshiba's control.³¹ The Staff joined with Intervenor at the evidentiary hearing in the position that foreign control bars NINA from obtaining a license.

Negation Action Plan is in appendix 1D to its application. *See* Ex. STP000045, "South Texas Project Units 3 & 4 Combined License Application, Rev. 6" (Aug. 30, 2011) (COL Application Rev. 6).

²⁵ *See* Ex. NRC000118, Matthews, David, Director, Division of New Reactor Licensing, NRC, Letter to Mark McBurnett, Vice President, Regulatory Affairs, NINA (Dec. 13, 2011), at 1.

²⁶ Relevant portions of NINA's application revisions including the proposed Negation Action Plans (as appendix 1D) are in the record as: Ex. STP000045, COL Application Rev. 6; Ex. STP000048, "South Texas Project Units 2 & 3 Combined License Application, Rev. 7" (Feb. 1, 2012); Ex. STP000052, "South Texas Project Units 2 & 3 Combined License Application, Rev. 8" (Sept. 17, 2012) (COL Application Rev. 8); Ex. STP000054, "South Texas Project Units 2 & 3 Combined License Application, Rev. 9" (Apr. 17, 2013) (COL Application Rev. 9); *see also* Ex. STP000053, Head, Scott, Regulatory Affairs Manager, STP Units 3 & 4, letter to NRC, "Proposed Update to [COL Application] Part 1 Information" (Jan. 31, 2013).

²⁷ *See* Ex. STP000054, COL Application Rev. 9, at 1D-16.

²⁸ *See* Ex. STP000052, COL Application Rev. 8, § 1.2, at 1.0-6; *see also* Ex. STP000049, Head, Scott, Manager Regulatory Affairs, STP Units 3 & 4, Letter to NRC, Supplemental Responses to RAI 01-22 and 01-24, Attachment at 8 (July 1, 2013).

²⁹ Ex. NRC000103, Matthews, David, Director, Division of New Reactor Licensing, NRC, Letter to Mark McBurnett, Vice President, Regulatory Affairs, NINA (Apr. 29, 2013), at 1 (Staff Second Determination Letter); Ex. NRC000105, Evaluation by the Office of Nuclear Reactor Regulation on Behalf of the Office of New Reactors, South Texas Project, Units 3 and 4, Docket Nos. 52-012 and 52-013, at 24 (July 1, 2013) (Staff 2013 Evaluation) (enclosure to Ex. NRC000103). The Staff continued its review of other portions of the combined license application, although it indicated that a license would not be issued until applicants satisfy the requirements of AEA § 103d and 10 C.F.R. § 50.38. *Id.* at 2.

³⁰ *See* Ex. NRC000105, Staff 2013 Evaluation, at 24.

³¹ *Id.*

C. The Evidentiary Hearing

The Board held an evidentiary hearing on Contention FC-1 in January 2014. Financial Analyst Anneliese Simmons testified for the NRC Staff in prehearing testimony and at the hearing. According to Ms. Simmons's prefiled written testimony, NRG Energy notified the Securities and Exchange Commission that it was withdrawing further financial support of the project and that it no longer had "controlling financial interest" in NINA as of March 31, 2011.³² Ms. Simmons also testified that TANE has the power to approve a budget for remaining loans to NINA.³³ The Staff maintained that because all of the current funding for the project is coming from TANE, TANE's actual control over the project exceeds its 10% ownership interest.³⁴

Intervenors presented the testimony of an economist, Michael Sheehan.³⁵ In summary, Dr. Sheehan testified that Toshiba, through TANE, controls NINA because it is the project's "banker," it has the right to nominate one of two NINA board members, and it has the right to nominate NINA's Chief Financial Officer.³⁶

NINA argued that TANE has no power to control NINA and only has limited rights as a minority owner and as a lender. NINA's CEO, Mark McBurnett, explained that NINA is governed by a board of managers, with NRG Energy and TANE each appointing one manager.³⁷ The votes are apportioned between these two managers in accordance with the appointer's ownership share.³⁸ Therefore, the NRG Energy-appointed manager (who must be a U.S. citizen) controls all decisions requiring a simple majority or supermajority vote.³⁹ The TANE-

³² Ex. NRCR00101, Staff Direct Testimony at 27 (citing Ex. NRC000129, NRG Energy, Inc., Form 10-Q, Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 (May 5, 2011), at 12-13).

³³ *Id.* at 35.

³⁴ *Id.* at 41; *see also* Ex. NRC000103, Staff Second Determination Letter, at 2 ("The staff has found that, although TANE owns about 10 percent of NINA, its overwhelming financial contributions give it significantly more power than is reflected by this ownership stake.").

³⁵ *See* Ex. INT000056, Prefiled Direct Testimony of Michael F. Sheehan, Ph.D. on Behalf of Intervenors Sustainable Energy and Economic Development Coalition (SEED), Susan Dancer, the South Texas Association for Responsible Energy, Public Citizen, Daniel A. Hickl and Bill Wagner Regarding Contention FC-1 (July 1, 2013) (Sheehan Direct Testimony); Ex. INT000065, *Prefiled Rebuttal Testimony of Michael F. Sheehan, Ph.D. on Behalf of Intervenors Sustainable Energy and Economic Development Coalition (SEED), Susan Dancer, the South Texas Association for Responsible Energy, Public Citizen, Daniel A. Hickl and Bill Wagner Regarding Contention FC-1* (July 22, 2013).

³⁶ Ex. INT000056, Sheehan Direct Testimony, at 11, 13.

³⁷ *See* Ex. STP000036, McBurnett Direct Testimony, at 30.

³⁸ *Id.*; *see also* Ex. STP000054, COL Application Rev. 5, § 1D.2.1, 1D-5 to 1D-6 (the board also includes two independent managers (or directors), who must be U.S. citizens and have no voting rights).

³⁹ Ex. STP000036, McBurnett Direct Testimony, at 30.

appointed manager's agreement is needed only in certain matters that require the NINA board's unanimous consent.⁴⁰ Mr. McBurnett further testified that he personally controls all licensing decisions on behalf of NINA and that TANE has no additional authority over licensing-related decisions by virtue of the loans.⁴¹ Jamey Seely, Senior Vice President of NRG Energy, testified that NRG Energy continues to exercise its majority voting authority over NINA and continues to support development of South Texas Project Units 3 and 4.⁴²

NINA argued that TANE's financial contribution (both equity and loans) is only a small part of the project's overall costs.⁴³ Mr. McBurnett testified that most of the money invested in the project so far has come from U.S. sources.⁴⁴ While TANE has a contractual right to approve a budget for the loans it provides, Mr. McBurnett testified that this right is "similar to what would be typical for any lender."⁴⁵ He also testified that TANE's loans will be extinguished prior to the start of construction as a condition of project finance.⁴⁶

In addition, NINA argued that its corporate governance structure and the Negation Action Plan prevent Toshiba, through TANE, from influencing any decision relating to nuclear safety, security, or reliability. As summarized in NINA's testimony, the Negation Action Plan contains the following provisions to negate potential foreign control with respect to matters involving nuclear safety, security, or reliability of South Texas Project Units 3 and 4:

- The Chairman of the Board, and anyone acting for the Chairman, must be a U.S. citizen.
- The Chief Executive Officer (CEO), anyone acting for the CEO, and the Chief Nuclear Officer of NINA must be U.S. citizens.
- The CEO and Chief Nuclear Officer each must execute a certificate that acknowledges a special duty to the U.S. Government to protect against and negate the potential for any foreign ownership, control, or domination of NINA.
- NINA will establish a Security Committee.

⁴⁰ *Id.* Decisions requiring unanimous consent include changing the type of business venture, declaring bankruptcy, and extending an interest in NINA to a Toshiba competitor. *Id.* at 31-32.

⁴¹ *Id.* at 39.

⁴² Ex. STP000038, *Direct Testimony of Applicant Witness Jamey S. Seely Regarding Contention FC-1*, at 7, 19 (July 1, 2013) (Seely Direct Testimony); *see also id.* at 14 (NRG Energy continues to participate in the project due to a potential return on investment).

⁴³ *See* Ex. STP000036, McBurnett Direct Testimony, at 9-10. According to Mr. McBurnett's testimony, TANE's financial contribution to the project is only 25%, considering both loans and equity. *Id.* at 11; *see also* Tr. at 2496.

⁴⁴ Ex. STP000036, McBurnett Direct Testimony, at 9.

⁴⁵ *Id.* at 32.

⁴⁶ *Id.* at 10-11.

- NINA will establish a Nuclear Advisory Committee.
- The Chief Nuclear Officer exercises U.S. control and oversight of nuclear safety issues through control of the NINA Quality Assurance Program and Safeguards Information (“SGI”) Program.
- The Negation Action Plan provides that any person involved in the licensing, design, construction, or operation of South Texas Project Units 3 and 4 may raise safety concerns or any potential foreign ownership, control, or domination issues.
- The Negation Action Plan prescribes actions by NINA to ensure U.S. control if any concern related to foreign ownership, control, or domination were to arise.
- Prior to implementation of the Security Committee and Nuclear Advisory Committee, the CEO has ultimate authority on decisions affecting nuclear safety, security, or reliability.⁴⁷

NINA argued that neither the Staff nor Intervenors had identified any instance where Toshiba or TANE had influenced or attempted to influence a decision relating to nuclear safety or security and that they had offered only “unsupported speculation” that such influence was possible.⁴⁸

D. The Board’s Decision

The Board in LBP-14-3 found in favor of NINA. In so doing, the Board made several foundational legal rulings governing its analysis and factual conclusions. The Board found that the Standard Review Plan directs that, where the indirect foreign ownership interest is less than 100%, it is appropriate for the Staff’s analysis to focus on potential impacts to nuclear safety, security, or reliability.⁴⁹ The Board relied on an early Atomic Energy Commission (AEC) decision in the *SEFOR* matter, where the AEC found that the foreign ownership, control, or domination analysis “should be given an orientation toward safeguarding the national defense and security.”⁵⁰ The AEC further held that the phrase “owned,

⁴⁷ Ex. STP000036, McBurnett Direct Testimony, at 43-44 (citing Ex. STP000054, COL Application Rev. 9, App. 1D (Negation Action Plan)).

⁴⁸ See Tr. at 2497-99.

⁴⁹ LBP-14-3, 79 NRC at 280 (citing Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,357).

⁵⁰ *Id.* (citing *General Electric Co.* (Southwest Experimental Fast Oxide Reactor), 3 AEC 99, 101 (1966) (*SEFOR*)).

controlled or dominated” “refers to relationships in which the will of one party is subjugated to the will of another.”⁵¹

The Board further noted that where the applicant is not 100% indirectly foreign owned, an applicant may negate the control of a foreign investor through a Negation Action Plan.⁵² Applying these principles to NINA, the Board found, as a matter of law, that if NINA’s Negation Action Plan “can successfully wall off the foreign entity from influencing [its] decisionmaking regarding nuclear safety, security, and reliability concerns, then the AEA’s prohibition on foreign control or domination will not stand in the way” of NINA’s application.⁵³

The Board then considered whether foreign ownership, control, or domination manifested in NINA’s ownership, corporate governance, or financing. It found that none of these considerations showed that NINA is subject to foreign ownership or control. First, noting that the NRC had previously approved license transfers involving indirect, minority foreign ownership, the Board found that Toshiba’s 10% indirect ownership interest would not preclude NINA from obtaining a license.⁵⁴

With respect to NINA’s corporate governance structure, the Board determined that NRG Energy controls the NINA board of managers by virtue of having “90% of the votes on most decisions and exclusive control of all decisions involving nuclear safety, security, and reliability.”⁵⁵ It found the corporate governance provisions NINA has in place to restrict foreign control to be comparable to those in other license applications that the NRC has approved.⁵⁶ Although TANE has

⁵¹ *SEFOR*, 3 AEC at 101. This definition was incorporated into the Standard Review Plan. Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,358.

⁵² LBP-14-3, 79 NRC at 281.

⁵³ *Id.* at 307.

⁵⁴ *See id.* at 284-86. The Board considered several relevant prior examples in this area. In particular the Board looked to several licensing actions where indirect minority ownership was approved, including the indirect acquisition by foreign companies of a 9.9% interest in the Seabrook facility (*see* Ex. STP000088, Safety Evaluation by the Office of Nuclear Reactor Regulation, Proposed Merger of New England Electric System and the National Grid Group, PLC, Seabrook Station, Unit 1 (Dec. 10, 1999) (excerpt)); a 12.2% interest in Millstone Unit 3 (*see* Ex. STP000086, Northeast Nuclear Energy Company, et al. (Millstone Nuclear Power Station, Unit 3); Order Approving Application Regarding Merger of New England Electric System and the National Grid Group, PLC, 64 Fed. Reg. 72,367 (Dec. 27, 1999)); and a 2.5% interest in the Trojan Nuclear Plant (*see* Ex. STP000077, Safety Evaluation by the Office of Nuclear Reactor Regulation, Proposed Merger of Pacificorp and Scottishpower PLC, Trojan Nuclear Plant (Nov. 10, 1999)).

⁵⁵ LBP-14-3, 79 NRC at 291.

⁵⁶ *Id.* at 291-92 (discussing Ex. NRC000153, NRC, Safety Evaluation for the Proposed Transfer of Clinton Power Station Operating License from Illinois Power Company to AmerGen Energy Company, LLC (Nov. 24, 1999), at 12, and Ex. NRC000154, NRC, Revised Safety Evaluation by the Office of Nuclear Reactor Regulation, Direct and Indirect Transfers of Control or Renewed Facility

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“veto power” over some financial and business decisions, the Board found that these powers are “typical of provisions in prior licensing matters where there was foreign involvement acceptable to the NRC.”⁵⁷

The Board found no indication that Toshiba, through TANE, either has attempted to control NINA through finances in the past, or that it has the ability to do so. The Board agreed with NINA that the Staff and Intervenor had provided “no record evidence of any instance where NINA has sought approval from Toshiba or TANE for strategic decisions in order to avoid threats of Toshiba or TANE withholding further loans.”⁵⁸ The Board further determined that the terms of the loans do not give TANE control over NINA. Specifically, the Board found that when placed “in context,” the power to approve a budget for the loans is “quite narrow” because TANE has only the “fleeting ability” to prepare a budget for the loans, but it has no control over how the money is spent.⁵⁹ Ultimately, the Board found it “difficult to understand how the NRC Staff ‘knows or has reason to believe’ that NINA is controlled or dominated by Toshiba or TANE within the meaning of the AEA § 103d or 10 C.F.R. § 50.38,” given the “absence of any particular examples where Toshiba, through TANE, has exercised control, and in the absence of any corporate or contractual methods by which Toshiba, through TANE, could exercise control over a decision related to nuclear safety, security, or reliability.”⁶⁰ The Board declined to infer control from the amount of TANE’s loans and observed that the Standard Review Plan expressly allows a foreign entity to provide more than 50% of the funding for a project, where an adequate Negation Action Plan is in place.⁶¹

Moreover, the Board held that NINA’s Negation Action Plan would prevent Toshiba, through TANE, from exerting control or domination over NINA in the future.⁶² It found that NINA’s Negation Action Plan was “consistent with

Operating Licenses Due to the Proposed Corporate Restructuring Calvert Cliffs Nuclear Power Plant, Units Nos. 1 and 2; Nine Mile Point Nuclear Station, Unit Nos. 1 and 2; and R.E. Ginna Nuclear Power Plant (Oct. 30, 2009), at 22-28).

⁵⁷ *Id.* at 292-93. TANE’s minority owner consent rights are designed to protect its business. For example, the majority owner cannot enter into business transactions with affiliates that might dilute the value of the minority owner’s interests in the company.

⁵⁸ *Id.* at 301.

⁵⁹ *Id.* at 302 (citing Ex. STP000036, McBurnett Direct Testimony, at 74); *see also id.* at 293 n.156.

⁶⁰ *Id.* at 303-04.

⁶¹ *Id.* at 304 (citing Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,358). Intervenor argued before the Board — as they do before us — that such control can be inferred because “he who has the gold, makes the rule.” *See id.* at 301; Intervenor’s Petition for Review of Licensing Board Memorandum and Order LBP-14-03 (May 5, 2014) at 21 (Petition for Review).

⁶² LBP-14-3, 79 NRC at 304-09. In evaluating the Negation Action Plan, the Board specifically considered revision 9 of the combined license application. The Board found the provisions calling for

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or more restrictive than” other such plans that the NRC has approved in the past.⁶³ The Board noted the Staff’s acknowledgment at the hearing that absent the Staff’s perceived financial control issue, the corporate governance provisions of the Negation Action Plan would have been consistent with other plans the Staff has deemed sufficient.⁶⁴ The Board also held, in response to Judge Arnold’s concurring opinion, that because the Negation Action Plan has been incorporated into NINA’s license application, it is a legally binding commitment.⁶⁵ The Board observed that NINA’s Negation Action Plan addresses not only how NINA avoids foreign ownership, control, and domination now, but how such concerns will be avoided “throughout the entire license period.”⁶⁶ The Board concluded that NINA had met its burden to show that it is not under foreign ownership, control, or domination.

Intervenors’ petition for review followed. The Staff supports Intervenors’ petition, in part, because the Staff contends that the Board’s ruling could be interpreted to hold that foreign control must have already been exercised before it would bar the issuance of a license.⁶⁷ NINA argues that Intervenors do not show either a legal or factual error in the Board’s decision that would warrant our review.⁶⁸

a Security Committee and a Nuclear Advisory Committee, both composed entirely of United States citizens, particularly significant. *Id.* at 306 (citing Ex. STP000054, COL Application Rev. 9, at 1D-5 to 1D-6).

⁶³ *Id.* at 304.

⁶⁴ *Id.* at 306 (citing Tr. at 2135 (Simmons): “[I]n any situation where we didn’t have financial control, this would be a sufficient Negation Action Plan.”).

⁶⁵ *Id.* at 308. Judge Arnold opined that the majority reached beyond what was necessary to find that NINA is not subject to foreign control. *See id.* at 314-15. In his view, the Board did not need to make a finding concerning the adequacy of the Negation Action Plan because it had already found that NINA is not currently under foreign control or domination. He explained that “the [foreign ownership, control, or domination] determination is based on current conditions, not hypothetical future conditions. This is different from the [Negation Action Plan] which is primarily to ensure that [foreign ownership, control, or domination] issues do not arise in the future.” *Id.* at 314.

⁶⁶ *Id.* at 308.

⁶⁷ NRC Staff Answer to Intervenors’ Petition for Review of the Licensing Board’s Partial Initial Decision on Contention FC-1 (May 30, 2014) at 14, 16-18 (Staff Answer).

⁶⁸ Nuclear Innovation North America LLC’s Answer Opposing Intervenors’ Petition for Review of LBP-14-3 (May 30, 2014) (NINA Answer). Subsequently, NINA filed a motion for leave to reply to the Staff’s answer with an accompanying reply brief. Nuclear Innovation North America LLC’s Motion for Leave to Reply to NRC Staff Answer to Intervenors’ Petition for Review of LBP-14-03 (June 9, 2014) and Nuclear Innovation North America LLC’s Reply to NRC Staff Answer to Intervenors’ Petition for Review of LBP-14-03 (June 9, 2014). While our rules do not provide for the filing of reply briefs in this circumstance, as a matter of discretion we have reviewed NINA’s reply brief. *See* 10 C.F.R. § 2.341(b)(3) (providing for reply briefs by the petitioning party only).

II. DISCUSSION

A. Standard of Review

We will grant review, in our discretion, where the petition raises a “substantial question” whether

- (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 or 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] deem to be in the public interest.⁶⁹

We review questions of law *de novo*, but we defer to the Board’s findings with respect to the underlying facts unless they are “clearly erroneous.”⁷⁰ The standard for showing “clear error” is a difficult one to meet: the petitioner must show that the Board’s determination is “not even plausible” in light of the record as a whole.⁷¹

B. Intervenor’s Petition Does Not Merit Review

Intervenors argue that errors of law led the Board to erroneous factual conclusions. First, they argue that the Board erred in ruling that the foreign control prohibition is primarily concerned with matters of nuclear safety, security, and reliability. They also claim that the Board failed to recognize that control may exist whenever the foreign entity has the power to control the applicant, without regard to whether the control is exercised or not. They then argue that these two misinterpretations of law caused the Board to erroneously conclude that NINA is not under Toshiba’s control. As discussed below, we conclude that the Petition does not raise a substantial question of fact or law that warrants review.

1. Intervenor’s Claims of Legal Error Do Not Warrant Review

Intervenors first claim that the Board erred in focusing its foreign ownership, control, or domination analysis on whether Toshiba, through TANE, controls

⁶⁹ 10 C.F.R. § 2.341(b)(4).

⁷⁰ *Honeywell International, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 18-19 (2013); *David Geisen*, CLI-10-23, 72 NRC 210, 224-25 (2010).

⁷¹ *Metropolis Works*, CLI-13-1, 77 NRC at 18-19; *Geisen*, CLI-10-23, 72 NRC at 224-25.

NINA with respect to matters relating to nuclear safety, security, or reliability. In support of this claim, Intervenor argue that 10 C.F.R. § 50.38 “does not impose restrictions as to the types of foreign ownership, control, or domination that render an applicant ineligible to apply for and obtain[] a license.”⁷² They contend that the Board’s ruling effectively permits a “type” of foreign ownership, control, or domination that does not relate to nuclear safety, security, or reliability. Because the statute and regulation do not distinguish between “impermissible” and “permissible” foreign ownership, control, or domination, they argue, both of these must be prohibited.⁷³

Both NINA and the Staff dispute Intervenor’s claim that the Board’s focus on nuclear safety, security, and reliability was improper. The Staff urges us to keep in mind that the statute and regulatory provisions must be read in the context of the AEA: “‘Nuclear safety, security and reliability’ broadly encompasses those matters within the NRC’s jurisdiction . . . and properly defines the scope of the foreign control prohibition.”⁷⁴ The Staff and NINA both argue that the Board’s ruling on the scope of the foreign ownership, control, or domination analysis is “consistent with the statutory text, Commission precedent, and Staff practice.”⁷⁵

We find that Intervenor have not made the case for our review of this legal ruling. Their arguments do not raise a “substantial question” with respect to whether a “necessary legal conclusion is without governing precedent or [is] contrary to established law.”⁷⁶ The Board applied guiding precedent; its legal rulings were consistent with our longstanding case law, the Standard Review Plan, and established agency practice. In *SEFOR*, the Atomic Energy Commission found that a parallel provision in the AEA, section 104d, relating to test or research facilities, “should be given an orientation toward safeguarding the national defense and security.”⁷⁷ That decision further held that whether a foreign entity has “[t]he ability to restrict or inhibit compliance with security or other regulations of AEC” is of “greatest significance” to a foreign ownership, control, or domination review.⁷⁸ The Commission reaffirmed this principle in the 1999 Standard Review Plan.⁷⁹

The Board’s decision was also guided by, and consistent with, the NRC’s approval of licensing actions involving numerous other facilities.⁸⁰ As noted

⁷² Petition for Review at 11.

⁷³ *Id.* at 11-15.

⁷⁴ Staff Answer at 10.

⁷⁵ *Id.*; *see id.* at 10-13, NINA Answer at 14-15.

⁷⁶ 10 C.F.R. § 2.341(b)(4)(ii).

⁷⁷ *SEFOR*, 3 AEC at 101.

⁷⁸ *Id.*

⁷⁹ Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,357.

⁸⁰ *See* LBP-14-3, 79 NRC at 285-86, 291-92.

above, the Board considered the NRC's approval of license transfers for the Seabrook, Millstone 3, Trojan, Clinton, and Calvert Cliffs nuclear plants, where appropriate measures barred the foreign owners from involvement in decisions that could affect safety or national security.⁸¹ The Board's analysis is consistent with the NRC's usual practice, which prioritizes ensuring that decisions relating to safety at a licensed facility remain in the hands of U.S. citizens.

Intervenors further argue that the Board's ruling conflicts with the language of AEA § 103d, which they argue provides for "two types of [foreign ownership, control, or domination] analyses."⁸² Intervenors point out that the first clause of the law prohibits issuance of a license to a foreign-owned or foreign-controlled entity, and a second sentence separately prohibits issuance of a license if doing so would be "inimical to the common defense and security or to the health and safety of the public."⁸³ Intervenors argue that because the second clause covers threats to national security and public health and safety, the first clause prohibits foreign ownership, control, or domination "in terms of rights and powers that would normally be indicative of ownership, control and domination."⁸⁴ Intervenors conclude that therefore, nuclear safety, security, and reliability "is not the exclusive measure" of whether an applicant is under foreign ownership, domination, or control. The Staff and NINA disagree and instead argue that the

⁸¹ These were not the only examples the Board could have cited. In addition to the Clinton facility, the Commission approved license transfers for three other facilities to AmerGen, an entity 50% owned by a British company, where the Staff found that license conditions would wall off the British owners from management decisions affecting nuclear safety and national security. *See* Ex. STP000072, Safety Evaluation by the Office of Nuclear Reactor Regulation, Transfer of Facility Operating License from General Public Utilities Nuclear, Inc. et al., to AmerGen Energy, LLC, and Approval of Conforming Amendment, Three Mile Island Nuclear Station, Unit 1 (undated excerpt), at 17-18; Ex. STP000074, Pastis, Helen N., Senior Project Manager, Office of Nuclear Reactor Regulation, Letter to T. Gary Broughton, President, GPU Nuclear, Inc. and Gerald R. Rainey, Chief Executive Officer, AmerGen Energy Company, LLC (June 6, 2000) (enclosing *GPU Nuclear, Inc. and Jersey Central Power & Light Company* (Oyster Creek Nuclear Generating Station), Order Approving Transfer of License and Conforming Amendment (June 6, 2000) (see Enclosure at 3-4)); Ex. STP000075, Croteau, Richard P., Letter to Gerald R. Rainey, Chief Executive Officer, AmerGen Vermont, LLC and Ross P. Barkhurst, President, Vermont Yankee Nuclear Power Corp. (July 7, 2000) (enclosing *Vermont Yankee Nuclear Power Corporation* (Vermont Yankee Nuclear Power Station), Order Approving Transfer of License and Conforming Amendment (July 7, 2000) (see Enclosure at 5-6).

⁸² Petition for Review at 15.

⁸³ *Id.* (citing AEA § 103d). Section 103d provides the following:

No license may be issued to any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government. In any event, no license may be issued to any person within the United States if, in the opinion of the Commission, the issuance of the license to such person would be inimical to the common defense or to the health and safety of the public.

⁸⁴ *Id.*

agency's foreign ownership, domination, or control analysis is limited to nuclear safety, security, and reliability.⁸⁵

But, even assuming that Intervenor's legal interpretation were correct, their argument is unavailing. Intervenor's argument mischaracterizes the Board's ruling. The Board did not find that nuclear safety and security were the only considerations in its examination of foreign ownership, control, or domination.⁸⁶ Rather, it found that these are the most significant considerations among the numerous factors it considered in its decision.⁸⁷ The Board found that TANE did not control or dominate NINA, either with respect to nuclear safety, security, or reliability concerns or with respect to any other concern.⁸⁸ In doing so, the Board examined various indicia of corporate control; it did not, as Intervenor suggest, hold that control should only be measured with respect to nuclear safety, security, and reliability. Therefore, Intervenor have not shown that the Board's ruling was "a departure from, or contrary to, established law."⁸⁹

Intervenor next argue that the Board erred by disregarding the directive in the Standard Review Plan that foreign control may exist even where the power to control has not been exercised.⁹⁰ Intervenor assert that Toshiba could control NINA because "NINA would be willing to acquiesce to Toshiba's demands in exchange for further financing or for not calling its loan."⁹¹ The Staff agrees that the Board's decision raises the issue of whether the Board erred by "requir[ing] evidence of actual, direct foreign control" over the applicant rather than potential

⁸⁵ Staff Answer at 10; NINA Answer at 14.

⁸⁶ Intervenor's argument is similar to their argument that the Board crafted an exception to AEA § 103d for "permissible" types of foreign ownership, control, or domination. *See* Petition for Review at 11-12. As the Staff points out, although the Board referred to "impermissible [foreign ownership, control, and domination]," it did not use the term "permissible [foreign ownership, control, or domination]." Staff Answer at 11-12. We read the Board's terminology as simply referring to the impermissible nature of foreign ownership, control, or domination.

⁸⁷ *See* LBP-14-3, 79 NRC at 280 (citing the Standard Review Plan, the Board held that the NRC's "primary focus should remain on safeguarding security and the national defense, although the NRC Staff is to consider a variety of factors").

⁸⁸ LBP-14-3, 79 NRC at 309. ("[T]he Board finds no evidentiary support . . . that Toshiba, through TANE, has financial control of NINA"). As discussed above, the Board considered the ownership percentages and voting rights of the two parent entities, and the terms of the loans, among other things. *See supra* text accompanying notes 54-66.

⁸⁹ 10 C.F.R. § 2.341(b)(4)(ii); *see AmerGen Energy Co.* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 259 (2009).

⁹⁰ Petition for Review at 22 (citing Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,358: "An applicant is considered to be foreign owned, controlled, or dominated whenever a foreign interest has the 'power,' direct or indirect, whether or not exercised, to direct or decide matters affecting the management or operations of the applicant.")).

⁹¹ *Id.* at 21.

control.⁹² The Staff argues that control may exist even where the foreign entity has not exercised that control.⁹³

We find that the Board's decision does not raise the question Intervenor and the Staff pose. While the Board attached significance to the lack of past instances where Toshiba or TANE exerted control over NINA, it did not hold that unexercised, potential control would not constitute improper foreign ownership, control, or domination. Rather, the Board examined the record for avenues of "potential" control and found none.⁹⁴ Because Intervenor does not present a substantial question with respect to this issue and because the Board did not reach a "necessary legal conclusion" concerning "unexercised control" we need not take review of this issue.

2. Intervenor's Claim of Factual Error Does Not Merit Review

Intervenor also claim that the Board erred in its finding of fact that Toshiba, through TANE, does not financially control NINA. In challenging the Board's factual conclusions, Intervenor reiterate their previous arguments that the Board improperly focused on issues of nuclear safety, security, and reliability and improperly required evidence that control had been exercised.⁹⁵

There is a heavy burden to overturn a Board's findings of fact following an evidentiary hearing. The mere presence of evidence supporting both sides does not call for our review, where it appears that the Board considered all the evidence and arguments before it.⁹⁶ Intervenor present scant evidence to support the argument that NINA is under Toshiba's control. At bottom, Intervenor have not raised a "substantial question" that the Board's findings of fact are "clearly erroneous."⁹⁷

Initially, Intervenor claim that the Board failed to consider "aspects of control that do not affect nuclear safety or security."⁹⁸ They argue that "other important factors" include "stock ownership, voice in management, contractual rights to participate in [] design and construction of [the proposed facility], voice in day-to-day conduct of project activities, legal ownership or interest in the physical

⁹² Staff Answer at 14. Although the Staff did not petition for review of the Board's decision, it provided its views on indirect and unexercised control, should we elect to take review. *See id.* at 1 n.2.

⁹³ *Id.* at 17.

⁹⁴ *See* LBP-14-3, 79 NRC at 302-05.

⁹⁵ Petition for Review at 15-19.

⁹⁶ *See, e.g., Geisen*, CLI-10-23, 72 NRC at 225 ("In as hard-fought case as this, we would not expect the record to support one party only."); *Honeywell*, CLI-13-1, 77 NRC at 19 ("The presence of evidence in [petitioner's] favor . . . does not, without more, warrant reversal of the Board's decision.").

⁹⁷ 10 C.F.R. § 2.341(b)(4)(i).

⁹⁸ Petition for Review at 13-15.

assets of the project, rights to use or direct the use of [the proposed facility], whether the foreign entity has a voice in the financial affairs of the applicant, and control of the expenditures of the applicant.”⁹⁹ Intervenor then list factors — all of which the Board discussed in its decision — that they claim prove TANE’s control over NINA.¹⁰⁰

Intervenor goes on to argue that the Board’s conclusion that TANE possessed only limited rights was erroneously skewed by its focus on nuclear safety and national security. Intervenor argues that because the proposed facilities are not yet under construction, and NINA will not be the operator, none of NINA’s decisions have a potential safety impact.¹⁰¹ Therefore, Intervenor argues, the Board was “unjustified and arbitrary” in “narrowing” its decision to consider only those impacts.¹⁰²

However, Intervenor misconstrues the Board’s conclusion. While NINA’s evidence and the Board’s findings both focused on showing that TANE had no control over matters involving nuclear safety, security, or reliability, the Board found that there was no control over any matter.¹⁰³ The Board’s discussion of NINA’s general corporate governance and its proposed Negation Action Plan concluded that, in light of all the evidence before it, Toshiba, through TANE, does not control matters pertaining to general corporate governance of issues specifically pertaining to nuclear safety.¹⁰⁴

Control exists in a relationship where the “will of one party is subjugated to the will of another.”¹⁰⁵ In essence, Intervenor argues that Toshiba, through TANE, could coerce NINA into taking some action against NINA’s will. The Board found this argument to be purely speculative.¹⁰⁶ The Board had evidence before it that neither Toshiba nor TANE had exerted such control in the past and that NINA would resist any attempt at improper control in the future.¹⁰⁷ In

⁹⁹ *Id.* at 13-14 (citing *SEFOR*, 3 AEC at 101-02).

¹⁰⁰ *Id.* at 16. These factors include TANE’s right to appoint one Board manager (*see* 79 NRC at 287), TANE’s right to nominate the Chief Financial Officer (*see id.* at 287-88), and the right to approve a budget (*see id.* at 290, 302).

¹⁰¹ *See* Petition for Review at 18.

¹⁰² *Id.* at 19.

¹⁰³ LBP-14-3, 79 NRC at 301.

¹⁰⁴ *Id.*; *see* Ex. STP000054, COL Application Rev. 9, at App. 1D (Negation Action Plan). Among the plan’s provisions that pertain generally to corporate governance are that both the Chairman of the NINA board and NINA’s CEO must be U.S. citizens (*id.* at 1D-5, 1D-11).

¹⁰⁵ Ex. NRC000106, Standard Review Plan, 64 Fed. Reg. at 52,358; *see also SEFOR*, 3 AEC at 101.

¹⁰⁶ LBP-14-3, 79 NRC at 301.

¹⁰⁷ With respect to Intervenor’s argument that NINA would accede to Toshiba’s “demands” in order to keep Toshiba from withdrawing funds, Mr. McBurnett testified during the hearing that he would rather lose Toshiba’s funding than violate NRC regulations: “[if I were] asked to do

(Continued)

their petition for review, Intervenor do not explain how TANE has subjugated NINA to its will by loaning NINA the money to pursue the business venture that is NINA's primary purpose.¹⁰⁸ Nor do Intervenor specify what "demands" Toshiba might make upon NINA in the future, which are not already considered in the Negation Action Plan. Intervenor do not explain how Toshiba's interests and NINA's interests might diverge in such a way that would be material to this licensing decision. Thus, the petition for review does not articulate any specific errors in the Board's findings of fact or demonstrate that the Board's findings were "not even plausible" in light of the record as a whole.

In sum, we do not find that Intervenor have raised a substantial question of fact or law meriting full review of the Board's decision.

III. CONCLUSION

For the foregoing reasons, we *deny* Intervenor's petition for review of LBP-14-3.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 14th day of April 2015.

something inappropriate from a safety, security, or reliability standpoint we're not going to do that. Consequences, for me, are far more severe for willingly failing to [comply with] NRC requirements than they are for losing Toshiba's funding." Tr. at 2042.

¹⁰⁸ See Ex. STP000052, COL Application Rev. 8, § 1.2, 1.0-5 (NINA's "focus is to market and promote ABWR nuclear technology and to develop and construct ABWR nuclear power generation facilities in the U.S.").

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

Docket Nos. 50-387
50-388
72-28

PPL SUSQUEHANNA, LLC
(Susquehanna Steam Electric Station,
Units 1 and 2)

April 14, 2015

The Commission denies a request for a hearing and to intervene in this license transfer proceeding.

LICENSE TRANSFER PROCEEDINGS

A license transfer applicant must show reasonable assurance of sufficient funds to decommission the facility. Our decommissioning funding rule in 10 C.F.R. § 50.75 cites specific formulas (based on reactor type and power level) for determining the minimum amounts required to demonstrate reasonable assurance of decommissioning funding.

CONTENTIONS, ADMISSIBILITY

Requests for Additional Information (RAIs) are a routine means for the Staff to ask for clarification or additional corroborating information from an applicant. They reflect followup questions, an ongoing dialogue between the Staff and applicant. Rarely will pointing to an RAI, without more, suffice as support for an admissible contention.

LICENSE TRANSFER PROCEEDINGS

A license transfer proceeding is not the appropriate venue for raising day-to-day operational safety concerns unconnected to the proposed transaction. Rather, it focuses on the impacts of the proposed license transfer. A license transfer proceeding does not encompass a full-scale safety review of a plant. Through the NRC's regulatory oversight of operating reactors, all plants are subject to ongoing monitoring and assessment.

LICENSE TRANSFER PROCEEDINGS

License transfer applications need not include an environmental analysis under the National Environmental Policy Act. No Environmental Report is required.

MEMORANDUM AND ORDER

This proceeding stems from PPL Susquehanna, LLC's (PPL Susquehanna) application for NRC approval of a license transfer and conforming license amendments.¹ PPL Susquehanna requests approval of an indirect transfer of control of the operating licenses for the Susquehanna Steam Electric Station Units 1 and 2 and of the general license for the plant's Independent Spent Fuel Storage Installation (ISFSI). The requested transaction would transfer PPL Susquehanna's interests in the licenses from its current ultimate parent, PPL Corporation, to a new, publicly listed, ultimate parent, Talen Energy Corporation.² Today we consider Mr. Douglas B. Ritter's petition for a hearing and to intervene in the license transfer.³ As we outline below, Mr. Ritter's petition does not include an admissible contention for hearing. We therefore deny the petition and terminate this adjudication.

¹ See Rausch, Timothy S., PPL Susquehanna, Letter to Document Control Desk, U.S. Nuclear Regulatory Commission (July 11, 2014) (ADAMS Accession No. ML14195A115) (Cover Letter), enclosing Application for Order Approving Indirect Transfer of Control of Facility Operating License Nos. NPF-14 and NPF-22 and Conforming Amendments (July 11, 2014) (ADAMS Accession No. ML14195A113) (Application). The Staff approved the transfer of licenses and conforming amendments on April 10, 2015. See Whited, Jeffrey A., Letter to Timothy S. Rausch, PPL Susquehanna, "Order Approving Transfer of Licenses and Conforming Amendments Related to the Susquehanna Steam Electric Station, Units 1 and 2 (TAC Nos. MF4426 and MF4427)" (Apr. 10, 2015) (ADAMS Package No. ML15057A230).

² Cover Letter at 1.

³ Douglas B. Ritter's Request for a Public Hearing on the Application for Approval of the Indirect License Transfer of Susquehanna Steam Electric Station, Units 1 and 2 (Oct. 24, 2014) (Petition).

I. BACKGROUND

PPL Susquehanna owns a 90% undivided ownership interest in each of the Susquehanna Steam Electric Station units, and is the sole operator of both units.⁴ Allegheny Electric Cooperative, Inc. (Allegheny) owns the remaining 10% interest in each unit and is a non-operating co-licensee.⁵ In an application dated July 11, 2014, PPL Susquehanna requested NRC approval of an indirect transfer of control of operating licenses NPF-14 and NPF-22 for Susquehanna Steam Electric Station, Units 1 and 2, and of the general license for the plant's ISFSI. PPL Susquehanna submitted its request pursuant to section 184 of the Atomic Energy Act of 1954, as amended,⁶ 10 C.F.R. § 50.80(a), and 10 C.F.R. § 72.50(a), all of which require written NRC consent for direct or indirect license transfer.

The license transfer involves a series of transactions. PPL Susquehanna's current ultimate parent, PPL Corporation, intends to spin off PPL Energy Supply, LLC (Energy Supply), which holds domestic competitive generation assets, including PPL Susquehanna.⁷ Additional transactions include the creation of and changes to intermediate holding companies, with Energy Supply ultimately becoming a direct subsidiary of a new intermediate parent, Talen Energy Holdings, Inc., which in turn would become a direct subsidiary of a new, publicly owned ultimate parent, Talen Energy Corporation.⁸ Consequently, Talen Energy Corporation — as the new ultimate parent — would acquire PPL Corporation's 90% ownership interest in the two Susquehanna units.⁹ Licensee PPL Susquehanna would "become indirectly controlled by two new entities": Talen Energy Corporation and Talen Energy Holdings, Inc.¹⁰ As part of the transfer application, PPL Susquehanna additionally requested conforming amendments to the Susquehanna plant's operating licenses.¹¹

⁴ See Application at 1.

⁵ *Id.* The proposed license transfer does not involve Allegheny and Allegheny does not plan to request a hearing or otherwise intervene in the adjudicatory proceeding. See Huang, William S., Attorney for Allegheny, Letter to Annette L. Vietti-Cook, Secretary of the Commission, NRC (Oct. 15, 2014) (ADAMS Accession No. ML14308A592).

⁶ See 42 U.S.C. § 2234 (providing, among other things, that "[n]o license granted [under this section] shall be transferred . . . directly, or indirectly, through transfer of control of any license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of this chapter, and shall give its consent in writing").

⁷ See Application at 1; see also Susquehanna Steam Electric Station, Units 1 and 2; Consideration of Approval of Transfer of Licenses and Conforming Amendments, 79 Fed. Reg. 60,192, 60,193 (Oct. 6, 2014) (Federal Register Notice).

⁸ *Id.*; see also Application at 2-3 (outlining additional steps and entities involved).

⁹ See Federal Register Notice, 79 Fed. Reg. at 60,193.

¹⁰ See Application at 3.

¹¹ See *id.* at 3-4.

The license transfer application specifies that PPL Susquehanna would continue as the licensed sole operator of the two units.¹² The application further states that the transfer will not involve changes to the station units, their licensing bases, their “day-to-day management and operation,” or “the principal officers, managers or staff of PPL Susquehanna.”¹³ And the application represents that there will be no change to the technical qualifications or procedures of PPL Susquehanna and “no change in its ownership interest or that of Allegheny Electric Cooperative, Inc.”¹⁴

In response to the *Federal Register* notice of opportunity to request a hearing, Mr. Douglas B. Ritter filed a petition for a public hearing and to intervene, submitting three contentions.¹⁵ PPL Susquehanna opposes Mr. Ritter’s request on grounds of timeliness, standing, and contention admissibility.¹⁶

Mr. Ritter filed no reply, other than to provide additional information regarding the timeliness of his petition. In a filing titled “Letter of Clarification,” he described various efforts made prior to the petition filing deadline to obtain assistance from NRC personnel regarding our electronic filing requirements.¹⁷ Mr. Ritter mailed his petition on the date of the filing deadline, but failed to file electronically on time. In view of his representations, we find that Mr. Ritter made repeated good-faith efforts to comply with our filing requirements and had reasonable ground to believe that he had done so.¹⁸ Under the circumstances here, we accept the petition for consideration. Below we address Mr. Ritter’s contentions.¹⁹

II. DISCUSSION

A. Contention Admissibility Standards

Petitions to intervene must “set forth with particularity” the contentions a

¹² See *id.* at 10; Cover Letter at 1.

¹³ See Cover Letter at 1; see also Application at 10.

¹⁴ See Cover Letter at 1; Application at 10. The application additionally states that although PPL Susquehanna’s “corporate existence will not change,” the corporation would be renamed Susquehanna Nuclear, LLC, on completion of the transaction. See Application at 3 n.5; see also Cover Letter at 2.

¹⁵ Petition, *supra* note 3.

¹⁶ See PPL Susquehanna’s Answer Opposing Douglas B. Ritter’s Request for Hearing Regarding the Indirect Transfer of Control of Susquehanna Licenses (Nov. 24, 2014) at 4-24 (PPL Susquehanna Answer).

¹⁷ See Letter of Clarification (Dec. 22, 2014).

¹⁸ See, e.g., *id.* at 3 (describing that he was advised by an NRC Staff member to request an exemption from electronic filing in his mailed petition).

¹⁹ Because Mr. Ritter’s contentions all fall far short of our contention admissibility standards, we need not address his standing to intervene.

petitioner seeks to have litigated in a hearing.²⁰ Requirements for an admissible contention are found in 10 C.F.R. § 2.309(f)(1)(i)-(vi) and were described in detail in the notice of opportunity for hearing.²¹ As we have long emphasized, our contention rule is “strict by design.”²² Contention admissibility requirements seek “to ensure that NRC hearings ‘serve the purpose for which they are intended: to adjudicate genuine, substantive safety and environmental issues placed in contention by qualified intervenors.’”²³ While our contention rule is strict, it reflects a deliberate effort to prevent the major adjudicatory delays caused in the past by ill-defined or poorly supported contentions that were admitted for hearing although “based on little more than speculation.”²⁴ To warrant an adjudicatory hearing, contentions need to have “some reasonably specific factual or legal basis.”²⁵

Under our rules, a petitioner must explain the basis for each proffered contention by stating alleged facts or expert opinions that support the petitioner’s position and on which the petitioner intends to rely in litigating the contention at hearing.²⁶ To be admissible, the issue raised must fall within the scope of the proceeding and be material to the findings that the NRC must make.²⁷ A contention, therefore, must provide sufficient information to show a genuine dispute with the applicant on a material issue of law or fact.²⁸ As such, the contention should refer to the “portions of the application” that the petitioner disputes along with the supporting reasons for each dispute; or, if the petitioner believes that an application fails altogether to contain information required by law, the petitioner must identify each failure and provide supporting reasons for the petitioner’s belief.²⁹

²⁰ 10 C.F.R. § 2.309(f); see 10 C.F.R. § 2.1300 (providing that the provisions of 10 C.F.R. Part 2, Subpart M, together with the generally applicable intervention provisions in 10 C.F.R. Part 2, Subpart C, govern adjudicatory proceedings on a license transfer application).

²¹ See Federal Register Notice, 79 Fed. Reg. at 60,194.

²² See, e.g., *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001).

²³ See *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003) (quoting *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)).

²⁴ See *Oconee*, CLI-99-11, 49 NRC at 334.

²⁵ See *Millstone*, CLI-03-14, 58 NRC at 213 (citation omitted).

²⁶ 10 C.F.R. § 2.309(f)(1)(ii), (v).

²⁷ *Id.* § 2.309(f)(1)(iii)-(iv).

²⁸ *Id.* § 2.309(f)(1)(vi).

²⁹ *Id.*

B. Contention 1 — Decommissioning Funding

In Contention 1, Mr. Ritter claims that “Decommissioning Funding Assurance will be adversely affected by the proposed Indirect License Transfers” and that “the future Talen Energy Corporation’s decommissioning savings levels at Susquehanna will be inadequate.”³⁰ Contention 1 lacks factual or legal support and does not identify a genuine dispute with the application on a material issue of fact or law.

A license transfer applicant must show reasonable assurance of sufficient funds to decommission the facility.³¹ Our decommissioning funding rule in 10 C.F.R. § 50.75, to which Mr. Ritter cites, specifies formulas (based on reactor type and power level) for determining the minimum dollar amounts required to demonstrate reasonable assurance of decommissioning funding.³² But Mr. Ritter does not contest — or even reference — any of the decommissioning funding description in the application.³³ He does not suggest how the license transfer might lead to a shortfall or otherwise adversely affect decommissioning funding.

The application, for example, states that PPL Susquehanna’s current decommissioning funding “will remain in effect” and “will not be affected by the proposed indirect license transfer.”³⁴ Financial assurance for decommissioning Susquehanna is based on the “prepayment method,” authorized under our rules.³⁵ Specifically, the application describes a “nuclear decommissioning master trust established by PPL Susquehanna” that is “segregated from the licensee’s assets and outside its administrative control.”³⁶ The application specifies the current market values of the investments held in the master trust for each of the two units.³⁷ The application goes on to outline the “minimum amount of decommissioning funds estimated to be required” under 10 C.F.R. § 50.75 for each Susquehanna unit.³⁸ It additionally estimates the cost for decommissioning the ISFSI, based on a site-specific study.³⁹ And finally, the application provides specific calculations intended to show that the credited value of the decommissioning trusts will exceed the NRC’s minimum requirement for decommissioning funding assurance.⁴⁰ Mr.

³⁰ See Petition at 8.

³¹ See 10 C.F.R. §§ 50.33(k)(1), 50.75, 50.80(b)(1)(i).

³² See *id.* § 50.75(c).

³³ See Application at 13-14.

³⁴ See *id.* at 13.

³⁵ See *id.*; 10 C.F.R. § 50.75(e)(1)(i).

³⁶ See Application at 13.

³⁷ See *id.* (specifying market values of investments as of December 31, 2013).

³⁸ *Id.* at 13-14; see also Attachment 6 to Application (Decommissioning Funding Assurance).

³⁹ Application at 14.

⁴⁰ See *id.* at 13-14. The application assumes and credits real earnings of 2% up to the time of permanent cessation of operations. See *id.* at 14; see also 10 C.F.R. § 50.75(e)(1)(i).

Ritter challenges none of this information. In short, he does not raise a genuine dispute with the applicant on its decommissioning funding assurance.⁴¹

Nor is Contention 1 otherwise supported. No alleged facts or expert opinion back the claim that “PPL’s nuclear trust funds” are “on shaky ground.”⁴² Mr. Ritter quotes passages from PPL Corporation’s 2011 and 2013 annual reports but does not explain how any of these passages challenge the adequacy of the decommissioning funding description in the application. Mr. Ritter also refers to an NRC Request for Additional Information (RAI) sent to the applicant.⁴³ As Mr. Ritter notes, the RAI “requests additional financial data from PPL.”⁴⁴ But Mr. Ritter does not describe how the RAI supports his claim that the decommissioning funds will be inadequate.

RAIs are a “routine means” for the Staff to ask for clarification or additional corroborating information from an applicant.⁴⁵ They reflect followup questions, an ongoing dialogue between Staff and applicant.⁴⁶ Rarely will pointing to an RAI, without more, suffice as support for an admissible contention.⁴⁷ Moreover, the RAI does not concern decommissioning funding. Instead, the Staff’s questions bear on financial qualifications for meeting plant operating costs, a different license transfer issue altogether.⁴⁸ The RAI requests supporting documentation to justify the projected market prices, capacity factors, and operating expenses, and requests a cashflow statement for the period 2015 to 2019.⁴⁹ By itself the RAI does not “demonstrate” that the application is “fatally flawed.”⁵⁰

Numerous other claims made in support of Contention 1 also appear irrelevant

⁴¹ Mr. Ritter states that while “publicly available information is severely limited, the information that is available, which is outlined in this submission, raises sufficient questions to merit an NRC examination of this issue.” See Petition at 8. But as we noted, even the nonproprietary version of the application provides specific decommissioning funding information for each unit.

⁴² Petition at 9.

⁴³ *Id.* (referencing Request for Additional Information (RAI), attached to Whited, Jeffrey A., NRC, Letter to Timothy S. Rausch, PPL Susquehanna (Oct. 9, 2014) (ADAMS Accession No. ML14268A531)).

⁴⁴ *Id.*

⁴⁵ See *Oconee*, CLI-99-11, 49 NRC at 336.

⁴⁶ *Id.* at 337.

⁴⁷ “Petitioners must do more than rest on the mere existence of RAIs as a basis for their contention.” *Id.* at 336. Issuance of an RAI “does not alone establish deficiencies in the application, or that the NRC Staff will go on to find any of the Applicant’s clarifications, justifications, or other responses to be unsatisfactory.” *Id.*

⁴⁸ See 10 C.F.R. § 50.33(f)(2) (requiring the applicant “to submit information that demonstrates the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operating costs for the period of the license”).

⁴⁹ See RAI at 2 (listing questions in RAI question 1, (a)-(c)).

⁵⁰ See Petition at 4.

to decommissioning funding assurance.⁵¹ Like the RAI, they apparently go to financial qualifications for meeting plant operating expenses, the focus of Contention 2. Because Mr. Ritter repeats these claims in Contention 2, we address them in the section below.⁵² In any event, Contention 1 lacks support and does not raise a genuine material dispute with the application.

C. Contention 2 — Operating Fund Levels and Operation of Units

In Contention 2, Mr. Ritter claims that the “continuing operation of both Susquehanna units will be adversely affected by the proposed Indirect License Transfers, and the future Talen Energy Corporation’s operating fund levels will be adversely impacted by the proposed license transfers.”⁵³ But again, Mr. Ritter provides neither alleged facts nor expert opinion to support the claims. Nor does he identify any portion of the application that he contests.

Contention 2 largely consists of requests for the NRC to carefully review the proposed license transfer transaction. For example, Mr. Ritter calls for the NRC to examine the plant’s revenue and anticipated costs for facility operations, repairs, spent fuel storage, and decommissioning and to closely review the “assets, revenue streams, and obligations between and among” the “family subsidiaries” involved in the transaction.⁵⁴ Mr. Ritter also requests the NRC to “examine the cost of certain and probable future Fukushima improvements at the Susquehanna Steam Electric Station.”⁵⁵ He states that the NRC’s review “should address current and future ISFSI maintenance and operation expenses.”⁵⁶ None of these requests, however, challenge the application. Therefore, the requests do not raise a genuine dispute with the application. Further, the requests do not provide the necessary legal or factual support for an admissible contention.

Mr. Ritter also does not outline how he expects the license transfer to adversely affect the “continuing operation” of the Susquehanna units, particularly given that the application states that no changes to the “management,” “operations,” or the units themselves are proposed.⁵⁷ Instead of addressing the application, Mr. Ritter alludes to safety concerns or views expressed decades ago that have no obvious link to the proposed license transfer. He states, for example, that in July 1993 “federal regulators said that a safety mechanism used by three Pennsylvania power

⁵¹ See, e.g., *id.* at 8-9 (regarding costs associated with operating, maintaining, repairing, and improving facility, and assets and revenue streams).

⁵² See *id.* at 11-12.

⁵³ *Id.* at 11.

⁵⁴ See *id.* at 12.

⁵⁵ Application at 9.

⁵⁶ See Petition at 12.

⁵⁷ See Application at 10; Cover Letter at 1.

plants,” including the Susquehanna plant, “might fail to alert operators about a drop in the water level — a condition which could lead to a nuclear accident.”⁵⁸ He also states that presenters in a 1993 NRC meeting “postulated that failure in spent fuel pool cooling could possibly lead” to “safety-related equipment failure and a full core meltdown.”⁵⁹ And he claims that Susquehanna has “containments that need capital improvements” and that the applicant received a \$55 million settlement in 1992 “over the Mark II containment structure.”⁶⁰ But Mr. Ritter does not explain how any of these various unrelated claims bear on the challenged license transfer application.

A license transfer proceeding is not the appropriate venue for raising day-to-day operational safety concerns unconnected to the proposed transaction. Rather, it focuses on the impacts of the proposed license transfer. It does not encompass “a full-scale health-and-safety review of a plant.”⁶¹ Through the NRC’s regulatory oversight of operating reactors, all plants are subject to ongoing monitoring and assessment. Any Fukushima-related or other enhancements that might be ordered to improve the safety of the Susquehanna plant, for example, would be subject to the NRC’s routine inspection and enforcement processes. Here, the petition’s unspecific claims regarding statements or events from over 20 years ago do not, in any event, identify any current safety violations or deficiencies at the Susquehanna plant (or elsewhere), and also do not identify a deficiency in the license transfer application.⁶²

To the extent that Mr. Ritter suggests that the transfer will lead to insufficient funds to pay for necessary maintenance, operations, or capital improvements, the contention lacks support. Mr. Ritter merely references again the Staff’s RAI, claiming that it shows the need for a hearing to address “numerous outstanding issues associated with safe operation and maintenance” of the Susquehanna station.⁶³ But Mr. Ritter does not identify any part of the RAI that supports this claim. As we stated previously, a generalized reference to a routine request for additional information does not suffice as support for an admissible contention.

While Contention 2 focuses on financial qualifications to operate the Susquehanna plant, Mr. Ritter does not challenge the applicant’s estimated future operating funds. As noted above, a license transfer applicant must demonstrate

⁵⁸ See Petition at 12.

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ See, e.g., *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 169 (2000).

⁶² To the extent that Mr. Ritter has concerns about current or ongoing safety deficiencies at Susquehanna, he (or any member of the public) can raise such concerns at any time via our 10 C.F.R. § 2.206 petition process.

⁶³ See Petition at 12.

that it possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the license period.⁶⁴ Here, to show “an adequate source of funds to meet PPL Susquehanna’s [90%] share” of Susquehanna’s anticipated operating expenses, the application includes projected income statements for a 5-year period, from January 1, 2015, to December 31, 2019.⁶⁵ Projected revenues are based on sales of energy, capacity, and ancillary services.⁶⁶ Projected operating expenses include those for fuel, taxes, depreciation, inter-company charges (overhead), and operation and maintenance.⁶⁷ The application also provides two sensitivity analyses, one assuming a 10% reduction in the forecast price of electricity and the other assuming a 10% reduction in the forecast capacity factor.⁶⁸ It further discusses additional measures, such as a new Support Agreement with the prospective ultimate parent, Talen Energy, designed to ensure that PPL Susquehanna will have sufficient funds available to meet its operating expenses.⁶⁹

The application concludes that the anticipated revenues will be adequate to meet anticipated expenses and that with the exception of potential reductions in corporate overhead, the license transfer “does not affect the anticipated revenues or expenses” for the Susquehanna station.⁷⁰ Mr. Ritter challenges none of the financial information in the application. He does not suggest how the projected operating funds might prove insufficient to cover maintenance, repairs, capital improvements, or any other costs.

And although the public version of PPL Susquehanna’s application did not contain proprietary financial information, the notice of opportunity for hearing detailed how potential parties could request access to sensitive unclassified information (including proprietary information) if it were needed to “provide the basis and specificity for a proffered contention.”⁷¹ The publicly available version of the application identified the particular categories of projected revenues and expenses for which specific dollar estimates were being withheld as proprietary.⁷² Mr. Ritter had the opportunity to request access to the proprietary information,

⁶⁴ See 10 C.F.R. § 50.33(f)(2).

⁶⁵ See Application at 11. Our rules require the applicant to submit estimates for total annual operating costs for each of the first 5 years of facility operation. 10 C.F.R. § 50.33(f)(2).

⁶⁶ See Application at 11-12.

⁶⁷ See *id.* at 12; “Projected Income Statement and Calculation of Six-Month Fixed Costs” (Redacted, Non-Proprietary) (Attachment 4NP to Application) at 1, 5. PPL Susquehanna states that the projected operation and maintenance costs include those for maintaining the ISFSI. See PPL Susquehanna Answer at 20.

⁶⁸ See Attachment 4NP to Application at 2-3, 6-7.

⁶⁹ See Application at 12-13.

⁷⁰ See *id.* at 11.

⁷¹ See Federal Register Notice, 79 Fed. Reg. at 60,195-96.

⁷² See Attachment 4NP to Application at 1-8.

but did not.⁷³ Nor does his petition address the financial qualifications description outlined in the public version of the application. Contention 2 lacks support and fails to raise a genuine material dispute for hearing.

D. Contention 3 — Low-Level Waste Storage Capability

In Contention 3, Mr. Ritter claims that “the proposed license transfers fail to demonstrate that Susquehanna has the capability to store Classes B and C low level radioactive waste (‘LLRW’) throughout its entire operating lifetime.”⁷⁴ Specifically, Mr. Ritter claims that the applicant’s “Environmental Report is deficient by omission” because it “fails to offer a realistic plan for disposal” of low-level waste, given the closure of the Barnwell waste disposal facility and “potential economic barriers to disposing of said waste at Energy Solution[s] in Clive, Utah.”⁷⁵ He calls for a description of the “environmental consequences of extended onsite storage” or how the applicant “will transfer its Class B and C wastes to another facility for storage.”⁷⁶ The contention questions whether the Susquehanna “site has the capability” to store low-level waste during the plant operating life “and beyond” if the Barnwell facility “remains closed” and “no other waste disposal options are developed or available.”⁷⁷ Mr. Ritter argues that “the future Talen Energy Corporation” must provide a plan “detail[ing] how it will safely manage low-level waste” during and after the plant operating life.⁷⁸ He states that a low-level waste disposal plan is required for license transfer “pursuant to NEPA [the National Environmental Policy Act] and NRC COLA [combined license application] guidelines.”⁷⁹

Mr. Ritter’s claims in Contention 3 are beyond the scope of this license transfer proceeding, lack support, and do not raise a genuine material dispute with the application. Under our rules, license transfer applications need not include an environmental analysis under NEPA.⁸⁰ No Environmental Report is required. Instead of addressing applicable license transfer rules and standards, Mr. Ritter

⁷³ Mr. Ritter states that although publicly available information was “severely limited,” the “available” information was “sufficient” for his hearing request. *See* Petition at 11.

⁷⁴ *See id.* at 13.

⁷⁵ *See id.* (internal quotation omitted).

⁷⁶ *See id.*

⁷⁷ *Id.*

⁷⁸ *See id.*

⁷⁹ *See id.* at 15.

⁸⁰ *See* 10 C.F.R. § 51.22(c)(21) (categorical exclusion for direct and indirect license transfers and associated license amendments).

relies on a decision involving a combined license application.⁸¹ Section 50.80 outlines the subject areas license transfer applications must address.⁸² Contention 3 does not identify any statutory or regulatory requirement for a license transfer application to include a plan detailing how low-level waste will be handled.

Nor does the contention suggest how the license transfer might change existing waste disposal plans or options or might decrease the licensee's current financial or technical qualifications to safely handle and store low-level waste. Our decommissioning funding requirements, for example, encompass the costs of low-level waste burial.⁸³ But Contention 3 does not address the application's decommissioning funding assurance discussion. It also does not address the applicant's projected operating funds — expenses and revenues — or otherwise call into question the licensee's continued ability to pay for and safely manage activities at the facility, whether related to low-level waste handling or not. As we earlier stressed, a license transfer proceeding focuses on the *impact of the license transfer*, not ongoing operational issues or other concerns unrelated to the transfer.⁸⁴ In short, Contention 3 is unsupported and does not raise a genuine dispute with the applicant on a material issue of law or fact.

III. CONCLUSION

We *deny* the request for hearing and petition to intervene, and *terminate* this proceeding.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK

Secretary of the Commission

Dated at Rockville, Maryland,
this 14th day of April 2015.

⁸¹ See Petition at 14 n.1 (citing a Licensing Board decision in the *Calvert Cliffs* combined license proceeding); see also *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 46 (2010) (referencing NEPA and 10 C.F.R. Part 52 requirements that do not apply in the license transfer context).

⁸² See 10 C.F.R. § 50.80(b)(1)(i), (2).

⁸³ See *id.* § 50.75(c).

⁸⁴ Moreover, PPL Susquehanna stresses that it is a participating company within the Utilities Service Alliance, and “will have access to” the Waste Control Specialists waste disposal facility. See PPL Susquehanna Answer at 23.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

Docket No. 70-3098-MLA
(Possession and Use License)

SHAW AREVA MOX SERVICES, LLC
(Mixed Oxide Fuel Fabrication
Facility)

April 23, 2015

**APPEALS: FACTUAL REVIEW (DEFERENCE; “CLEAR ERROR”
STANDARD); STANDARD OF REVIEW**

We review questions of law *de novo*, but we defer to the Board’s findings with respect to the underlying facts unless they are clearly erroneous. The standard for showing clear error is a difficult one to meet: Intervenors must demonstrate that the Board’s determination is not even plausible in light of the record as a whole.

REGULATIONS: INTERPRETATION

No fundamental principle of regulatory interpretation precludes licensees from using one or more specific actions, commitments, capabilities, structures, systems, or components to address the requirements of more than one regulation.

REGULATIONS: INTERPRETATION (10 C.F.R. § 74.57)

Section 74.57(b) of 10 C.F.R., which requires a licensee to “resolve the nature and cause of any MC&A alarm within approved time periods,” does not specify a particular time period for alarm resolution. A licensee must therefore provide

reasonable assurance that it can achieve the performance objectives set out in this section of our regulations.

CONTENTIONS

NRC adjudications are limited to the scope of admitted contentions. In interpreting the scope of an admitted contention, we look back to the bases set forth in support of the contention.

LICENSING PROCEEDINGS

A licensing proceeding is not the appropriate venue for generic rulemaking issues.

LICENSING PROCEEDINGS

The adequacy of the NRC Staff's review is not a litigable issue in a licensing case.

MEMORANDUM AND ORDER

Nuclear Watch South, Blue Ridge Environmental Defense League, and Nuclear Information and Resource Service (together, Intervenor) challenge the Atomic Safety and Licensing Board's ruling on the merits of Contentions 9, 10, and 11 in favor of the applicant, Shaw AREVA MOX Services (MOX Services).¹ For the reasons set forth below, we deny their petition for review.

I. BACKGROUND

A. Procedural History

This proceeding involves MOX Services' application to possess and use strategic special nuclear material in a mixed oxide fuel fabrication facility located at the

¹ Intervenor's Petition for Review of LBP-14-1 (Mar. 27, 2014; corrected Apr. 1, 2014) (Petition for Review); LBP-14-1, 79 NRC 39 (2014). Judge Farrar issued a "separate statement," wherein he noted his "essential agreement with most of the substance" of the Board's decision, raised additional concerns regarding the Board's treatment of cybersecurity, and dissented with respect to portions of the Board's decision regarding Contentions 9 and 11. *Id.* at 119-27 (Farrar, J., dissenting).

Department of Energy's Savannah River Site.² The Board, in its initial decision, set forth a comprehensive history of the proceedings involving this facility, which commenced in 2001 when MOX Services submitted its Construction Authorization Request.³ MOX Services received its construction authorization in 2005, and, in 2006, it filed an application to possess and use strategic special nuclear material, byproduct material, and source material at the MOX Facility.⁴ Intervenor filed a petition to intervene, which the Board granted.⁵ Based on the issuance of a revised Fundamental Nuclear Material Control Plan (Control Plan) in 2010, Intervenor proposed, and the Board admitted, Contentions 9, 10, and 11, which challenged MOX Services' compliance with our material control and accounting (MC&A) regulations involving verification of the presence and integrity of strategic special nuclear material items and the resolution of alarms related to those items.⁶

As admitted by the Board, Contentions 9, 10, and 11 assert:

Contention 9: [MOX Services'] Revised [Control Plan] does not satisfy the MC&A requirements in 10 C.F.R. § 74.55(b)(1) because it does not demonstrate that [MOX Services'] item monitoring program has the capability to verify, on a statistical sampling basis, the presence and integrity of [strategic special nuclear material] item losses that total 5 formula kilograms of plutonium or more[,] plant-wide[,] within the time frames specified by the regulation [—] 30 calendar days for Category 1[A] items and 60 [calendar] days for Category 1B items contained in a vault or in a permanently control[led] access area isolated from the rest of the material access area.⁷

Contention 10: The Revised [Control Plan] is inadequate to satisfy the alarm resolution requirements in 10 C.F.R. § 74.57(b), which requires that licensees "shall resolve the nature and cause of any MC&A alarm within approved time periods." In the event that alarm resolution requires an inventory of one of the four item storage areas identified in [MOX Services'] December 17, 2009 Exemption Request, [MOX Services] has not demonstrated that it can meet its commitment to normally resolve the alarm within three days.⁸

Contention 11: [MOX Services] claims that in the event of alleged theft of plutonium from the [MOX Facility], it is capable of confirming the presence of a specific individual plutonium item within eight hours and verifying the presence of

²Ex. APPR00014, SHAW AREVA MOX Services, LLC's Revised Prefiled Direct Testimony on Contentions 9-11 (Mar. 1, 2012) (nonpublic) (MOX Services Direct Testimony), at 10.

³LBP-14-1, 79 NRC at 47-50.

⁴*Id.* at 47.

⁵*Id.* at 48.

⁶*Id.* (citing LBP-11-9, 73 NRC 391, 395 (2011)).

⁷*Id.* at 55 (citing Licensing Board Order (Appendix — New Contentions 9, 10, 11) (Apr. 1, 2011) at 1 (Contention Order) (unpublished) (nonpublic)).

⁸*Id.* at 96 (citing Contention Order at 1).

all [plutonium] in item form in vault storage within 72 hours. But [MOX Services] does not support this assertion with any information that would show how such confirmation and verification will be carried out in the specified timelines. In addition, as discussed above in Contentions 9 and 10, other statements by [MOX Services] in its exemption application and RAI responses strongly indicate that in fact, [MOX Services] is not capable of meeting these timelines with respect to certain categories of plutonium in vault storage. Therefore [MOX Services] has not demonstrated that it satisfies 10 C.F.R. § [74].57(e).⁹

The Board generated a robust record in this proceeding based on two evidentiary hearings, substantial written testimony, and many exhibits.¹⁰ Based on this record, the Board issued its Initial Decision, LBP-14-1, rejecting Intervenors' Contentions 9, 10, and 11 on their merits.¹¹ Intervenors have now filed a petition for review asking that we reverse LBP-14-1.¹² MOX Services and the Staff oppose the Petition; Intervenors replied to those answers.¹³ Before we address Intervenors' petition for review, we first provide a short summary of our MC&A regulations and the contentions here at issue.

B. Summary of Relevant Regulations and MOX Services' Proposed MC&A System

1. Summary of Regulations

An applicant for a license to possess and use strategic special nuclear material must "establish, implement, and maintain a Commission-approved . . . MC&A . . . system" that will address the loss or theft of such material.¹⁴ Specifically, the system must enable the applicant to achieve the following five objectives:

- (1) Prompt investigation of anomalies potentially indicative of [strategic special nuclear material] losses;^[15]

⁹ LBP-14-1, 79 NRC at 107-08 (citing Contention Order at 1).

¹⁰ *Id.* at 49-50.

¹¹ *See, e.g., id.* at 46.

¹² Petition for Review.

¹³ Shaw AREVA MOX Services, LLC's Answer Opposing Intervenors' Petition for Review of LBP-14-01 (Apr. 24, 2014) (nonpublic) (MOX Services Answer); NRC Staff Answer to Petition for Review of LBP-14-01 (Apr. 24, 2014) (Staff Answer); Intervenors' Reply to Oppositions to Petition for Review of LBP-14-01 (May 7, 2014) (nonpublic) (Reply).

¹⁴ 10 C.F.R. § 74.51(a).

¹⁵ The term "strategic special nuclear material" means "uranium-235 (contained in uranium enriched to 20 percent or more in the U²³⁵ isotope), uranium-233, or plutonium." 10 C.F.R. § 74.4.

- (2) Timely detection of the possible abrupt loss of five or more formula kilograms of [strategic special nuclear material] from an individual unit process;^{16]}
- (3) Rapid determination of whether an actual loss of five or more formula kilograms occurred;
- (4) Ongoing confirmation of the presence of [strategic special nuclear material] in assigned locations; and
- (5) Timely generation of information to aid in the recovery of [strategic special nuclear material] in the event of an actual loss.^{17]}

To achieve these objectives, a licensee must, among other things, satisfy the requirements in 10 C.F.R. §§ 74.55(b) and 74.57(b) and (e), the regulations at the center of Intervenor's contentions.^{18]}

The regulation at issue in Contention 9, 10 C.F.R. § 74.55(b), requires licensees to "verify on a statistical sampling basis, the presence and integrity of [strategic special nuclear material] items."^{19]} Any statistical sampling plan for verifying the presence and integrity of strategic special nuclear material items "must have at least 99 percent power of detecting item losses that total five formula kilograms or more, plant-wide, within . . . [30] calendar days for Category IA items and 60 calendar days for Category IB items contained in a vault or in a permanently controlled access area isolated from the rest of the material access area."^{20]}

^{16]} The term "formula kilogram" means strategic special nuclear material "in any combination in a quantity of 1000 grams computed by the formula, grams = (grams contained U-235) + 2.5 (grams U-233 + grams plutonium)." *Id.*

The term "unit process" means "an identifiable segment or segments of processing activities for which the amounts of input and output [strategic special nuclear material] are based on measurements." *Id.*

^{17]} 10 C.F.R. § 74.51(a)(1)-(5).

^{18]} Although the NRC is currently considering amendments to Part 74, no changes to 10 C.F.R. § 74.55 are proposed; the proposed change to 10 C.F.R. § 74.57 would not affect the issues addressed in this decision. Proposed Rule: "Amendments to Material Control and Accounting Regulations," 78 Fed. Reg. 67,225, 67,228, 67,250 (Nov. 8, 2013).

^{19]} 10 C.F.R. § 74.55(b).

^{20]} 10 C.F.R. § 74.55(b)(1). To provide additional clarity, we provide below the definitions of some of the key terms used in this adjudication.

A special nuclear material "item" is "any discrete quantity or container of special nuclear material or source material, not undergoing processing, having an unique identity and also having an assigned element and isotope quantity." 10 C.F.R. § 74.4.

The term "Category IA" material means any strategic special nuclear material "directly useable in the manufacture of a nuclear explosive device" (with three exceptions), and the term "Category IB" material refers to all strategic special nuclear material other than Category IA material. *Id.*

A "vault" is "a windowless enclosure with walls, floor, roof and door(s) designed and constructed to delay penetration from forced entry." *Id.*

(Continued)

Contention 10 raises the issue of compliance with 10 C.F.R. § 74.57(b), which requires a licensee to “resolve the nature and cause of any MC&A alarm within approved time periods.”

Finally, Contention 11 raises the issue of compliance with 10 C.F.R. § 74.57(e), which requires that a licensee be able “to rapidly assess the validity of alleged thefts.”

The regulations at issue here do not prescribe any particular methodology for regulatory compliance, and they instead provide only the result that a licensee must achieve. This absence of specificity provides the “flexibility for licensees to select the most cost-effective way of achieving performance objectives.”²¹ A licensee must nonetheless demonstrate that, under the Atomic Energy Act, the licensee’s proposed methodology will not “be inimical to the common defense and security” and will not “constitute an unreasonable risk to the health and safety of the public.”²² Licensees must show with “reasonable assurance” that this standard has been satisfied.²³

2. MOX Services’ Proposed MC&A System

Because all three contentions relate to MOX Services’ MC&A system, we provide a short summary of that system. MOX Services proposes to meet its obligation to verify the presence of strategic special nuclear material items using two computer systems that would be used to track the MOX Facility’s inventory.²⁴ These two systems are the Manufacturing Management Information System (MMIS) and the Programmable Logic Controllers (PLCs).²⁵ The MMIS monitors and supervises the automated production activities at the facility, directs

A “controlled access area” is “any temporarily or permanently established area which is clearly demarcated, access to which is controlled, and which affords isolation of the material or persons within it.” *Id.*

A “material access area” is “any location which contains special nuclear material, within a vault or a building, the roof, walls, and floor of which constitute a physical barrier.” *Id.*

The phrase “power of detection” means “the probability that the critical value of a statistical test will be exceeded when there is an actual loss of a specific . . . quantity” of strategic special nuclear material. *Id.*

²¹ Final Rule, “Material Control and Accounting Requirements for Facilities Licensed to Possess and Use Formula Quantities of Strategic Special Nuclear Material,” 52 Fed. Reg. 10,033, 10,034 (Mar. 30, 1987) (Final Rule).

²² Atomic Energy Act of 1954, as amended, § 57c(2), 42 U.S.C. § 2077(c)(2).

²³ *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 263 (2009); *see also* LBP-14-1, 79 NRC at 51-52.

²⁴ Ex. APPR00014, MOX Services Direct Testimony, at 51-52.

²⁵ LBP-14-1, 79 NRC at 64-65 (citing Ex. APPR00014, MOX Services Direct Testimony, at 35-37, 47-49, 56-57).

the movement of material throughout the facility, and generates a “Perpetual Inventory Report” that includes items’ expected locations.²⁶ The PLCs control the local movement and placement of strategic special nuclear material items and determine the actual location and identity of those items.²⁷ MOX Services proposes to verify daily the presence of every item of strategic special nuclear material by comparing the information in the PLCs and the MMIS.²⁸

In addition, MOX Services proposes to verify the integrity of strategic special nuclear material items by sealing and designing the storage locations for strategic special nuclear material items in a way that renders the storage locations, and the items within, tamper-safe or the equivalent.²⁹ Specifically, all but one item-storage-area boundary would constitute a containment boundary, with each boundary protected by a tamper-indicating device or its equivalent.³⁰ For these protected boundaries, MOX Services proposes to visually inspect the tamper-indicating device daily.³¹ According to MOX Services, “confirmation that the containment boundary has not been breached ensures the integrity of all the items contained therein.”³² The sole exception is the Assembly Storage Area, where MOX Services proposes to verify the integrity of the heavy assemblies (each about 1,500 pounds and 13 feet long) by controlling access to the area’s crane.³³ The access logs for the crane would be checked daily.³⁴

MOX Services asserts that its use of the computer systems, as well as the periodic monitoring of secured and tamper-safe item-storage-area boundaries, enables it to verify daily the presence and integrity of all items in storage.³⁵ Further, according to MOX Services, its MC&A procedures enable it to resolve an MC&A alarm “normally” within 3 days, and to confirm the presence (or absence) of any specific strategic special nuclear material item within 8 hours of an alleged theft, and to verify the presence of every item of strategic special nuclear material within 72 hours.³⁶

²⁶ See *id.* at 57, 64-65.

²⁷ See *id.* at 57, 64-65; MOX Services Answer at 3-4.

²⁸ See, e.g., Ex. APPR00014, MOX Services Direct Testimony, at 51-52.

²⁹ See, e.g., *id.* at 52-56. “Tamper-safing” refers to “the use of devices on containers or vaults in a manner and at a time that ensures a clear indication of any violation of the integrity of previously made measurements of special nuclear material within the container or vault.” 10 C.F.R. § 74.4.

³⁰ See, e.g., Ex. APPR00014, MOX Services Direct Testimony, at 52-56.

³¹ See, e.g., *id.* at 57.

³² *Id.* at 53.

³³ *Id.* at 33-34, 55.

³⁴ *Id.* at 55.

³⁵ *Id.* at 53-56.

³⁶ *Id.* at 69-70, 74.

II. DISCUSSION

We will grant a petition for review at our discretion, upon a showing that the petitioner has raised a substantial question as to whether

- (i) a finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;
- (ii) a necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;
- (iii) a substantial and important question of law, policy, or discretion has been raised;
- (iv) the conduct of the proceeding involved a prejudicial procedural error; or
- (v) any other consideration that we may deem to be in the public interest.³⁷

We review questions of law *de novo*, but we defer to the Board's findings with respect to the underlying facts unless they are "clearly erroneous."³⁸ The standard for showing "clear error" is a difficult one to meet: Intervenor must demonstrate that the Board's determination is "not even plausible" in light of the record as a whole.³⁹

Intervenor argues that review is warranted here because they have raised substantial questions as to considerations (i), (ii), and (iii), above.⁴⁰ Intervenor, at bottom, find fault with the highly automated MC&A system proposed by MOX Services.⁴¹ Many asserted legal errors, and several factual errors, each discussed in turn below, reflect Intervenor's concerns. Further, Intervenor argues that the Board's "approval" of the Control Plan raises substantial questions "that can only be addressed by the Commission" regarding cybersecurity, the appropriate interpretation of our MC&A regulations, and the NRC Staff's technical review.⁴² As discussed below, we find that Intervenor have not presented a substantial question that would justify review of the Board's decision.

A. Intervenor's Challenges to the Board's Rulings on Contentions 9, 10, and 11

On appeal, Intervenor raise four specific challenges to the Board's initial

³⁷ 10 C.F.R. § 2.341(b)(4)(i)-(v).

³⁸ *Honeywell International, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 18-19 (2013); *David Geisen*, CLI-10-23, 72 NRC 210, 224-25 (2010).

³⁹ *Metropolis Works*, CLI-13-1, 77 NRC at 18-19; *Geisen*, CLI-10-23, 72 NRC at 224-25.

⁴⁰ Petition for Review at 2-3.

⁴¹ *Id.* at 2.

⁴² *Id.*

decision on Contentions 9, 10, and 11. First, with respect to Contention 9, Intervenor claim that the Board's interpretation of 10 C.F.R. § 74.55(b)(1) with respect to item presence verification "ignores the term 'verify' in the regulation."⁴³ Second, also with respect to Contention 9, Intervenor argue that the Board's finding regarding "item integrity verification is fatally unclear."⁴⁴ Next, Intervenor challenge the Board's decision on Contentions 9 and 11 on the grounds that the Board violated "fundamental principles of regulatory interpretation" by allowing MOX Services to "rely on qualitative security measures to comply with the requirements for item integrity verification and theft detection."⁴⁵ Finally, Intervenor challenge the Board's decision with respect to Contention 10 and the meaning of the phrase "any MC&A alarm" in 10 C.F.R. § 74.57(b).⁴⁶ As discussed below, we find that Intervenor have not raised a substantial question related to the Board's resolution of these contentions.

1. Item Presence Verification (Contention 9)

Intervenor assert that the Board erred by ignoring the term "verify" in 10 C.F.R. § 74.55 in ruling on issues related to item presence verification.⁴⁷ Intervenor contend that the plain meaning of the word "verify" requires a comparison of two independent sources of data, which they find incompatible with the Board's ruling.⁴⁸ Moreover, Intervenor interpret the context in which the NRC uses the word "verify" in 10 C.F.R. § 74.55(b) to require "a quantitative

⁴³ *Id.* at 12.

⁴⁴ *Id.* at 15.

⁴⁵ *Id.* at 17.

⁴⁶ *Id.* at 19.

⁴⁷ *Id.* at 12-15. Section 74.55(b) of 10 C.F.R. states:

The licensee shall verify on a statistical sampling basis, the presence and integrity of [strategic special nuclear material] items. The statistical sampling plan must have at least 99 percent power of detecting item losses that total five formula kilograms or more, plant-wide, within:

(1) Thirty calendar days for Category IA items and 60 calendar days for Category IB items contained in a vault or in a permanently controlled access area isolated from the rest of the material access area;

(2) Three working days for Category IA items and seven calendar days for Category [IB] items located elsewhere in the [material access area], except for reactor components measuring at least one meter in length and weighing in excess of 30 kilograms for which the time interval shall be 30 calendar days;

(3) Sixty calendar days for items in a permanently controlled access area outside of [a material access area]; or

(4) Sixty calendar days for samples in a vault or permanently controlled access area and 30 calendar days for samples elsewhere in the [material access area] for samples each containing less than 0.05 formula kilograms of [strategic special nuclear material].

⁴⁸ Petition for Review at 13-15.

statistical measure . . . and a sample size determined by quantitative analysis.”⁴⁹ Intervenor would require a quantitative statistical measure, which they define as “the random selection, location, removal and physical inspection of an item’s identification and integrity.”⁵⁰

First, Intervenor has not shown that the Board ignored the plain-language meaning of the word “verify” in 10 C.F.R. § 74.55(b). Intervenor argues that the Board’s holding is incompatible with the plain meaning of the word verify, which they contend requires a comparison between two independent sources of information.⁵¹ But, as discussed below, the record contained substantial evidence demonstrating that data from the PLCs and the MMIS are sufficiently independent to enable a meaningful comparison.⁵² Therefore, we do not find that the Intervenor’s claim that the Board’s holding eliminates the concept of “independence” from the meaning of “verify” constitutes a substantial question warranting review.⁵³

Next, Intervenor claims that the Board’s holding ignored the requirement in 10 C.F.R. § 74.55(b) that the applicant base the item presence verification on “a quantitative statistical measure” and a “sample size determined by quantitative analysis.”⁵⁴ However, after taking extensive evidence on the record, the Board found that MOX Services’ proposed approach to verify item presence, which uses the comparison of two digital (i.e., nonphysical) systems to sample “100% of [strategic special nuclear material] items[,] . . . complies with the requirement to sample a sufficient number of items to result in at least 99% power of detecting the specified losses.”⁵⁵ The Board concluded that, by sampling “the entire set of [strategic special nuclear material] items,” MOX Services would

⁴⁹ *Id.* at 14 (referring to the requirements in 10 C.F.R. § 74.55(b) that a licensee “verify on a statistical basis the presence and integrity of . . . items” and also verify that the statistical sampling plan “have at least 99% power of detecting losses that total five formula kilograms or more.”).

⁵⁰ *Id.* at 14.

⁵¹ *Id.* at 13-15.

⁵² Although not cited by Intervenor, the Board did state that the NRC does not “require that such verifications be ‘independent.’” LBP-14-1, 79 NRC at 69-70 (citing Tr. at 1707-08). But, in making this statement, the Board was responding to Intervenor’s claim that to be truly independent, the verification must be physical (i.e., nondigital). *Id.* at 61-70. Moreover, the Board cited to portions of the transcript that considered whether section 74.55(b) requires a physical verification, not an independent one. *Id.* at 68-69. Therefore, we interpret this statement from the Board to be a shorthand for addressing the Intervenor’s claims regarding physical verifications and not a general holding regarding the meaning of “verify” within section 74.55(b). Such a holding would be incompatible with the Board’s extensive discussion of the additional measures MOX Services has taken to ensure that the PLC data are sufficiently accurate to enable a meaningful comparison to the MMIS. *Id.* at 77-92.

⁵³ Petition for Review at 13.

⁵⁴ *Id.* at 14.

⁵⁵ LBP-14-1, 79 NRC at 70.

“sample a sufficient number of items” to comply with the 99% power of detection contemplated by 10 C.F.R. § 74.55(b).⁵⁶ The Board found “no support” for Intervenors’ argument that 10 C.F.R. § 74.55(b) “plainly contemplates physical verification” or that MOX Services’ 100% sampling method does not include “a sufficient number of items” to satisfy the regulatory requirement.⁵⁷ On appeal, Intervenors do not explain how the Board’s reading of 10 C.F.R. § 74.55(b) departs from existing law or otherwise ignores the sampling component of the verification requirement in 10 C.F.R. § 74.55(b).⁵⁸ Therefore, we find nothing in Intervenors’ petition for review or reply that raises a substantial question of law with respect to this issue.

Intervenors also argue that, as a factual matter, the Board erred in finding that MOX Services’ comparison of the data in two computer systems satisfies the presence verification requirement of 10 C.F.R. § 74.55. According to Intervenors, “MOX Services’ own evidence [shows that] the data systems are *not* independent.”⁵⁹ Intervenors argue that the absence of an independent means of verification would preclude corroboration of the data in the PLCs and MMIS.⁶⁰ But Intervenors do not address record evidence that explains how these systems communicate.⁶¹ To function properly, the two systems must communicate at some level, and, as MOX Services explained, “[t]he PLC will always maintain its own mapping based on item movements even in manual mode, and if there is a difference at the end of the day between the MMIS and the storage PLC information, the difference will be identified through the nightly automatic mapping comparison.”⁶² We give substantial deference to licensing board findings of fact, and we will not overturn a board’s factual findings unless they are “not even plausible in light of the record viewed in its entirety.”⁶³ Here, Intervenors have failed to raise a substantial question of fact regarding the Board’s finding in view of the ample record evidence that exists to support the Board’s determination.

Intervenors also challenge the reliability of MOX Services’ computer systems, claiming that “MOX Services assumes that the MMIS and PLCs cannot fail and

⁵⁶ *Id.*

⁵⁷ *Id.* at 68-70.

⁵⁸ Petition for Review at 14.

⁵⁹ *Id.* at 14-15 (emphasis in original).

⁶⁰ Reply at 3.

⁶¹ See, e.g., Ex. APPR00014, MOX Services Direct Testimony, at 50; Ex. APPR10037, SHAW AREVA MOX Services, LLC’s Revised Pre-Filed Direct Testimony in Response to Board’s June 29, 2012 Memorandum and Order (Dec. 5, 2012) (nonpublic) (MOX Services Supplemental Direct Testimony), at 13.

⁶² Ex. APPR00014, MOX Services Direct Testimony, at 50.

⁶³ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 26 (2003) (citing *Anderson v. Bessemer City*, 470 U.S. 564, 573-76 (1985)) (internal quotation marks omitted); see also *Geisen*, CLI-10-23, 72 NRC at 220.

cannot be tampered with undetected under any circumstances.”⁶⁴ Yet Intervenor has not identified any portion of the Board’s order that propagates such an error.⁶⁵ Moreover, contrary to Intervenor’s claims, the record demonstrates that MOX Services has taken steps to ensure the operation of the MOX Facility is not affected by the failure of the computer systems. As noted by the Board, there are “at least six program features that prevent errors in MMIS and PLC data” and “five actions that are used to detect errors in MMIS and PLC data.”⁶⁶ Intervenor’s unsupported statements do not raise a substantial question regarding the Board’s findings, nor are they sufficient to satisfy our criteria to overturn the Board’s factual findings.

2. Item Integrity Verification

Intervenor next argues that the Board’s interpretation of the NRC’s item integrity verification requirements is “fatally unclear” and rises to the level of a “clear factual error.”⁶⁷ They assert that the Board contradicts itself in stating both that (i) integrity can be verified without reference to the accuracy of the underlying data and (ii) the methodology’s accuracy “is an integral component of the requirement to provide reasonable assurance of item presence and integrity with a 99% power of detection.”⁶⁸ Moreover, Intervenor argues, there are “two reasons why the integrity verification approach depends on accuracy of the data”: (1) “MOX Services depends on the accuracy of data in the MMIS to ensure that it can keep track of all items . . . moving in and out of containment”; and (2) MOX Services uses the MMIS to maintain the seal records for the storage areas.⁶⁹

Here again, Intervenor misconstrues the Board’s order and fails to identify a clear factual error on the part of the Board. As discussed by MOX Services, Intervenor conflates MOX Services’ proposed approach to verify item presence (comparison of PLC and MMIS data) with MOX Services’ proposed approach to verify item integrity (daily, physical inspection of tamper-indicating devices or, in the case of the Assembly Storage Area, the crane log).⁷⁰ As discussed

⁶⁴ Petition for Review at 14.

⁶⁵ See, e.g., *id.*

⁶⁶ See, e.g., LBP-14-1, 79 NRC at 83-86 (citing Ex. APPR00014, MOX Services Direct Testimony, at 10-18, 20-22, 38-39, 49, 53-55; Tr. at 1149, 1155, 1180, 1189-91 (Bell), 1306-07 (Trikouros, Bell), 1185-86 (McDade, Clark); Ex. APPR10037, MOX Services Supplemental Direct Testimony, at 5, 10; Ex. APP000031, SHAW AREVA MOX Services, LLC’s Prefiled Reply Testimony on Contentions 9-11 (Jan. 24, 2012) (MOX Services’ Reply Testimony), at 14-16).

⁶⁷ Petition for Review at 15-17 (citing LBP-14-1, 79 NRC at 75-77).

⁶⁸ Petition for Review at 16 (quoting LBP-14-1, 79 NRC at 77, 81).

⁶⁹ Petition for Review at 16-17.

⁷⁰ MOX Services Answer at 13.

above, MOX Services' approach to item *presence* verification rests on a nightly comparison of data from the MMIS and the PLC computer systems. Thus, within the context of item presence verification, the Board extensively considered the question of accuracy.⁷¹ In contrast, the Board found that MOX Services' "integrity *verification* approach *does* involve daily, physical, human confirmation that the containment boundaries around [strategic special nuclear material] items have not been breached."⁷² Thus, the Board did not consider accuracy with respect to these integrity verification methods. As a result, we do not see any contradiction in the Board's statements that would raise a substantial question warranting review.⁷³

Further, Intervenor's complaint that maintaining the tamper-indicating-device seal records in the MMIS illustrates a factual error on the part of the Board is unsupported.⁷⁴ As MOX Services points out, Intervenor "provided no testimony, evidence, or legal argument" to support their complaint about the use of the MMIS to maintain seal records.⁷⁵ In any event, there is ample evidence on the record that MOX Services' commitment to verify daily — through physical inspection — the tamper-indicating devices and crane log have no relationship to how MOX Services decides to store the records of these inspections. Intervenor has therefore not identified a material error of fact in the Board's determination regarding verification of item integrity.

Intervenor also criticizes as "cumbersome and inefficient" MOX Services' approach of considering all items contained within a single "containment boundary" to be a single item for purposes of item monitoring.⁷⁶ But Intervenor does not claim that this concern raises a material question with respect to the Board's findings.⁷⁷ The Board determined that MOX Services' approach to item integrity verification meets our regulatory requirements, and a claim of inefficiency in an applicant's selected procedures is not sufficient to raise a substantial question or to demonstrate a material error in the Board's decision.

⁷¹ LBP-14-1, 79 NRC at 77-92.

⁷² *Id.* at 75 (citation omitted) (second emphasis in original).

⁷³ The Board's statement that "accuracy of the methodology is an integral component of the requirement to provide reasonable assurance of item presence and integrity with a 99% power of detection" appears to be the source of Intervenor's confusion. LBP-14-1, 79 NRC at 81; Petition for Review at 16. But, in light of the discussion above, it appears that the Board was simply stating that accuracy is an integral component of the portion of the regulatory requirement in 10 C.F.R. § 75.55(b) that addresses presence verification. Indeed, this view finds considerable support in the statement's placement within the discussion of data accuracy in MOX Services' approach to item presence verification. LBP-14-1, 79 NRC at 81.

⁷⁴ Petition for Review at 16-17.

⁷⁵ MOX Services Answer at 14.

⁷⁶ Petition for Review at 17.

⁷⁷ *Id.* at 17.

3. *Physical Security and MC&A (Contentions 9 and 11)*

Intervenors' next challenge to the Board's decision relates to Contentions 9 and 11.⁷⁸ Here, the Board found that, based on its commitments in section 3.3 of the Control Plan, MOX Services "has provided reasonable assurance of its ability to rapidly assess the validity of alleged thefts within the 8- and 72-hour time frames."⁷⁹ Intervenors argue that the Board erred as a matter of law because "NRC regulations do not permit the substitution of security measures for MC&A measures; *both* types of measures are required."⁸⁰ Specifically, Intervenors argue that the Board inappropriately relied "on qualitative security measures to substitute for full compliance with the quantitative requirements of MC&A regulations."⁸¹ In essence, Intervenors question whether measures implemented by MOX Services to satisfy our 10 C.F.R. Part 73 physical security requirements can, at the same time, satisfy MOX Services' 10 C.F.R. Part 74 MC&A obligations.⁸² With respect to Contention 9, Intervenors challenge the Board's determination that "the physical protection features, which prevent intruder access, [provide] assurance that the data as originally generated in the PLCs represent an unchanged condition of storage of the items so tracked and recorded."⁸³ Similarly, Intervenors challenge the Board decision on Contention 11, which raised the issue of MOX Services' ability to comply with 10 C.F.R. § 74.57(e) (requiring that a licensee be able "to rapidly assess the validity of alleged thefts").⁸⁴

Intervenors again misunderstand the interrelationship of the different protective measures that MOX Services uses. The security measures bolster the MC&A measures; they do not substitute for them, nor did the Board so hold.⁸⁵ Intervenors have not provided a basis to question the Board's consideration of all elements (not just the computer systems) of MOX Services' theft assessment commitments. Rather, in considering whether MOX Services' MC&A plan met our regulatory requirements, the Board considered the plan in light of the entire application

⁷⁸ *Id.* at 17-18.

⁷⁹ LBP-14-1, 79 NRC at 113.

⁸⁰ Petition for Review at 18 (emphasis in original). Judge Farrar agrees with this point: MOX Services "cannot be given extra credit for doing what is already required." LBP-14-1, 79 NRC at 122 (Farrar, J., dissenting). Moreover, Judge Farrar calls into question the adequacy of MOX Services' data systems with respect to cybersecurity, given MOX Services' lack of a current cybersecurity plan. *Id.* Judge Farrar would have conditioned his ruling on Contention 11 on "full-blown NRC review [of cybersecurity] *before* a license can be issued." *Id.* (emphasis in original). As we discuss below, cybersecurity at fuel cycle facilities, like the MOX Facility, is currently the subject of a rulemaking.

⁸¹ Petition for Review at 17.

⁸² *Id.*

⁸³ *Id.* (citing LBP-14-1, 79 NRC at 76).

⁸⁴ *Id.* at 17-18.

⁸⁵ *See, e.g.,* LBP-14-1, 79 NRC at 113.

and facility. As MOX Services observes, “Intervenors point to no ‘fundamental principles of regulatory interpretation’ that preclude the use of one or more specific actions, commitments, capabilities, structures, systems, or components to address the requirements of more than one regulation.”⁸⁶ We therefore find that Intervenors have not raised a substantial question of law regarding the Board’s determination that MOX Services has demonstrated an ability to achieve the performance objectives in 10 C.F.R. §§ 74.55(b) and 74.57(e).⁸⁷

4. Resolution of MC&A Alarms (Contention 10)

Contention 10 raises the issue of compliance with 10 C.F.R. § 74.57(b), which requires a licensee to “resolve the nature and cause of any MC&A alarm within approved time periods.” This regulation, however, does not specify a particular time period for alarm resolution. A licensee must therefore provide reasonable assurance that it can achieve the performance objectives set out in this section of our regulations. NUREG-1280 provides guidance to applicants and licensees regarding compliance with the alarm-resolution requirements in 10 C.F.R. § 74.57(b).⁸⁸ In this instance, MOX Services committed to, and the Staff approved, a timeline consistent with that contemplated in NUREG-1280.⁸⁹ The Board found that MOX Services provided “reasonable assurance that its proposed alarm resolution procedures, as a group, can resolve MC&A alarms within the 3-day period to which [MOX Services] has committed.”⁹⁰

Intervenors take issue with the Board’s approval of MOX Services’ commitment to resolve alarms “normally” within 3 days.⁹¹ Intervenors describe as circular the Board’s reasoning (based on the Staff’s position) that “[w]e do not view as

⁸⁶ MOX Services Answer at 15-16 (citing Petition for Review at 17).

⁸⁷ LBP-14-1, 79 NRC at 113. “[MOX Services’] theft assessment commitments in section 3.3 of its [Control Plan] follow NUREG-1280’s recommendations, proposing to use the computer system to identify the location of items in the event of an alleged theft. While [MOX Services] assumes the accuracy of its records systems, we find this acceptable because other NRC regulations and other elements of [MOX Services’] proposal provide reasonable assurance of the security and accuracy of its MC&A system. Additionally, and very importantly, the computer system is not the exclusive means by which [MOX Services] will assess an alleged theft.” (citations omitted). *Id.*

⁸⁸ *Id.* at 99 (discussing “Standard Format and Content Acceptance Criteria for the Material Control and Accounting (MC&A) Reform Amendment: 10 CFR Part 74, Subpart E,” NUREG-1280, Rev. 1 (Apr. 1995), Ch. 3 (ADAMS Accession No. ML031340295) (NUREG-1280)).

⁸⁹ *See, e.g.*, Ex. APPR00014, MOX Services Direct Testimony, at 69; Ex. NRC000006, NRC Staff’s Prefiled Direct Testimony of Tom Pham Concerning Contentions 9-11 (Oct. 19, 2011) at 5.

⁹⁰ LBP-14-1, 79 NRC at 99-100. The Board found that an inventory was not the only means available to an applicant to satisfy 10 C.F.R. § 74.57(b) and that the “suite of procedures” proposed by MOX Services can be used “individually or in combination to resolve alarms.” *Id.* at 99.

⁹¹ Petition for Review at 19.

normal the conditions under which alarm resolution would be expected to take more than 3 days.”⁹² Intervenor’s argue that the Board’s conclusion as to what constitutes (or, more precisely, what does not constitute) normal conditions deprives the word “normal” of meaning and, further, that it “jettisons any objective measure of the condition under which [MOX Services] should be able to resolve an alarm within three days.”⁹³ Intervenor’s claim that the Board “is making a wholly arbitrary distinction between ‘normal’ alarms and ‘abnormal’ alarms such that any alarm could be considered ‘abnormal’ just because it was not resolved in three days.”⁹⁴

Intervenor’s provide no support for their challenge to the Board’s ruling and misconstrue the meaning of the word “normal” in this context. The Board concluded that “nothing before us convinces us that [MOX Services’] use of the term, and the Staff’s interpretation of that use, is contradictory to a reasonable interpretation of the rule.”⁹⁵ Contrary to Intervenor’s argument, the Board, the Staff, and MOX Services did not focus on “normal” and “abnormal” alarms but rather on “normal” conditions wherein MOX Services “has committed to resolve alarms within three days.”⁹⁶ As the Staff observes, the Board found that “an alarm at the MOX facility that would require more than three days to resolve would entail the simultaneous occurrence of five unexpected or unusual circumstances, and thus such circumstances could not be considered ‘normal.’”⁹⁷ Thus, we again find that Intervenor’s have not identified a substantial question that would merit granting their petition for review.

B. Intervenor’s Assertions Regarding Additional Substantial Questions of Law, Policy, and Discretion

Intervenor’s raise three additional claims asserting questions of law, policy, and discretion.⁹⁸ We understand these arguments to support their request that we take review of LBP-14-1 under 10 C.F.R. § 2.341(b)(4)(iii).

⁹² *Id.* (citing LBP-14-1, 79 NRC at 107).

⁹³ *Id.* at 19.

⁹⁴ *Id.*

⁹⁵ LBP-14-1, 79 NRC at 106.

⁹⁶ *Id.* at 106-07.

⁹⁷ Staff Answer at 16 (citing LBP-14-1, 79 NRC at 106-07).

⁹⁸ Petition for Review at 3, 20-25. Intervenor’s raise a fourth issue — a general concern regarding the fundamental importance of MC&A to national security and the protection of public health and safety — that is beyond the scope of this decision. *Id.* at 25. We agree with Intervenor’s that MC&A is a critical part of the finding that must be made with respect to this application. But this general concern, without more, does not rise to the level of a substantial question under 10 C.F.R. § 2.341(b). Nor does it satisfy our strict contention admissibility rules, which do not allow a petitioner “to attack generic

(Continued)

1. Cybersecurity

At the supplemental hearing, Intervenor expressed concern that the NRC has not adopted cybersecurity regulations for fuel-cycle facilities.⁹⁹ The Board found that “whether or not the NRC may license the MOX Facility without NRC cyber-security regulations in effect is beyond the scope of this proceeding and not relevant” to the resolution of the contentions.¹⁰⁰ Further, the Board found that “Intervenor provided no evidence on [cybersecurity] and did not raise this concern before the supplemental hearing.”¹⁰¹ Intervenor lodge several, often overlapping, challenges to the Board’s handling of cybersecurity, claiming that it raises “major issues of law and policy.”¹⁰² Intervenor argue that the Board committed factual error in ruling that cybersecurity was “not currently before” the Board and “beyond the scope of the proceeding” because MOX Services brought cybersecurity into the proceeding “by relying on it” in the revised Control Plan.¹⁰³ Intervenor further argue that the Board’s reliance on MOX Services’ protective cybersecurity measures raises significant policy questions because we have no cybersecurity regulations for fuel cycle facilities and, therefore, no standard by which to judge the adequacy of a licensee’s cybersecurity program.¹⁰⁴ And Intervenor take issue with the Board’s acceptance of MOX Services’ commitment to rely on its own compliance with DOE’s cybersecurity standards.¹⁰⁵ Intervenor argue that in the context of this proceeding, it is DOE’s responsibility to create cybersecurity standards and to prove their adequacy to the NRC and the public.¹⁰⁶ Citing Judge Farrar’s dissent, Intervenor argue that, “[a]t the very least, the NRC must review DOE’s cybersecurity standards in this proceeding or accept them in a [Memorandum of Understanding].”¹⁰⁷ Finally, Intervenor challenge the Board’s

NRC requirements or regulations, or to express generalized grievances about NRC policies.” *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999) (citing *North Atlantic Energy Services Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 217 n.8 (1999)); *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974)). We therefore decline to grant Intervenor’s petition for review with respect to this general concern.

⁹⁹ LBP-14-1, 79 NRC at 94 (citing Tr. at 1857 (Curran)).

¹⁰⁰ LBP-14-1, 79 NRC at 95-96. Although Judge Farrar agreed that cybersecurity is not ripe for adjudication, he separately expressed his concern that MOX Services cannot create “a sound MC&A system” without the cybersecurity measures that are “the inherent underpinning . . . of a dependable MC&A system.” *Id.* at 119 (Farrar, J., dissenting).

¹⁰¹ LBP-14-1, 79 NRC at 94.

¹⁰² Petition for Review at 20.

¹⁰³ *Id.* at 20-21 (quoting LBP-14-1, 79 NRC at 46-47).

¹⁰⁴ Petition for Review at 20. Regarding the significance of the cybersecurity issue, *see id.* at 23.

¹⁰⁵ *Id.* at 20 (citing LBP-14-1, 79 NRC at 91-92).

¹⁰⁶ Petition for Review at 20-21.

¹⁰⁷ *Id.* at 21 (citing LBP-14-1, 79 NRC at 122-24 (Farrar, J., dissenting)).

decision as “effectively deferr[ing] the question of the adequacy of cyber-security for post-hearing resolution by the Staff.”¹⁰⁸ We disagree with these assertions.

Intervenors have not raised a substantial question related to the Board’s conclusions on the cybersecurity issue. The Board concluded that “the adequacy” of MOX Services’ cybersecurity systems “[was] not currently before [it].”¹⁰⁹ We have long held that NRC adjudications are limited to the scope of admitted contentions.¹¹⁰ In interpreting the scope of an admitted contention, we look “back to the bases set forth in support of the contention.”¹¹¹ We have carefully examined the supporting bases for Contentions 9, 10, and 11 and do not find that they raise cybersecurity issues.¹¹² Thus, we do not find that the Intervenors have raised a substantial question warranting review regarding the Board’s finding that cybersecurity was outside the scope of this adjudicatory proceeding.¹¹³

Contrary to Intervenors’ claims, the Board’s ruling is not inconsistent with the Board’s acknowledgment of MOX Services’ reliance on cybersecurity as one measure of several in place to assess the validity of an allegation of theft from the facility.¹¹⁴ As MOX Services points out, “[i]t was not an error for the Board to recognize these additional program steps, while also recognizing that the actual adequacy of at least one of those steps (the cybersecurity) measures were not before it for decision.”¹¹⁵ In any event, if Intervenors sought to challenge MOX Services’ reliance on cybersecurity in its revised Control Plan, then our regulations provide that Intervenors should have filed a new or amended contention.¹¹⁶ Moreover, MOX Services observes that it “is required to implement the National

¹⁰⁸ *Id.* at 21.

¹⁰⁹ LBP-14-1, 79 NRC at 46-47.

¹¹⁰ *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 309 (2010); *see also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 359 (2001) (“Petitioners must articulate at the outset the specific issues they wish to litigate as a prerequisite to gaining formal admission as parties.”) (internal quotations and citation omitted).

¹¹¹ *Pilgrim*, CLI-10-11, 71 NRC at 308-09 (internal quotations omitted).

¹¹² Petitioners’ Motion for Admission of Contentions 9, 10, and 11 Regarding Shaw AREVA MOX Services’ Revised Fundamental Nuclear Material Control Plan (July 26, 2010) (ADAMS Accession No. ML102220017). As the Board noted, Intervenors raised the concern that the NRC has not yet adopted any cybersecurity requirements for Part 70 fuel cycle facilities at the supplemental hearing. LBP-14-1, 79 NRC at 94.

¹¹³ We are not persuaded otherwise by Commissioner Baran’s dissenting opinion.

¹¹⁴ *See, e.g.,* MOX Services Answer at 19-20.

¹¹⁵ *Id.* at 20.

¹¹⁶ 10 C.F.R. § 2.309(c).

Nuclear Security Administration (NNSA) Cyber Security Program” and “the NRC can inspect against and enforce [MOX Services’] commitment.”¹¹⁷

To be sure, cybersecurity at fuel cycle facilities as a general matter presents an important policy issue, even if that issue is not appropriate for resolution in this adjudication as discussed above. Indeed, since the Board’s initial decision, we have taken additional steps in the development of rules governing cybersecurity at fuel cycle facilities. In particular, we have directed the NRC staff to engage in a rulemaking proceeding to develop cybersecurity regulations for fuel-cycle facilities, including the MOX Facility.¹¹⁸ Consistent with our longstanding practice, a licensing proceeding is not the appropriate venue for generic rulemaking issues.¹¹⁹ But Intervenor will have the opportunity to participate in the NRC’s rulemaking activities on cybersecurity for fuel cycle facilities. We encourage Intervenor and other interested members of the public to participate in the rulemaking as it progresses through the notice-and-comment process.

2. NRC’s Regulations and MOX Services’ Control Plan

Intervenor argues that a gap exists between our 10 C.F.R. Part 74 regulations and the revised Control Plan. Intervenor refers to Judge Farrar’s juxtaposition of our current, assertedly “antiquated” regulations with MOX Services’ modern computerized tracking system and then observe that the Commission, when it originally promulgated Part 74, did not contemplate the kind of MC&A measures that MOX Services proposes.¹²⁰ This line of argument reiterates Intervenor’s earlier expressions of dissatisfaction with MOX Services’ proposed use of two computer systems to perform various MC&A functions, as opposed to “physical” verification processes. As the Board extensively discussed, by its terms, the regulation here is technology-neutral, and it therefore can accommodate technologies developed after its adoption.¹²¹ Here again, Intervenor has failed to raise a material question. The Board has determined, based on an extensive adjudicatory record that took into account Intervenor’s arguments and evidence, that MOX Services’ approach satisfies our regulations; Intervenor’s support for a different

¹¹⁷ Ex. APP000034, Program Cyber Security Plan Baseline Requirements (Jan. 24, 2012); LBP-14-1, 79 NRC at 94-95 (citing Tr. at 1750 (Klukan) and 1844 (Tiktinsky)).

¹¹⁸ Staff Requirements — SECY-14-0147 — Cyber Security for Fuel Cycle Facilities (Mar. 24, 2015) (ADAMS Accession No. ML15083A175).

¹¹⁹ *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), ALAB-655, 14 NRC 799, 816 (1981); *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1974)).

¹²⁰ Petition for Review at 23-24 (quoting LBP-14-1, 79 NRC at 120 (Farrar, J., dissenting)).

¹²¹ LBP-14-1, 79 NRC at 51-52.

approach is not sufficient to raise a substantial question regarding the Board's decision.

3. Adequacy of the NRC Staff's Review

Finally, Intervenors ask us to grant their petition for review based on their claim that the Staff's review was inadequate.¹²² Intervenors do not seek reversal of the Board's decision on this ground.¹²³ Instead, they ask us to conduct such a review ourselves.¹²⁴ We decline to do so, on the well-established ground that the adequacy of the Staff's review is not a litigable issue in a licensing case.¹²⁵

C. Protected Information

During the course of the hearing on this matter, the Board received testimony and exhibits, some of which were fully or partially withheld from public disclosure. In addition, the pleadings before us have been fully withheld from public disclosure. To ensure that protected information is not inadvertently disclosed, at this time this Memorandum and Order has been released only to the parties. Within 10 days of the date of this decision, the parties are directed to jointly submit proposed redactions to this decision or a statement that no redactions are needed. Any proposed redactions should be for the sole purpose of preventing public release of nonpublic information. Thereafter, we will release a publicly available version of this Memorandum and Order as soon as practicable.

III. CONCLUSION

For the reasons set forth above, we *deny* Intervenors' petition for review. We *direct* the parties to jointly submit proposed redactions to this Order or a statement that no redactions are needed within 10 days.

¹²² Petition for Review at 4, 24-25.

¹²³ Intervenors criticize the Board for not stating whether it was relying on the Staff and for stating merely that "[t]he Board has considered each witness' testimony to the extent appropriate." *Id.* at 24 (quoting LBP-14-1, 79 NRC at 55). Yet a review of the Board's decision shows extensive citation to all parties' testimony and exhibits.

¹²⁴ Petition for Review at 4.

¹²⁵ See, e.g., *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-8, 41 NRC 386, 395-96 (1995); *Pa'ina Hawaii, LLC*, CLI-08-3, 67 NRC 151, 168 n.73 (2008).

IT IS SO ORDERED.¹²⁶

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 23d day of April 2015.

¹²⁶ Chairman Burns did not participate in this matter.

Dissenting Opinion of Commissioner Baran

I respectfully dissent from the majority opinion. In my view, the issue of cybersecurity raises a substantial question that merits granting Intervenor's petition for review. I believe that the information in the record is insufficient to support the conclusions reached by the Board and the Commission regarding the cybersecurity of the computerized systems that are intended to perform Material Control and Accounting (MC&A) functions at Shaw AREVA MOX Services' (MOX Services) mixed oxide fuel fabrication facility.

As a preliminary matter, I disagree with the Board's finding that the Intervenor did not raise cybersecurity concerns prior to the supplemental hearing. The record reflects that Intervenor expressed concerns relating to MOX Services' cybersecurity measures early in the proceeding, both in their initial testimony prior to the first evidentiary hearing and at the first evidentiary hearing.¹ In my view, that early introduction of cybersecurity concerns placed the issue before the Board.

I also disagree with the Board when it, in effect, concluded that the determination of the adequacy of MOX Services' cybersecurity program was beyond the scope of this proceeding. It is clear from the record before us that MOX Services will be relying on highly automated, computerized systems to, among other things, perform MC&A functions, including verifying item presence. These are novel systems unlike those used by other material licensees to date. Yet, the evidentiary record contains gaps with respect to MOX Services' cybersecurity program and how it relates to its MC&A systems.

MOX Services does not currently have a cybersecurity plan; rather, it has committed to follow NNSA cybersecurity standards when it develops its plan in the future. Because MOX Services will rely so heavily on first-of-a-kind, highly automated systems to perform some MC&A functions, the adequacy of its cybersecurity program is integral to finding that the MC&A systems will function as intended and satisfy NRC's regulatory requirements. As the Board explained, "accuracy of the methodology is an integral component of the requirement to provide reasonable assurance of item presence and integrity with a 99% power of detection, especially when item sampling is entirely computer-based."²

¹ See Ex. INT000001, Direct Testimony of Dr. Edwin S. Lyman in Support of Intervenor's Contentions 9, 10, and 11 (Oct. 20, 2011), at 11 (unnumbered) (nonpublic) ("[T]he security of these computer systems [the Manufacturing Management Information System and the Programmable Logic Controllers] must also be a concern, particularly in light of the contemporary threat environment."); Tr. at 1303-04, 1420 (nonpublic) (Intervenor introducing Ex. INT000014, "MOX Services Cyber Security Threat Analysis," Ver. 2.2 (Sept. 2009) to rebut MOX Services' testimony that it is extremely difficult to tamper with its computer systems); Tr. at 1524 (nonpublic) (Intervenor's expert witness discussing compromise of the computer system with respect to alleged thefts).

² LBP-14-1, 79 NRC 39, 81 (2014).

Thus, in order for the Commission to determine that this unique MC&A system will function as intended, the Commission must find that MOX Services' cybersecurity program is adequate. To make such a finding, the NRC Staff should review the NNSA cybersecurity standards that MOX Services has committed to follow and determine the sufficiency of those standards to provide reasonable assurance that the MC&A system will meet NRC's existing MC&A regulatory requirements. While there is some information in the record related to cybersecurity, I find nothing in the record stating that either the Board or the NRC Staff made a determination regarding the adequacy of cybersecurity at MOX Services' facility. In the absence of an NRC determination that MOX Services' cybersecurity commitments will provide reasonable assurance that its MC&A systems will function as intended, I see no basis for finding that MOX Services' proposed automated MC&A systems will satisfy 10 C.F.R. § 74.55(b).

It may well be that the NRC Staff could readily explain that the cybersecurity standards for the MC&A systems are adequate and that the MC&A systems will function as intended. But the record does not currently include such a demonstration. Granting the Petition for Review would provide an opportunity to supplement the record on this key issue.

I acknowledge the agency's longstanding practice of not accepting contentions related to matters that are (or are about to become) the subject of rulemaking.³ In these circumstances, however, the rulemaking on cybersecurity for fuel cycle facilities being initiated by the NRC Staff is unrelated to MOX Services' ability to meet the NRC's current MC&A regulations. Even though the Commission recently decided to proceed with this rulemaking, MOX Services must satisfy NRC's existing MC&A regulatory requirements. With highly automated and computerized MC&A systems, MOX Services cannot meet those requirements without ensuring data accuracy, which necessarily assumes data and cybersecurity.

In sum, I would have the Commission grant the Petition for Review and supplement the record on MOX Services' cybersecurity measures to provide reasonable assurance that NRC's MC&A regulations can indeed be met by MOX Services' unique systems.

³ See, e.g., *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1975) ("[L]icensing boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.").

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

DTE ELECTRIC COMPANY (Fermi Nuclear Power Plant, Unit 3)	Docket No. 52-033-COL
DUKE ENERGY CAROLINAS, LLC (William States Lee III Nuclear Station, Units 1 and 2)	Docket Nos. 52-018-COL 52-019-COL
LUMINANT GENERATION COMPANY LLC (Comanche Peak Nuclear Power Plant, Units 3 and 4)	Docket Nos. 52-034-COL 52-035-COL
NUCLEAR INNOVATION NORTH AMERICA LLC (South Texas Project, Units 3 and 4)	Docket Nos. 52-012-COL 52-013-COL
PROGRESS ENERGY FLORIDA, INC. (Levy County Nuclear Power Plant, Units 1 and 2)	Docket Nos. 52-029-COL 52-030-COL
STP NUCLEAR OPERATING COMPANY (South Texas Project, Units 1 and 2)	Docket Nos. 50-498-LR 50-499-LR
TENNESSEE VALLEY AUTHORITY (Watts Bar Nuclear Plant, Unit 2)	Docket No. 50-391-OL

April 23, 2015

CONTINUED STORAGE

The Continued Storage Rule (10 C.F.R. § 51.23) deems the environmental impacts of continued storage incorporated into environmental impact statements for initial reactor licensing and subsequent license renewal actions. Additional supplementation of environmental impact statements for these actions is not required.

NATIONAL ENVIRONMENTAL POLICY ACT

The Continued Storage rulemaking proceeding satisfied the dual goals of the National Environmental Policy Act — it informed decision makers of the environmental impacts of continued storage and made ample information available to interested states, local governments, and members of the public.

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

In completing licensing actions dependent upon the Continued Storage Rule where a final environmental impact statement was completed before the Continued Storage rule was issued, the NRC Staff must consider whether, and to what extent, the impacts of continued storage affect previously completed environmental impact statements. In conducting this analysis, the NRC Staff must determine whether or not to prepare a supplemental environmental impact statement based on the criteria in 10 C.F.R. § 51.92.

MEMORANDUM AND ORDER

Several environmental organizations (collectively, Petitioners) have requested that we order the supplementation of final environmental impact statements in each of the captioned matters to reference the recently published Continued Storage generic environmental impact statement (Continued Storage GEIS).¹ For the reasons set forth below, we deny the petition.

¹ Petition to Supplement Reactor-Specific Environmental Impact Statements to Incorporate by Reference the Generic Environmental Impact Statement for Continued Spent Fuel Storage (Jan. 28, 2015) at 2 (Petition); NUREG-2157, Vols. 1 & 2, *Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel* (Sept. 2014) (ADAMS Accession Nos. ML14196A105 and ML14196A107) (Continued Storage GEIS).

I. BACKGROUND

Last year, we approved the Continued Storage Rule — supported by the Continued Storage GEIS — in accordance with the National Environmental Policy Act (NEPA) and the Administrative Procedure Act, to assess the environmental impacts associated with the storage of spent nuclear fuel after the end of a reactor’s license term.² The Continued Storage Rule directs that the “impact determinations in [the Continued Storage GEIS] shall be deemed incorporated into the environmental impact statements” associated with combined license and license renewal applications, such as those at issue here.³ Petitioners challenge the NRC Staff’s implementation of the Continued Storage Rule in the environmental impact statements for the captioned matters.⁴ The NRC Staff and the applicants oppose the petition; Petitioners have replied.⁵

²Final Rule: “Continued Storage of Spent Nuclear Fuel,” 79 Fed. Reg. 56,238 (Sept. 19, 2014) (Continued Storage Rule); National Environmental Policy Act § 102, 42 U.S.C. § 4332 (2012); Administrative Procedure Act, 5 U.S.C. § 553 (2012).

³10 C.F.R. § 51.23(b).

⁴*See, e.g.*, Petition at 2.

⁵NRC Staff Opposition to the “Petition to Supplement Reactor-Specific Environmental Impact Statements to Incorporate by Reference the Generic Environmental Impact Statement for Continued Spent Fuel Storage” (Feb. 12, 2015) (filed in each of the captioned matters) (Staff Answer); Luminant Response Opposing Petition to Supplement Environmental Impact Statements (Feb. 12, 2015); Applicant’s Opposition to Petition to Supplement Fermi 3 Final Environmental Impact Statement to Reference Continued Storage Generic Environmental Impact Statement (Feb. 12, 2015) (DTE Answer); Answer of Duke Energy Carolinas, LLC Opposing Petition to Supplement W.S. Lee Final Environmental Impact Statement (Feb. 12, 2015); Answer of Progress Energy Florida, Inc. Opposing Petition to Supplement Levy County Final Environmental Impact Statement (Feb. 12, 2015); Answer of Dominion Virginia Power Opposing Petition to Supplement North Anna Final Environmental Impact Statement (Feb. 12, 2015); Nuclear Innovation North America LLC Response Opposing Petition to Supplement Environmental Impact Statements (Feb. 12, 2015); STP Nuclear Operating Company Response Opposing Petition to Supplement Environmental Impact Statements (Feb. 12, 2015); Tennessee Valley Authority’s Answer Opposing Petition to Supplement Reactor-Specific Environmental Impact Statements to Incorporate by Reference the Generic Environmental Impact Statement for Continued Spent Fuel Storage (Feb. 12, 2015); Petitioners’ Reply to Oppositions to Petition to Supplement Reactor-Specific Environmental Impact Statements to Incorporate by Reference the Generic Environmental Impact Statement for Continued Spent Fuel Storage (Feb. 18, 2015) (Reply).

The Nuclear Energy Institute filed an unopposed motion for leave to file a brief *amicus curiae* opposing the Petition. Nuclear Energy Institute, Inc.’s Unopposed Motion for Leave to File *Amicus Curiae* Brief (Feb. 12, 2015); *Amicus Curiae* Brief of the Nuclear Energy Institute, Inc. in Response to Petitions to Supplement Site-Specific Environmental Impact Statements to Reference the Continued Storage Generic Environmental Impact Statement (Feb. 12, 2015). Our rule governing *amicus curiae* participation does not contemplate a brief under the current circumstances. *See* 10 C.F.R. § 2.315(d) (providing the opportunity to file *amicus* briefs for matters taken up at our discretion under 10 C.F.R. § 2.341 or *sua sponte*). We nonetheless have considered the Nuclear Energy Institute’s views as a

(Continued)

II. DISCUSSION

Petitioners argue that to comply with our obligations under NEPA and our implementing regulations in 10 C.F.R. Part 51 we must supplement the final environmental impact statements in the captioned matters to incorporate by reference the Continued Storage GEIS.⁶ Without this supplementation, Petitioners claim, our final environmental impact statements will not provide “complete, accurate, and up-to-date sources of information for members of the public and state and local governments.”⁷ As discussed below, we find Petitioners’ claims to be without merit.⁸

matter of discretion. *See, e.g., Omaha Public Power District* (Fort Calhoun Station, Unit 1), CLI-15-5, 81 NRC 329, 333 n.19 (2015) (citing *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-13-9, 78 NRC 551, 556 n.17 (2013)).

⁶ Petition at 2 (citing NEPA and 10 C.F.R. Part 51, App. A).

⁷ Petition at 2 (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). Petitioners also contend that supplementation is necessary to “allow members of the public to lodge . . . ‘placeholder’ contentions challenging [our] reliance, in individual licensing proceedings, on the [Continued Storage] GEIS and [Continued Storage] Rule.” Petition at 2-3. Petitioners assert that such contentions would “ensure that if the Court [of Appeals] overturns the [Continued Storage] Rule and/or the [Continued Storage] GEIS, NRC licensing decisions that rely on them will also be overturned.” *Id.* at 3. We need not address here Petitioners’ assertions concerning either the significance of “placeholder” contentions or their relationship to any petitions for review pending before the court of appeals. Petitioners did not include any such contentions either in the petition or in the accompanying filings. *See, e.g.,* Petition at 2-3. Separately, however, two hearing requests seeking to admit “placeholder” contentions were filed before us. *See* Missouri [Coalition] for the Environment’s Hearing Request and Petition to Intervene in License Renewal Proceeding for Callaway Nuclear Power Plant (Dec. 8, 2014) (ADAMS Accession No. ML14342B010); Missouri [Coalition] for the Environment’s Motion to Reopen the Record of License Renewal Proceeding for Callaway Unit 1 Nuclear Power Plant (Dec. 8, 2014) (ADAMS Accession No. ML14342B011); Beyond Nuclear’s Hearing Request and Petition to Intervene in Combined License Proceeding for Fermi Unit 3 Nuclear Power Plant (Feb. 12, 2015) (ADAMS Accession No. ML15043A567); Beyond Nuclear’s Motion to Reopen the Record of Combined License Proceeding for Fermi Unit 3 Nuclear Power Plant (Feb. 12, 2015) (ADAMS Accession No. ML15043A566). We deny these two requests in separate decisions also issued today. *See Union Electric Co.* (Callaway Plant, Unit 1), CLI-15-11, 81 NRC 546 (2015); *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-12, 81 NRC 551 (2015). Further, three additional hearing requests proposing similar placeholder contentions have been filed recently. Southern Alliance for Clean Energy’s Motion for Leave to File a New Contention Concerning Reliance by Turkey Point Draft Environmental Impact Statement on the Continued Spent Fuel Storage Rule (Apr. 13, 2015) (ADAMS Accession No. ML15103A468); Southern Alliance for Clean Energy’s Hearing Request and Petition to Intervene in Operating License Proceeding for Watts Bar Unit 2 Nuclear Power Plant (Apr. 21, 2015) (ADAMS Accession No. ML15111A356); Nuclear Information and Resource Service’s Hearing Request and Petition to Intervene in Combined License Proceeding for Levy County Nuclear Plant (Apr. 22, 2015) (ADAMS Accession No. ML15111A478). These requests will be addressed separately.

⁸ The litigants present numerous arguments regarding the procedural propriety of the petition now
(Continued)

A. Incorporation of Continued Storage Impacts

Petitioners argue that, despite the plain language of 10 C.F.R. § 51.23, the impact determinations from the Continued Storage GEIS are “in fact . . . *not* incorporated into individual reactor [final environmental impact statements]” because “the NRC has taken no steps to ensure that reactor-specific [final environmental impact statements] . . . cross-reference or summarize the [Continued Storage] GEIS.”⁹ Petitioners argue that our treatment of the Continued Storage GEIS does not comport with either NEPA case law or our regulations regarding the incorporation of material in environmental impact statements by reference.¹⁰ Specifically, Petitioners express concern that our NEPA process with respect to this issue did not appropriately comply with regulations in 10 C.F.R. Part 51, Appendix A.¹¹

We find that Petitioners do not present a compelling case to support their arguments. Petitioners misread the plain language of 10 C.F.R. § 51.23(b), which states that the environmental impacts of continued storage are “deemed incorporated” into the environmental impact statements at issue in these proceedings.¹² By its terms, 10 C.F.R. § 51.23(b) does not contemplate that the environmental impacts in the Continued Storage GEIS will be incorporated by reference, as they have already been incorporated into environmental impact statements by operation of law. As we stated in the *Federal Register* notice for the Continued Storage Rule, the Continued Storage GEIS sets forth the environmental impacts of post-licensed-life storage and “[n]o additional analysis of the impacts of continued storage is required” in site-specific NEPA documents.¹³

before us. *See, e.g.*, Petition at 6-7; Staff Answer at 4-10; DTE Answer at 5-7. Because we find that the petition fails on the merits, we need not address these procedural issues. *See, e.g.*, *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221, 239 n.100 (2015) (citing *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 158 n.65 (2011)); *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-7, 80 NRC 1, 7 n.22 (2014).

⁹ Petition at 3-4 (emphasis in original) (footnote omitted).

¹⁰ *Id.* at 7-9.

¹¹ *Id.* at 8.

¹² 10 C.F.R. § 51.23(b).

¹³ Continued Storage Rule, 79 Fed. Reg. at 56,243. Absent a waiver, we do not expect the NRC Staff to revisit the impact determinations made in the Continued Storage GEIS as part of its site-specific NEPA reviews. The “deemed incorporated” function of 10 C.F.R. § 51.23(b) provides administrative efficiency by adding the environmental impacts of continued storage to site-specific environmental impact statements without additional work by the Staff. But this administrative step does not relieve the NRC of the responsibility to fully consider the environmental impacts of licensing decisions, including the impacts resulting from the continued storage of spent fuel. As discussed below, we expect the Staff to consider the environmental impacts of continued storage in the broader context of its site-specific NEPA reviews. Where, as here, the final environmental impact statement was

(Continued)

In this instance, we have adopted a specific regulation that supersedes our general NEPA regulations in 10 C.F.R. Part 51 with respect to the environmental impacts of continued storage. Rather than impose additional procedural requirements on the Staff to “incorporate by reference” the environmental impacts of continued storage in every reactor licensing and license renewal environmental impact statement, we deemed these impacts incorporated into environmental impact statements as part of the Continued Storage Rule.¹⁴ Thus, as we have done in the case of other generic environmental issues, we have adopted a specific procedure that governs the consideration of the environmental impacts of continued storage in our initial licensing and license renewal NEPA documents.¹⁵ It is well established that specific regulations (here, the Continued Storage Rule) control over general regulations (here, our general NEPA implementing regulations in 10 C.F.R. Part 51).¹⁶ Because 10 C.F.R. § 51.23(b) prescribes a specific procedure for incorporating the environmental impacts of continued storage into a site-specific analysis, this procedure — rather than a procedure set forth in the general provisions of 10 C.F.R. Part 51 — governs our environmental review in this instance.

B. General NEPA Obligations

In challenging the Staff’s application of our regulations implementing NEPA, Petitioners raise concerns that, at bottom, challenge our compliance with our general obligation under NEPA to consider the environmental impacts of major federal actions. The statutory requirement to prepare an environmental impact statement serves two purposes.¹⁷ First, the environmental impact statement ensures that decisionmakers “will have available, and will carefully consider, detailed information concerning significant environmental impacts.”¹⁸ Second, the environmental impact statement “guarantees that the relevant information will

issued prior to the issuance of the Continued Storage Rule, we expect the Staff to ensure that the environmental impacts of continued storage are fully considered in the broader NEPA context for each licensing action and to publicly disclose this review.

¹⁴ Continued Storage Rule, 79 Fed. Reg. at 56,243.

¹⁵ See, e.g., NUREG-1437, Rev. 1, Vols. 1-3, Generic Environmental Impact Statement for License Renewal of Nuclear Plants — Final Report (June 2013) (ADAMS Accession Nos. ML13106A241, ML13106A242, and ML13106A244); Final Rule: “Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses,” 78 Fed. Reg. 37,281, 37,282-83 (June 20, 2013).

¹⁶ See, e.g., *RadLAX Gateway Hotel, LLC v. Amalgamated Bank*, 132 S. Ct. 2065, 2071 (2012); *Bulova Watch Co. v. United States*, 365 U.S. 753, 758 (1961); *Toledo Edison Co. (Davis-Besse Nuclear Power Station)*, ALAB-300, 2 NRC 752, 761 (1975) (citing *Ginsberg & Sons v. Popkin*, 285 U.S. 204, 208 (1932)).

¹⁷ *Robertson*, 490 U.S. at 349.

¹⁸ *Id.*

be made available to the larger audience [such as Petitioners and state and local governments] that may also play a role in the decisionmaking process.”¹⁹ Our approach to assessing the environmental impacts of continued storage satisfies both these purposes.

With respect to the first purpose — ensuring that we have available for our consideration detailed information regarding the environmental impacts of continued storage — we have prepared, and approved, a comprehensive generic analysis of those impacts.²⁰ The Staff, in its 2-year review, prepared a two-volume generic environmental impact statement that provides extensive detail regarding the environmental impacts of continued storage.²¹ To ensure that these impacts are considered in individual licensing actions that could implicate continued storage, we adopted a rule, 10 C.F.R. § 51.23, that deems these impacts incorporated into site-specific environmental impact statements.²²

With respect to the second purpose — ensuring that information is made available to members of the public and state and local governments — the Staff used a comprehensive rulemaking and NEPA process that involved extensive, robust, and meaningful public participation. Petitioners claim that, without supplemental environmental impact statements, state and local decisionmakers are “deprived of any information regarding the NRC’s current analysis of” continued storage.²³ The rulemaking record does not bear out Petitioners’ claim. The Continued Storage Rule and GEIS were developed through a robust, 2-year notice-and-comment process that was one of the most extensive in NRC history and included an extended public comment period and thirteen public meetings held at various locations around the country.²⁴ Members of the public, including Petitioners and state and local decisionmakers, were involved throughout the rulemaking process.²⁵ From the beginning of this process, we recognized the importance of public involvement, and we — and the Staff — ensured that

¹⁹ *Id.*

²⁰ *See* Continued Storage GEIS.

²¹ *Id.* The Continued Storage GEIS responds to the three issues identified by the court of appeals (spent fuel pool fires, spent fuel pool leaks, and the possibility of a repository never becoming available). To fully consider the impacts of a repository never becoming available, the Continued Storage GEIS contains a comprehensive analysis of the environmental impacts of at-reactor and away-from-reactor storage of spent fuel for three time frames: 60 years after the end of a reactor’s licensed life for operation, an additional 100 years of storage, and the indefinite storage of spent nuclear fuel. *Id.* chs. 4 and 5.

²² 10 C.F.R. § 51.23(b); Continued Storage Rule, 79 Fed. Reg. at 56,243.

²³ Petition at 9.

²⁴ *See, e.g.*, Continued Storage Rule, 79 Fed. Reg. at 56,253.

²⁵ *See, e.g.*, Continued Storage GEIS § D.3, List of Unique Comment Authors (noting the many individuals and groups who submitted comments during the public comment period for the Continued Storage GEIS and Rule).

members of the public had the opportunity to fully participate in this proceeding.²⁶ The NRC need not undertake incorporation by reference of the GEIS where, as here, we have already taken public comment and performed a comprehensive analysis of the environmental consequences of continued spent fuel storage.²⁷

Further, since the publication of the Continued Storage Rule, the Staff has provided public notice of the Continued Storage Rule and GEIS in the context of the NEPA reviews for proceedings where the NRC is about to make a final decision. At the time the Continued Storage Rule was promulgated, we directed that “the results of the continued storage proceeding must be accounted for before finalizing individual license decisions.”²⁸ In response to this direction, the Staff has assessed whether supplementation is needed for final environmental impact statements completed before the Continued Storage Rule was promulgated.²⁹ Our NEPA implementing regulations in 10 C.F.R. § 51.92 specify that supplementation of a final environmental impact statement is required when a final action has not been taken and “[t]here are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.”³⁰

Petitioners did not raise the issue of supplementation in their initial petition but contend on reply that, “assuming for purposes of argument that [10 C.F.R. § 51.92] does apply here,” the vacatur and remand of the Waste Confidence proceeding by the court of appeals in *New York v. NRC* constitutes new and significant information and changed circumstances that necessitate supplementation under 10 C.F.R. § 51.92.³¹ We disagree. As discussed above, no additional procedural steps are necessary to add the impacts of continued storage to existing environmental impact statements because 10 C.F.R. § 51.23, by its terms, has already done so.

²⁶ See, e.g., *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 67 (2012); Proposed Rule, Proposed Waste Confidence Rule and Draft Generic Environmental Impact Statement — Public Meetings, 78 Fed. Reg. 54,789 (Sept. 6, 2013) (announcing plans to hold public meetings at various locations around the country).

²⁷ See *Nevada v. Department of Energy*, 457 F.3d 78, 90-91 (D.C. Cir. 2006) (declining to direct the Department of Energy to revise its final EIS addressing transportation of waste from production sources to Yucca Mountain, Nevada, where the EIS did not identify a preferred rail corridor but the agency later announced its preference in a *Federal Register* notice and sought public comment; the court observed that to require revision would be a “meaningless gesture” in view of the agency’s subsequent disclosure).

²⁸ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 77 (2014).

²⁹ See, e.g., Consideration of New Information Regarding the Impacts of the Continued Storage of Spent Fuel for the Fermi Nuclear Power Plant, Unit 3, Combined License Application (ADAMS Accession No. ML14318A477) (Fermi 3 New Information Analysis).

³⁰ 10 C.F.R. § 51.92(a)(2).

³¹ Reply at 7-8 (citing *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012)).

Further, the determination of whether information is significant enough to require supplementation of an environmental impact statement is not governed by the volume of information developed or the significance of the agency effort in developing the information. Rather, the Staff must consider, when finalizing site-specific environmental analyses, whether, and to what extent, the now-incorporated impacts of continued storage affect the recommendations and analyses contained in the final environmental impact statements. Undertaking this analysis does not mean that supplementation of the final environmental impact statements is automatically required: as we have stated in the past, supplementation “is not necessary every time new information comes to light after the [environmental impact statement] is finalized.”³²

Supplementation is required when the new information presents “a seriously different picture of the environmental impact of the proposed project from what was previously envisioned.”³³ Here, the vacatur and remand of the 2010 Waste Confidence Decision and Temporary Storage Rule, did not, by themselves, automatically trigger the supplementation requirements in 10 C.F.R. § 51.92. The relevant question is whether the inclusion of the environmental impacts from the Continued Storage GEIS presents “a seriously different picture” of the environmental impacts that have been assessed in the relevant licensing action, and of our analysis of those impacts, when compared to the previously issued final environmental impact statement. As we directed in CLI-14-8, the Staff must account for the environmental impacts of continued storage “before finalizing individual licensing decisions,” and, when appropriate circumstances exist, we expect that the question of whether or not to prepare a supplemental final environmental impact statement to be part of that analysis.³⁴ In general, the environmental impact statements associated with our reactor licensing actions provide comprehensive analyses of the environmental impacts of the proposed actions, including storage of spent fuel, for the license term.³⁵ The Staff’s assessment of the environmental

³² *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-39, 60 NRC 657, 659 (2004) (citing *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999)) (internal quotation marks omitted). As the Staff notes, “[t]o warrant supplementation, ‘new information’ must paint a ‘seriously different picture of the environmental landscape.’” Staff Answer at 8-9 (citing *Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388-89 (2012); *National Committee for the New River, Inc. v. Federal Energy Regulatory Commission*, 373 F.3d 1323, 1330 (D.C. Cir. 2004)).

³³ *Hydro Resources*, CLI-04-39, 60 NRC at 659 (quoting *Hydro Resources*, CLI-99-22, 50 NRC at 4).

³⁴ *Calvert Cliffs*, CLI-14-8, 80 NRC at 77.

³⁵ See, e.g., NUREG-1947, Final Supplemental Environmental Impact Statement for Combined Licenses (COLs) for Vogtle Electric Generating Plant Units 3 and 4 (Mar. 2011) (ADAMS Accession (Continued)

impacts of continued storage (impacts that occur after the end of the license term) constitutes just one component of the assessment of many impacts associated with these proposed actions.³⁶ Nevertheless, the supplementation analysis must be conducted on a proceeding-specific basis to ensure that the unique circumstances of each proceeding (e.g., the scope of the analysis, the procedural posture, any balancing of costs and benefits and evaluation of alternatives, etc.) are appropriately considered to determine whether supplementation or other appropriate action is required.

For example, the Staff has conducted such an analysis for the *Fermi* combined license proceeding, in which it analyzed the environmental impacts of continued storage in the context of the *Fermi* environmental review; the Staff made its analysis publicly available in December 2014.³⁷ Such an analysis complies with our direction that “the results of the continued storage proceeding must be accounted for before finalizing individual licensing decisions.”³⁸ In recognition of our NEPA obligations, we expect the Staff, when considering continued storage in licensing reviews with previously completed final environmental impact statements, to use a consistent and transparent process to ensure that all stakeholders are aware of how the environmental impacts of continued storage are considered in each licensing action affected by 10 C.F.R. § 51.23.

III. CONCLUSION

In light of these considerations, we *deny* the petition.

No. ML11076A010); NUREG-1437, Supp. 30, Vols. 1 & 2, Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Vermont Yankee Nuclear Power Station (Aug. 2007) (ADAMS Accession Nos. ML072050012 and ML072050013).

³⁶ See, e.g., Continued Storage GEIS § 4.3 (“The environmental analysis in [the Continued Storage] GEIS fulfills a small part of the NRC’s NEPA obligation with respect to the [initial license] or [license renewal review] of a nuclear reactor or spent fuel storage facility.”); *id.* § D.2.2.5 (“The [Continued Storage] GEIS and [Continued Storage] Rule will not be used to address the impacts of spent fuel storage during a proposed license term. The impacts of storage during a proposed license term . . . would be subject to the safety and environmental review [that is] part of that review.”).

³⁷ *Fermi 3* New Information Analysis.

³⁸ *Calvert Cliffs*, CLI-14-8, 80 NRC at 77.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 23d day of April 2015.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

Docket No. 50-483-LR

UNION ELECTRIC COMPANY
(Callaway Plant, Unit 1)

April 23, 2015

CONTINUED STORAGE

The Continued Storage Rule (10 C.F.R. § 51.23) generically satisfies the NRC's obligations to consider the environmental impacts of spent fuel storage after the end of a reactor's license term in the environmental analyses supporting initial reactor licensing, reactor license renewal, and independent spent fuel storage licensing and renewal actions.

**RULES OF PRACTICE: CONTENTIONS (CHALLENGES TO
COMMISSION REGULATIONS)**

"[N]o rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding" unless the petitioner first obtains a waiver. 10 C.F.R. § 2.335(a).

MEMORANDUM AND ORDER

Missouri Coalition for the Environment (MCE) moves to reopen the record of this proceeding. MCE seeks a hearing on its claim that the final supplemental environmental impact statement prepared in connection with this license renewal

application violates the National Environmental Policy Act by failing to consider environmental impacts associated with the continued storage of spent nuclear fuel.¹ For the reasons discussed below, MCE's request is denied.

I. BACKGROUND

MCE sought to intervene early on in this license renewal proceeding. In its initial petition, MCE proffered three contentions that ultimately were rejected by the Atomic Safety and Licensing Board.² Subsequently, our 2010 Waste Confidence Decision and Temporary Storage Rule were vacated by the court of appeals and remanded to the agency.³ In response, MCE, together with several other petitioners, filed requests to suspend final licensing decisions in this and other proceedings pending completion of our action on the remanded Waste Confidence proceeding.⁴ We suspended final licensing decisions until we addressed the court's remand and instructed the boards in the affected proceedings to hold the contentions in abeyance pending our further order.⁵ Thereafter, concurrent with our approval last year of the final Continued Storage Rule and companion Generic Environmental Impact Statement (GEIS), we lifted the suspension on final licensing decisions and directed that the proposed contention in this matter (among others) be dismissed.⁶ We observed that, "[a]s part of the

¹ Missouri [Coalition] for the Environment's Hearing Request and Petition to Intervene in License Renewal Proceeding for Callaway Nuclear Power Plant (Dec. 8, 2014) (Petition); Missouri [Coalition] for the Environment's Motion to Reopen the Record of License Renewal Proceeding for Callaway Unit 1 Nuclear Power Plant (Dec. 8, 2014) (Motion to Reopen).

² See LBP-12-15, 76 NRC 14 (2012). MCE did not appeal this decision.

³ See *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).

⁴ Petition to Suspend Final Licensing Decisions in All Pending Reactor Licensing Proceedings Pending Completion of Remanded Waste Confidence Proceedings (June 18, 2012). MCE also filed a fourth contention asserting that the applicant's environmental report improperly failed to address the environmental impacts associated with spent fuel pool leaks and fires, and the lack of a permanent spent fuel disposal facility. Intervenor's Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Callaway Nuclear Power Plant (July 9, 2012).

⁵ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63 (2012). At that time, we observed, "[t]o the extent the NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in our adjudicatory process." *Id.* at 67 (but citing *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1975) ("[L]icensing boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.")).

⁶ See NUREG-2157, Vols. 1 & 2, Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel (Sept. 2014) (ADAMS Accession Nos. ML14196A105 and ML14196A107)

(Continued)

analysis underpinning the GEIS . . . we concluded that the impacts of continued storage will not vary significantly across sites; the impacts of continued storage at reactor sites, or at away-from-reactor sites, can be analyzed generically.”⁷ For this reason, these generic determinations were appropriately excluded from litigation in individual proceedings.⁸

MCE now has filed a fresh intervention petition in which it argues that the recently released final supplemental environmental impact statement for license renewal of the Callaway plant is inherently flawed because it relies on the NRC’s generic analysis, in the Continued Storage Rule and GEIS, of the environmental impacts of the continued storage of spent fuel.⁹ The NRC Staff and the applicant, Union Electric Company, doing business as Ameren Missouri, oppose the hearing request.¹⁰

II. DISCUSSION

MCE seeks to lodge with us a “placeholder” contention.¹¹ MCE does not seek to litigate the substance of its contention now and candidly acknowledges that our rules of practice do not allow litigants to challenge our regulations within the context of individual license proceedings, absent a request for a waiver.¹² MCE’s stated reason for filing its petition and motion to reopen is to ensure that any court

(Continued Storage GEIS); Final Rule: “Continued Storage of Spent Nuclear Fuel,” 79 Fed. Reg. 56,238 (Sept. 19, 2014) (Continued Storage Rule); *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 77-79 (2014). The Staff issued the renewed license on March 6, 2015. See Ghosh, Anita, Counsel for NRC Staff, Letter to the Parties, “In the Matter of Union Electric Co. (Callaway Nuclear Power Plant, Unit 1), Docket No. 50-483-LR, Notification of Commission Authorization to Issue Renewed License” (Mar. 6, 2015).

⁷ *Calvert Cliffs*, CLI-14-8, 80 NRC at 78. We stated additionally that “the assumptions used in the analysis are sufficiently conservative to bound the impacts such that variances that may occur between sites are unlikely to result in environmental impact determinations greater than those presented in the [Continued Storage] GEIS.” *Id.* (citation omitted).

⁸ *Id.* at 79.

⁹ See NUREG-1437, Generic Environmental Impact Statement for License Renewal, Supp. 51 (Regarding Callaway Plant, Unit 1) (ADAMS Accession No. ML14289A140) (Oct. 2014), at 1-4 to 1-5, 6-3.

¹⁰ See NRC Staff Answer to Missouri Coalition for the Environment’s Hearing Request and Petition to Intervene and Motion to Reopen the Record in the License Renewal Proceeding for Callaway Unit 1 Nuclear Power Plant (Dec. 18, 2014); Ameren’s Answer Opposing Missouri Coalition for the Environment’s Hearing Request and Motion to Reopen the Record (Dec. 18, 2014).

¹¹ Petition at 2.

¹² See *id.* at 2 & 2-3 n.3. MCE does not seek a rule waiver. *Id.*

decision resulting from its federal court challenge to the Continued Storage Rule and GEIS will also be applied to the individual *Callaway* proceeding.¹³

MCE is correct that the proposed contention is not admissible under our rules of practice because it impermissibly challenges an agency regulation and is therefore outside the scope of this individual licensing proceeding.¹⁴ MCE provides seven bases for its contention, all of which challenge the generic findings in the GEIS.¹⁵ None of the contention's bases pertain specifically to the Callaway license renewal application. The contention therefore does not provide sufficient information to demonstrate a genuine dispute with the applicant on a material issue.¹⁶ For these reasons, we decline to admit the contention.¹⁷

In MCE's view, its "placeholder contention" is "the only procedural means" available for ensuring that any court decision resulting from the pending appeal of the Continued Storage Rule and GEIS will be applied to the Callaway license renewal matter.¹⁸ However, MCE cannot litigate the Continued Storage Rule and GEIS here. We addressed the environmental impacts of continued storage generically, via the rulemaking process, in accordance with NEPA and general principles of administrative law.¹⁹ MCE had — and took advantage of — the opportunity to provide comments on the proposed rule and draft GEIS.²⁰ Now

¹³ *Id.* at 2. MCE has challenged the Continued Storage Rule and Continued Storage GEIS in the U.S. Court of Appeals for the District of Columbia Circuit. *Beyond Nuclear v. NRC*, Docket No. 14-1216 (D.C. Cir. filed Oct. 29, 2014). As MCE notes in its hearing request, its petition for review has been consolidated with similar petitions before the D.C. Circuit and the case is now captioned *New York v. NRC*, Docket Nos. 14-1210, 14-1216, and 14-1217 (D.C. Cir. Oct. 31, 2014). MCE states that, should we decline to admit its contention, it will ask the court to consolidate its challenge here with its pending appeal. Petition at 2-3.

¹⁴ See, e.g., *Calvert Cliffs*, CLI-14-8, 80 NRC at 79; *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999).

¹⁵ See Petition at 7-9.

¹⁶ 10 C.F.R. § 2.309(f)(1)(vi).

¹⁷ Because MCE has not submitted an admissible contention, it necessarily has not satisfied our reopening standards because it has not raised a significant environmental issue and has not demonstrated that a materially different result would be likely if the contention had been considered initially. 10 C.F.R. § 2.326(a)(2)-(3). Because MCE's contention is inadmissible, we need not address the timeliness of its filing, a matter of some debate among the litigants.

¹⁸ Missouri [Coalition] for the Environment's Reply to Oppositions to Hearing Request/Petition to Intervene and Motion to Reopen the Record of License Renewal Proceeding for Callaway Nuclear Power Plant (Dec. 29, 2015) at 2.

¹⁹ *New York*, 681 F.3d at 483 (declining to grant the petitioners' request that the NRC consider continued storage on a site-by-site basis); see also *National Labor Relations Board v. Bell Aerospace Co. Division of Textron, Inc.*, 416 U.S. 267, 294 (1974) (agency had discretion to choose between rulemaking and adjudication); *Securities and Exchange Commission v. Chenery Corp.*, 332 U.S. 194, 203 (1947) ("the choice made between proceeding by general rule or by individual, ad hoc litigation is one that lies primarily in the informed discretion of the administrative agency").

²⁰ See Continued Storage GEIS at D-596.

that the rule has been adopted, MCE has sought review of the rule and GEIS in the appropriate venue, the court of appeals. Absent a successful petition that the rule should be waived in accordance with 10 C.F.R. § 2.335, MCE's challenges to the Continued Storage Rule and GEIS are appropriately brought before the court of appeals. Should the D.C. Circuit find any infirmities in the Continued Storage Rule or GEIS, we would take appropriate action consistent with the court's direction. In the meantime, however, admission of a "placeholder" contention is not necessary to ensure that MCE's challenges to the Continued Storage Rule and GEIS receive a full and fair airing.²¹

III. CONCLUSION

For the foregoing reasons, we *deny* MCE's motion to reopen the record of this proceeding and admit a new contention.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 23d day of April 2015.

²¹ Cf. *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-6, 75 NRC 352, 372-76 (2012) (declining a suspension request filed by the intervenor to "protect its position" and eventually enable it to litigate challenges to a final supplemental EIS following resolution of a rulemaking petition).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

Docket No. 52-033-COL

DTE ELECTRIC COMPANY
(Fermi Nuclear Power Plant,
Unit 3)

April 23, 2015

MEMORANDUM AND ORDER

Beyond Nuclear moves to reopen the record of this proceeding and seeks a hearing on its claim that the final environmental impact statement prepared in connection with this combined license application violates the National Environmental Policy Act by failing to consider the environmental impacts associated with the continued storage of spent nuclear fuel.¹ For the reasons discussed below and explained in the related decision also issued today in the *Callaway* license renewal matter, Beyond Nuclear's request is denied.²

During this combined license proceeding, the U.S. Court of Appeals for the District of Columbia Circuit vacated and remanded our 2010 Waste Confidence Decision and Temporary Storage Rule.³ For various licensing actions, including this one, the Decision and Rule served as part of the environmental analysis of

¹ See Beyond Nuclear's Hearing Request and Petition to Intervene in Combined License Proceeding for Fermi Unit 3 Nuclear Power Plant (Feb. 12, 2015) (Petition); Beyond Nuclear's Motion to Reopen the Record of Combined License Proceeding for Fermi Unit 3 Nuclear Power Plant (Feb. 12, 2015) (Motion).

² See *Union Electric Co.* (Callaway Plant, Unit 1), CLI-15-11, 81 NRC 546 (2015).

³ *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012).

the impacts of spent fuel storage after the end of a reactor's license term, pending ultimate disposal of spent fuel in a repository. In response to the court's decision, Beyond Nuclear, together with other petitioners, sought to suspend final licensing decisions in this and other proceedings pending completion of our action on the remanded Waste Confidence proceeding.⁴ We suspended final licensing decisions until we addressed the court's remand and instructed the boards in the affected proceedings to hold the contentions in abeyance pending our further order.⁵

Last year, concurrent with our approval of the final Continued Storage Rule and companion Generic Environmental Impact Statement (GEIS), we lifted the suspension on final licensing decisions and directed that the proposed contention in this matter (among others) be dismissed.⁶ We observed that, "[a]s part of the analysis underpinning the GEIS . . . we concluded that the impacts of continued storage will not vary significantly across sites; the impacts of continued storage at reactor sites, or at away-from-reactor sites, can be analyzed generically."⁷ These generic determinations, therefore, were appropriately excluded from litigation in individual proceedings.⁸

Beyond Nuclear has now filed a fresh intervention petition in which it argues that the environmental analysis for the Fermi combined license is inherently flawed because it relies on the NRC's generic analysis in the Continued Storage GEIS of the environmental impacts of the continued storage of spent fuel, yet did not supplement the final environmental impact statement to reflect these

⁴ Petition to Suspend Final Licensing Decisions in All Pending Reactor Licensing Proceedings Pending Completion of Remanded Waste Confidence Proceedings (June 18, 2012). Beyond Nuclear (together with several other intervenors) filed a new contention asserting that the draft environmental impact statement failed to address the environmental impacts associated with spent fuel pool leaks and fires, and the lack of a permanent spent fuel storage facility. Intervenors' Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Nuclear Waste at Proposed Fermi 3 Nuclear Power Plant (July 9, 2012).

⁵ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63 (2012). At that time, we observed, "[t]o the extent the NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in our adjudicatory process." *Id.* at 67 (but citing *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1975) ("[L]icensing boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.")).

⁶ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 77-79 (2014). The Board dismissed the continued storage contention consistent with our direction. Order (Denying Motion to Admit Waste Confidence Contention) (Oct. 6, 2014) at 3 (unpublished).

⁷ *Calvert Cliffs*, CLI-14-8, 80 NRC at 78-79. We stated additionally that "'the assumptions used in the analysis are sufficiently conservative to bound the impacts such that variances that may occur between sites are unlikely to result in environmental impact determinations greater than those presented in the GEIS.'" *Id.* at 79 (citation omitted).

⁸ *Id.*

impacts.⁹ Beyond Nuclear seeks to reopen the record in this proceeding to file a “placeholder” contention in anticipation that the court of appeals will overturn our recently promulgated Continued Storage Rule.¹⁰ The NRC Staff and the applicant, DTE Electric Company, oppose the petition to intervene and motion to reopen.¹¹

Beyond Nuclear seeks to lodge with us a “placeholder” contention; it does not seek to litigate the substance of the contention now and candidly acknowledges that our rules of practice do not allow litigants to challenge our regulations within the context of individual license proceedings, absent a request for a waiver.¹² Rather, Beyond Nuclear states that it filed the petition to ensure that the decision resulting from its federal court challenge to the Continued Storage Rule and GEIS will be applied to this combined license proceeding.¹³ With respect to the bases of its contention and its rationale for moving to reopen this proceeding, Beyond Nuclear’s pleadings are substantively identical to those filed in the *Callaway* license renewal proceeding, which we also rule on today.¹⁴ Particularly, the contention challenges the generic findings in the GEIS; Beyond Nuclear does not, in its new contention, specifically challenge the *Fermi* combined license application or the final environmental impact statement.¹⁵

As we explained in the *Callaway* decision, a contention that challenges an agency regulation does not raise an issue appropriately within the scope of this individual licensing proceeding and is not admissible absent a waiver.¹⁶ Further, because the contention does not engage the *Fermi* combined license application,

⁹ See NUREG-2105, Final Environmental Impact Statement for Combined License (COL) for Enrico Fermi Unit 3, Vols. 1-4 (Jan. 2013) (ADAMS Accession Nos. ML12307A172, ML12307A176, ML12307A177, ML12347A202). Petition at 1, 7, 9 n.5; NUREG-2157, Vols. 1 & 2, Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel (Sept. 2014) (ADAMS Accession Nos. ML14196A105 and ML14196A107).

¹⁰ *Beyond Nuclear v. NRC*, Docket No. 14-1216 (D.C. Cir. filed Oct. 29, 2014); see Final Rule: “Continued Storage of Spent Nuclear Fuel,” 79 Fed. Reg. 56,238 (Sept. 19, 2014).

¹¹ NRC Staff Answer to Beyond Nuclear’s Motion to Reopen the Record and Petition to Intervene (Feb. 27, 2015); Applicant’s Response Opposing Beyond Nuclear’s Motion to Reopen and Request for Hearing (Feb. 27, 2015).

¹² Petition at 1-2. Beyond Nuclear does not seek a rule waiver. *Id.* at 2 n.2.

¹³ *Id.* at 2.

¹⁴ Compare Missouri [Coalition] for the Environment’s Hearing Request and Petition to Intervene in License Renewal Proceeding for Callaway Nuclear Power Plant (Dec. 8, 2014) (ADAMS Accession No. ML14342B010), and Missouri [Coalition] for the Environment’s Motion to Reopen the Record of License Renewal Proceeding for Callaway Unit 1 Nuclear Power Plant (Dec. 8, 2014) (ADAMS Accession No. ML14342B011) with Petition and Motion.

¹⁵ Petition at 8-9.

¹⁶ *Callaway*, CLI-15-11, 81 NRC at 548-50.

Beyond Nuclear has not demonstrated a genuine dispute with the applicant on a material issue.¹⁷

For the reasons explained in *Callaway* and as discussed above, we *deny* Beyond Nuclear's motion to reopen the record of this proceeding and admit a new contention.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 23d day of April 2015.

¹⁷ *Id.* at 549. Moreover, the lack of an admissible contention necessarily precludes reopening the proceeding. *Id.* at 549 n.17.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

Docket No. 52-033-COL

DTE ELECTRIC COMPANY
(Fermi Nuclear Power Plant,
Unit 3)

April 30, 2015

MANDATORY HEARINGS

Atomic Energy Act § 189a requires that the Commission hold a hearing on each application to construct a nuclear power plant, regardless of whether an interested member of the public requests a hearing on the application. The Notice of Hearing for the “uncontested” or “mandatory” portion of the proceeding outlines the standards for the Commission’s review.

MANDATORY HEARINGS: SAFETY ISSUES

On the safety side, the Commission must determine whether: (1) the applicable standards and requirements of the Atomic Energy Act and the Commission’s regulations have been met; (2) any required notifications to other agencies or bodies have been duly made; (3) there is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of the Atomic Energy Act, and the Commission’s regulations; (4) the applicant is technically and financially qualified to engage in the activities authorized by the license; 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.

MANDATORY HEARINGS: NATIONAL ENVIRONMENTAL POLICY ACT

On the environmental side, the Commission must consider and determine: (1) whether the requirements of NEPA § 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51 (the NRC regulations implementing NEPA), have been met; (2) the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; 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) whether the NEPA review conducted by the Staff has been adequate.

MANDATORY HEARINGS

The Commission does not review DTE's application *de novo*; rather, it considers the sufficiency of the Staff's review of the application — that is, whether the Staff's review was sufficient to support the required findings.

MANDATORY HEARINGS

The scope of an uncontested proceeding is defined by the scope of the contested proceeding: all of the safety and environmental issues in DTE's combined license application, except for the contested matters, are subject to the Commission's review in the uncontested proceeding.

LICENSING BOARDS: JURISDICTION

The Board's jurisdiction terminates when there are no longer any contested matters pending before it.

ADJUDICATORY PROCEEDINGS: MOTIONS

When a party requests action from the presiding officer in an NRC adjudicatory proceeding, the request must come in the form of a motion.

NATIONAL ENVIRONMENTAL POLICY ACT, ENDANGERED SPECIES ACT

Section 7 of the Endangered Species Act requires an agency, in consultation with and with the assistance of the Secretary of the Interior or the Secretary of

Commerce (as appropriate), to ensure 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.”

NATIONAL ENVIRONMENTAL POLICY ACT

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.

NATIONAL ENVIRONMENTAL POLICY ACT

NEPA § 102(2)(E) calls for agencies to study, develop, and describe appropriate alternatives.

NATIONAL ENVIRONMENTAL POLICY ACT

NEPA § 102(2)(C) requires agencies to assess the relationship between local short-term uses and long-term productivity of the environment, to consider alternatives, and to describe the unavoidable adverse environmental impacts and the irreversible and irretrievable commitments of resources associated with the proposed action.

MEMORANDUM AND ORDER

On February 4, 2015, we held a hearing on DTE Electric Company’s combined license application to construct and operate a new nuclear reactor at the Fermi Nuclear Power Plant site in Monroe County, Michigan.¹ The purpose of the evidentiary hearing was to consider the sufficiency of the NRC Staff’s review of DTE’s application. 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). We authorize issuance of the combined license.

¹ See *In the Matter of DTE Electric Company, Combined License for Enrico Fermi Unit 3*; Notice of Hearing, 79 Fed. Reg. 72,215, 72,216 (Dec. 5, 2014) (Notice of Hearing); Tr. at 1-217 (attached as Appendix B to Order of the Secretary (Adopting Proposed Transcript Corrections and Admitting Post-Hearing Exhibits) (Mar. 9, 2015) (unpublished) (Transcript Correction Order)).

I. BACKGROUND

A. Proposed Action

DTE seeks to build a GE-Hitachi Economic Simplified Boiling Water Reactor (ESBWR) at the Fermi Nuclear Power Plant site in Monroe County, Michigan. Two units currently exist at the site: Unit 1 was permanently shut down in 1972; Unit 2 began commercial operation in 1988 and is operating today.² DTE submitted its combined license application for Unit 3 on September 18, 2008. The Staff docketed and accepted the application for review shortly thereafter.³

Over the past 6 years, the Staff has spent approximately 52,000 hours reviewing DTE's application to determine whether it complies with the Atomic Energy Act of 1954, as amended, and the NRC's regulations.⁴ The Staff's review included an analysis of the environmental impacts of constructing and operating Fermi Unit 3 in accordance with the National Environmental Policy Act of 1969 (NEPA), on which the Staff has spent another 17,000 hours.⁵ In a separate rulemaking proceeding, the Staff reviewed GE-Hitachi's application to certify the design for the ESBWR. The Staff completed the rulemaking and issued the final ESBWR design certification rule, following our approval, in October 2014.⁶ DTE's combined license application incorporates by reference the ESBWR certified design.⁷

The Office of New Reactors led the review and provided much of the expertise, with support from the Office of Nuclear Security and Incident Response,

² DTE submitted an application to renew the operating license for Fermi Unit 2 for an additional 20 years. *See* DTE Electric Company; Fermi Unit 2, 79 Fed. Reg. 34,787 (June 18, 2014). The Atomic Safety and Licensing Board designated to preside over the *Fermi* license renewal proceeding granted two petitions to intervene. *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2), LBP-15-5, 81 NRC 249 (2015). DTE has appealed the Board's decision. Applicant's Notice of Appeal of LBP-15-5 (Mar. 3, 2015); Applicant's Brief in Support of Appeal of LBP-15-5 (Mar. 3, 2015) (ADAMS Accession No. ML15062A634).

³ *See* Detroit Edison Company; Notice of Hearing, and Opportunity to Petition for Leave to Intervene and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information and Safeguards Information for Contention Preparation on a Combined License for Fermi 3, 74 Fed. Reg. 836 (Jan. 8, 2009).

⁴ Tr. at 49 (Mr. Tracy).

⁵ *Id.*

⁶ *See* 10 C.F.R. Part 52, App. E; Final Rule: "Economic Simplified Boiling-Water Reactor Design Certification," 79 Fed. Reg. 61,944 (Oct. 15, 2014) (ESBWR Final Rule). The final rule became effective on November 14, 2014. ESBWR Final Rule, 79 Fed. Reg. at 61,944.

⁷ *See generally* Ex. NRC000006A to NRC000006H and NRC000006J, DTE Energy, Fermi 3 Combined License Application (Oct. 2014) (DTE Combined License Application). Portions of DTE's combined license application contain sensitive unclassified nonsafeguards information and are not publicly available.

the Office of Nuclear Material Safety and Safeguards, the Office of Nuclear Reactor Regulation, the Office of the General Counsel, and NRC Regions I and III.⁸ The Staff held approximately eighty public meetings on the Fermi Unit 3 combined license application.⁹ In its environmental review, the Staff worked closely with the U.S. Army Corps of Engineers, a cooperating agency.¹⁰ Other federal agencies, including the U.S. Department of Homeland Security and the U.S. Fish and Wildlife Service, also contributed to the Staff's review of DTE's license application.¹¹ In addition, the Staff consulted with state, local, and tribal organizations — both in the United States and in Canada — concerning a variety of issues, including issues arising under the National Historic Preservation Act.¹² The Advisory Committee on Reactor Safeguards (ACRS), a committee of technical experts advising the Commission, provided an independent assessment of the safety aspects of the application, as required by our regulations.¹³

DTE did not pursue an early site permit for Fermi Unit 3.¹⁴ Therefore, all relevant site characteristics, including site geology, hydrology, seismology, and man-made hazards, as well as the potential environmental impacts of the project, were studied as part of the Staff's combined license review and are within the scope of our decision today.

B. Review Standards

The Atomic Energy Act, section 189a, requires that we hold a hearing on each

⁸ See Tr. at 51-52 (Tracy); Staff Witness List (Jan. 14, 2015), Attachment A, at 1-3 (Staff Witness List).

⁹ Ex. NRC000001, Staff Statement in Support of the Uncontested Hearing for Issuance of Combined License for the Fermi Nuclear Plant Unit 3, Commission Paper SECY-14-0132 (Nov. 20, 2014) at 4 (Staff Information Paper).

¹⁰ See Tr. at 59 (Mr. Delligatti).

¹¹ See Ex. NRC0000001, Staff Information Paper at 5; Tr. at 51 (Mr. Tracy), 60 (Mr. Delligatti), 152 (Ms. Sutton).

¹² Ex. NRC0000001, Staff Information Paper at 5.

¹³ 10 C.F.R. §§ 1.13, 52.87; see Stetkar, John W., Chairman of the ACRS, Letter to Allison M. Macfarlane, Chairman of the NRC (Sept. 22, 2014) (ADAMS Accession No. ML14252A294) (ACRS Letter). The ACRS concluded that “[t]here is reasonable assurance that Fermi Unit 3 can be built and operated without undue risk to the health and safety of the public” and recommended that the combined license application “be approved following its final revision.” ACRS Letter at 1. It also found that there is reasonable assurance that the ESBWR design and the Fermi Unit 3 site satisfy NRC requirements that were imposed as part of the agency's lessons learned from the Fukushima Dai-ichi accident on March 11, 2011. *Id.* at 2. The Staff responded to other, generic recommendations in the ACRS letter. See Satorius, Mark A., Executive Director for Operations, Letter to John W. Stetkar, Chairman of the ACRS (Nov. 14, 2014) (ADAMS Accession No. ML14293A058) (Staff Response to ACRS).

¹⁴ See 10 C.F.R. Part 52, Subpart A.

application to construct a nuclear power plant, regardless of whether an interested member of the public requests a hearing on the application.¹⁵ Our Notice of Hearing for the “uncontested” or “mandatory” portion of this proceeding outlines the standards for our review.¹⁶ On the safety side, we must determine whether:

- (1) the applicable standards and requirements of the Atomic Energy Act and the Commission’s regulations have been met;
- (2) any required notifications to other agencies or bodies have been duly made;
- (3) there is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of the Atomic Energy Act, and the Commission’s regulations;
- (4) the applicant is technically and financially qualified to engage in the activities authorized by the license; 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.¹⁷

On the environmental side, we must consider and determine:

- (1) whether the requirements of NEPA § 102(2)(A), (C), and (E), and the applicable regulations in 10 C.F.R. Part 51 (the NRC regulations implementing NEPA), have been met;
- (2) 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) 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) whether the NEPA review conducted by the Staff has been adequate.¹⁸

We do not review DTE’s application *de novo*; rather, we consider the sufficiency

¹⁵ AEA § 189a, 42 U.S.C. § 2239(a).

¹⁶ See Notice of Hearing, 79 Fed. Reg. at 72,216.

¹⁷ 10 C.F.R. § 52.97(a).

¹⁸ *Id.* § 51.107(a).

of the Staff's review of the application — that is, whether the Staff's review was sufficient to support the required findings.¹⁹

C. Contested Proceeding

When the Staff docketed DTE's combined license application, it also provided interested persons an opportunity to challenge the application in a contested proceeding, in accordance with Atomic Energy Act § 189a.²⁰ Nineteen individuals and environmental groups (collectively, Intervenor) submitted a request for hearing and petition to intervene with fourteen proposed contentions.²¹ A Licensing Board comprised of three administrative judges, one with legal expertise and two with technical expertise, granted Intervenor's request for hearing and admitted Contentions 3, 5, 6, and 8.²² Contention 3 pertained to the management of Class B and C low-level waste, Contention 5 pertained to hydrology at the Fermi site, Contention 6 concerned aquatic impacts from algae, and Contention 8 concerned potential adverse impacts on the eastern fox snake, a state-listed endangered species.²³

The Board granted summary disposition of Contentions 3, 5, and 6 in favor of DTE.²⁴ And after an evidentiary hearing, the Board resolved Contention 8 in favor of the Staff. The Board also held a hearing on a new contention that concerned DTE's compliance with the NRC's quality assurance regulations, Contention 15A/B, which was resolved in favor of DTE.²⁵ Intervenor petitioned for review

¹⁹ *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-12-9, 75 NRC 421, 428 (2012); *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63, 74 (2012).

²⁰ See 74 Fed. Reg. at 836.

²¹ Intervenor are Beyond Nuclear, Citizens for Alternatives to Chemical Contamination, Citizens Environmental Alliance of Southwestern Ontario, Don't Waste Michigan, Sierra Club, Keith Gunter, Edward McArdle, Henry Newman, Derek Coronado, Sandra Bihn, Harold L. Stokes, Michael J. Keegan, Richard Coronado, George Steinman, Marilyn R. Timmer, Leonard Mandeville, Frank Mantei, Marcee Meyers, and Shirley Steinman.

²² LBP-09-16, 70 NRC 227, 306 (2009). DTE challenged the Board's ruling on standing and argued that the 50-mile "proximity presumption" should no longer apply in reactor licensing proceedings based on DTE's interpretation of contemporaneous judicial concepts of standing. It did not challenge the Board's contention admissibility ruling. We affirmed the Board's ruling on standing and upheld the validity of the proximity presumption. CLI-09-22, 70 NRC 932, 933 (2009) (citing *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911 (2009)).

²³ LBP-09-16, 70 NRC at 256, 272, 277, 285-86.

²⁴ See Order (Granting Motion for Summary Disposition of Contention 3) (July 9, 2010) (unpublished); Order (Granting Motion for Summary Disposition of Contention 5) (Mar. 1, 2011) (unpublished); LBP-12-23, 76 NRC 445, 452 (2012) (among other things, granting summary disposition of Contention 6).

²⁵ LBP-14-7, 79 NRC 451, 454 (2014). See generally LBP-10-9, 71 NRC 493, 499 (2010).

of the Board's ruling on Contention 15A/B; they did not seek review of the Board's decisions resolving the other admitted contentions.²⁶ We later denied Intervenor's petition for review of the Board's dismissal of Contention 15A/B.²⁷

Shortly after it ruled on Intervenor's last remaining admitted contentions, the Board requested our permission to hold an evidentiary hearing on Intervenor's proposed Contention 23, which challenged the Staff's discussion of the environmental impacts of building a new transmission-line corridor for Fermi Unit 3.²⁸ The Board did not admit the contention because the Board found that Intervenor had filed it impermissibly late.²⁹ Nonetheless, the Board determined that Contention 23 presented issues that warranted the Board's review *sua sponte* and sought our approval to undertake such a review. Intervenor also filed a petition for review of the Board's dismissal of Contention 23.³⁰ We denied Intervenor's petition for review.³¹ And we denied the Board's request for *sua sponte* review and concluded that the environmental impacts of the transmission corridor were among the issues appropriate for resolution in this uncontested proceeding.³² We discuss the Staff's review of the transmission-line corridor as part of today's decision.

Also during the pendency of the contested proceeding, the U.S. Court of Appeals for the District of Columbia Circuit vacated and remanded our 2010 Waste Confidence Decision and Temporary Storage Rule, which for various NRC licensing actions served as part of the environmental analysis of the impacts of spent fuel storage after the end of a reactor's license term pending ultimate disposal in a repository.³³ In light of the D.C. Circuit's vacatur and remand of the rule, and in response to a number of suspension petitions filed on multiple dockets, we held the issuance of final licensing decisions for affected matters, including this one, while

²⁶ Intervenor's Petition for Review of LBP-14-07 (Ruling for Applicant on Quality Assurance) (June 17, 2014).

²⁷ CLI-14-10, 80 NRC 157 (2014).

²⁸ LBP-14-9, 80 NRC 15, 37 (2014).

²⁹ See *id.* at 34. Intervenor filed proposed Contention 23 a second time after the Staff issued the Final Environmental Impact Statement (FEIS). The Board again dismissed the contention as impermissibly late. See *id.* at 36-37.

³⁰ Intervenor's Petition for Review of Atomic Safety and Licensing Board's Dismissal of Contention 23 for Lack of Timeliness (Oct. 6, 2014); see Order of the Secretary (Sept. 10, 2014) (unpublished) (amending the deadline for Intervenor's petition for review).

³¹ CLI-15-1, 81 NRC 1 (2015).

³² *Id.* at 11.

³³ See *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012). See generally Final Rule: "Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation," 75 Fed. Reg. 81,032 (Dec. 23, 2010); Waste Confidence Decision Update, 75 Fed. Reg. 81,037 (Dec. 23, 2010).

we addressed the court's remand.³⁴ To address the court's remand and provide a comprehensive analysis of the environmental impacts of continued storage, we issued a final Continued Storage Rule and supporting Generic Environmental Impact Statement.³⁵ Concurrent with this action, we lifted the licensing suspension and dismissed, or directed licensing boards to dismiss, proposed contentions that had been filed with the multidocket suspension petitions and held in abeyance.³⁶ The Board dismissed Intervenor's continued storage contention consistent with our direction.³⁷ Separately, the Staff considered whether the Continued Storage Rule and the associated Generic Environmental Impact Statement presented new and significant information such that a supplement to the Final Environmental Impact Statement for Fermi Unit 3 (FEIS) was required.³⁸ The Staff compared the fuel cycle impacts analysis in the FEIS with the analysis in the Generic Environmental Impact Statement for Continued Storage and concluded that the information in the Generic Environmental Impact Statement did not present a seriously different picture of the environmental impacts of the proposed action when compared to the impacts that were described in the FEIS.³⁹ Therefore, the Staff determined that a supplement to the FEIS was not required.⁴⁰

Thereafter, Intervenor sought leave to file a new contention that would require the NRC to make safety-related findings for the Continued Storage Rule and suspend licensing decisions until completing that action.⁴¹ We exercised our supervisory authority to consider this and other substantively similar filings,

³⁴ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 67 (2012).

³⁵ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 77 (2014). *See generally* Final Rule: "Continued Storage of Spent Nuclear Fuel," 79 Fed. Reg. 56,238 (Sept. 19, 2014); Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel, 79 Fed. Reg. 56,263 (Sept. 19, 2014); Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel, NUREG-2157, Vols. 1 and 2 (Sept. 2014) (ADAMS Accession Nos. ML14196A105 and ML14196A107).

³⁶ *Calvert Cliffs*, CLI-14-8, 80 NRC at 79-80.

³⁷ Order (Denying Motion to Admit Waste Confidence Contention) (Oct. 6, 2014) at 3 (unpublished).

³⁸ *See* Ex. NRC000004, NRC Staff Responses to Commission Pre-Hearing Questions (Jan. 14, 2015) at 42-43 (Staff Responses to Initial Pre-Hearing Questions) (citing Consideration of New Information Regarding the Impacts of the Continued Storage of Spent Fuel for the Fermi Nuclear Power Plant, Unit 3, Combined License Application (Nov. 20, 2014) (ADAMS Accession No. ML14318A477) (Staff's New and Significant Information Analysis)).

³⁹ *Id.* at 43 (citing Staff's New and Significant Information Analysis).

⁴⁰ *Id.*

⁴¹ Intervenor's Motion for Leave to File a New Contention Concerning the Absence of Required Waste Confidence Safety Findings in the Combined Operating Licensing Proceeding for Fermi 3 Nuclear Power Plant (Sept. 29, 2014); Petition to Suspend Final Decisions in All Pending Reactor Licensing Proceedings Pending Issuance of Waste Confidence Safety Findings (Sept. 29, 2014) (errata Oct. 1, 2014; amended and corrected petition Oct. 6, 2014).

dismissed the proposed “waste confidence safety contention,” and denied the suspension petitions.⁴²

Finally, Beyond Nuclear, a party to the contested proceeding, joined a group of petitioners in a multidocket petition to supplement the environmental impact statements for a number of applications, including DTE’s combined license application for Fermi Unit 3, to incorporate by reference the analysis in the Generic Environmental Impact Statement for Continued Storage.⁴³ Beyond Nuclear also filed a new contention, accompanied by a motion to reopen the record, as a “placeholder” to permit it to challenge the Staff’s Final Environmental Impact Statement for Fermi Unit 3 (FEIS) assuming that Beyond Nuclear is successful in its pending challenge to the Continued Storage Rule in the D.C. Circuit.⁴⁴ We denied the petition to supplement and declined to admit Beyond Nuclear’s “placeholder” contention.⁴⁵ The Board has terminated its jurisdiction.⁴⁶

D. Uncontested Proceeding

The scope of an uncontested proceeding is defined by the scope of the contested proceeding: all of the safety and environmental issues in DTE’s combined

⁴² *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221, 223-24, 225 (2015); *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-9, 80 NRC 147, 149-50 (2014). Some of the parties challenging DTE’s application in the contested proceeding also joined other multidocket suspension petitions that we later denied. *See DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-7, 80 NRC 1, 5 & n.11, 10 (2014) (denying suspension request that would have halted final licensing decisions pending action on a petition for rulemaking regarding the Staff’s review of the potential expedited transfer of spent fuel from pools to dry casks); *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 146, 177-78 (2011) (requesting suspension of proceedings and other relief after the March 11, 2011, accident at Fukushima Dai-ichi).

⁴³ *See* Petition to Supplement Reactor-Specific Environmental Impact Statements to Incorporate by Reference the Generic Environmental Impact Statement for Continued Spent Fuel Storage (Jan. 28, 2015).

⁴⁴ Beyond Nuclear’s Motion to Reopen the Record of Combined License Proceeding for Fermi Unit 3 Nuclear Power Plant (Feb. 12, 2015) at 1-2; Beyond Nuclear’s Hearing Request and Petition to Intervene in Combined License Proceeding for Fermi Unit 3 Nuclear Power Plant (Feb. 12, 2015) at 1-3. *See generally* *New York v. NRC*, Nos. 14-1210, 14-1212, 14-1216, and 14-1217 (Consolidated) (D.C. Cir.) (Beyond Nuclear filed its petition for review in the D.C. Circuit on October 29, 2014).

⁴⁵ *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-10, 81 NRC 535 (2015); CLI-15-12, 81 NRC 551 (2015).

⁴⁶ LBP-15-12, 81 NRC 452 (2015); *see also* *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-14, 75 NRC 692, 693, 699-701 (2012). As the Board observed, a number of matters remained pending before the Commission after the Board resolved the final contention pending before it. LBP-15-12, 81 NRC at 454-55. To clarify an understandable point of confusion, the Board’s jurisdiction terminates when there are no longer any contested matters pending before it. In this instance, the Board’s jurisdiction terminated when we exercised supervisory authority over the “waste confidence safety contention” in CLI-14-9.

license application, except for the contested matters, are subject to our review in the uncontested proceeding.⁴⁷ Before we held the first mandatory hearings for combined license applications, we directed the Staff to provide us with an information paper on its review of each application at the time the Staff issues its final safety or environmental review document.⁴⁸ The Staff issued the FEIS for Fermi Unit 3 in January 2013 and the final Safety Evaluation Report (SER) in November 2014, which triggered the start of the uncontested portion of this proceeding.⁴⁹ We received the Staff's information paper on November 20, 2014, shortly after the Staff's issuance of the SER.⁵⁰

1. Prehearing Activities

We issued the Notice of Hearing on December 1, 2014, and set the schedule for the parties — the Staff and DTE — to file their lists of witnesses, as well as for DTE to provide its prefiled testimony.⁵¹ We also issued several questions on environmental and safety-related topics to DTE and the Staff to answer in writing before the hearing.⁵² In addition, we invited interested states, local government bodies, and federally recognized Indian tribes and Canadian Provinces, local government bodies, and First Nations to provide statements of issues for us to consider as part of the uncontested proceeding.⁵³ We received one response from

⁴⁷ See Notice of Hearing, 79 Fed. Reg. at 72,216.

⁴⁸ See generally Staff Requirements — SECY-10-0082 — Mandatory Hearing Process for Combined License Application Proceedings Under 10 C.F.R. Part 52 (Dec. 23, 2010) at 1-2 (ADAMS Accession No. ML103570203) (SRM-SECY-10-0082).

⁴⁹ See Ex. NRC0000010A to NRC0000010D, Environmental Impact Statement for the Combined License (COL) for Enrico Fermi Unit 3 (Final Report), NUREG-2105, Vols. 1-4 (Jan. 2013) (FEIS); Ex. NRC0000008A to NRC0000008B, Final Safety Evaluation Report for the Fermi 3 Combined License Application (Nov. 18, 2014) (SER). Portions of the SER contain sensitive unclassified nonsafeguards information and are not publicly available.

⁵⁰ See Ex. NRC000001, Staff Information Paper at 1.

⁵¹ Notice of Hearing, 79 Fed. Reg. at 72,216. The Staff's information paper serves as its prefiled testimony.

⁵² See Order of the Secretary (Transmitting Additional Pre-Hearing Questions) (Jan. 16, 2015) (unpublished) (Transmission-Line Corridor Questions); Order of the Secretary (Transmitting Pre-Hearing Questions) (Dec. 30, 2014) (unpublished) (Initial Pre-Hearing Questions). We also issued a question that contains sensitive unclassified nonsafeguards information and was therefore filed on the nonpublic docket for the proceeding. The parties' responses to that question were likewise filed on the nonpublic docket.

⁵³ Notice of Hearing, 79 Fed. Reg. at 72,216-17.

the Delaware Nation, which stated that it declined to participate because the Fermi Unit 3 project does not lie within its area of interest.⁵⁴

2. *The Hearing*

The Secretary of the Commission transmitted a scheduling note to DTE and the Staff setting the topics for and the order of presentations at the hearing.⁵⁵ In the first panel, witnesses for DTE and the Staff provided an overview of DTE's combined license application and the Staff's review. The next two panels focused on safety-related issues, and the final two panels focused on environmental issues.

The Staff made available seventy-eight witnesses at the hearing.⁵⁶ Twelve of these witnesses were scheduled panelists; the remainder stood by to answer questions on topics relating to their expertise.⁵⁷ A total of twelve witnesses offered testimony on behalf of DTE on panels at the hearing and in prefiled written testimony.⁵⁸

a. *Summary of the Overview Panels*

Peter Smith, Director of Nuclear Development for DTE, and Ron May, Sr., Executive Vice President of DTE, represented DTE on the overview panel.⁵⁹ Mr. Smith provided background on the development of DTE's license application, including DTE's decision to pursue a combined license, its selection of the ESBWR for the reactor design, and the selection of the Fermi site.⁶⁰ He also provided an overview description of the Fermi site and the features of the ESBWR.⁶¹

⁵⁴ E-mail from Corey Smith, Assistant Director, Delaware National Cultural Preservation, to Hearing Docket, NRC (Jan. 20, 2015) (ADAMS Accession No. ML15022A627). The Delaware Nation requested, however, that "should th[e] project inadvertently uncover an archaeological site or object(s)" that "you halt all construction and ground disturbance activities and immediately contact the appropriate state agencies, as well as our office (within 24 hours)." *Id.*

⁵⁵ See Vietti-Cook, Annette, Secretary of the Commission, Memorandum to Counsel for DTE and the Staff (Jan. 30, 2015) (Scheduling Note) (revising the scheduling note issued on January 22, 2015).

⁵⁶ See Staff Witness List at 1-3; Tr. at 14-15.

⁵⁷ See Scheduling Note at 1-5; Tr. at 14-15.

⁵⁸ See Ex. DTE000004, Applicant's Witness List for the Fermi Unit 3 Hearing on Uncontested Issues (Jan. 14, 2015); Tr. at 12-13, 132-33; Ex. DTE000001, Applicant's Pre-filed Written Testimony in Support of the Hearing on Uncontested Issues for Fermi Unit 3 (Jan. 14, 2015) (DTE Pre-filed Testimony).

⁵⁹ Tr. at 18.

⁶⁰ See Ex. DTE000005, Fermi 3, Combined License Mandatory Hearing, Introduction & Overview (Jan. 28, 2015) at 1-4 (DTE Overview Presentation); *see also* Tr. at 19-33.

⁶¹ See Ex. DTE000005, DTE Overview Presentation at 5-9.

Glenn Tracy, Director of the Office of New Reactors, Frank Akstulewicz, Director of the Division of New Reactor Licensing in the Office of New Reactors, and Mark Delligatti, Deputy Director of the Division of New Reactor Licensing in the Office of New Reactors, provided background on the Staff's review of the Fermi Unit 3 combined license application.⁶² In particular, Mr. Akstulewicz described the "design-centered review approach," a review methodology that we have endorsed, where the Staff performs a single technical review for standard issues involving a particular design that are then applied to other combined license applications referencing the same design.⁶³ When DTE submitted its application, the combined license application for a new nuclear plant at the North Anna Power Station was designated as the "reference application," the "Reference COL" or "RCOL," for the ESBWR design-centered review.⁶⁴ DTE was a "subsequent application," "Subsequent COL" or "SCOL."⁶⁵ In May 2010, the Fermi application took over as the reference application after the North Anna applicant selected a different reactor design.⁶⁶ The Staff verified that the standard content in the North Anna safety evaluation report directly applied to Fermi Unit 3, and DTE provided information to address the open items in that report.⁶⁷ Mr. Akstulewicz completed his testimony with a summary of the Staff's findings under 10 C.F.R. § 52.97(a).⁶⁸ Mr. Delligatti provided background on the Staff's environmental review, including a summary of the Staff's findings in accordance with NEPA § 102(2)(A), (C), and (E) and 10 C.F.R. § 51.107(a).⁶⁹

b. Summary of the Safety Panels

The first safety panel focused on the soil-structure interaction and seismic analyses for Fermi Unit 3.⁷⁰ Peter Smith testified for DTE.⁷¹ With him on the panel were Javad Moslemian, Engineering Manager, Sargent and Lundy, and

⁶² See Tr. at 48.

⁶³ Ex. NRC000011, Combined License Application Review, Fermi 3, Overview (Jan. 28, 2015) at 5 (Staff Overview Presentation); Tr. at 53-54; *see also Summer*, CLI-12-9, 75 NRC at 427 & n.17 (discussing the design-centered review approach with respect to the AP1000 reactor design).

⁶⁴ Ex. NRC000011, Staff Overview Presentation at 6-7.

⁶⁵ *Id.*

⁶⁶ Tr. at 54 (Mr. Akstulewicz).

⁶⁷ Ex. NRC000011, Staff Overview Presentation at 8.

⁶⁸ *Id.* at 11-13.

⁶⁹ Tr. at 58-65; Ex. NRC000011, Staff Overview Presentation at 14-20.

⁷⁰ See Ex. DTE000006, Fermi 3 COLA, Combined License Mandatory Hearing, Safety — Panel 1 (Jan. 28, 2015) (DTE Safety Panel 1 Presentation); Ex. NRC000012, Combined License Application Review, Fermi 3, Safety Panel 1 (Jan. 28, 2015) (Staff Safety Panel 1 Presentation).

⁷¹ Tr. at 83-85.

Steven Thomas, Engineering Manager, Black and Veatch.⁷² Adrian Muniz, Lead Project Manager for the Fermi Unit 3 Application Review, Licensing Branch 3, Office of New Reactors, Sara Tabatabai, Seismologist, Structural, Geotechnical and Seismic Engineering Branch, Office of Research, and Manas Chakravorty, Senior Structural Engineer, Structural Engineering Branch 2, Office of New Reactors, provided testimony for the Staff.⁷³ In addition to the soil-structure interaction and seismic analyses, the first ten chapters of the Fermi 3 SER were subject to our examination during the first safety panel.⁷⁴

The second safety panel focused on Fermi SER Chapter 20, which covered the Staff's activities relating to recommendations from the Near-Term Task Force established in response to the accident at Fukushima Dai-ichi on March 11, 2011, and the discussion of Fukushima-related regulatory actions in DTE's application and the Staff's SER.⁷⁵ Peter Smith provided testimony for DTE, with David Hinds, Technical Engineering Manager, GE-Hitachi, and Steven Thomas, Black and Veatch, on the panel.⁷⁶ Adrian Muniz, Angelo Stubbs, Senior Reactor Systems Engineer, Plant Systems Branch, Office of New Reactors, Raul Hernandez, Reactor Systems Engineer, Plant Systems Branch, Office of New Reactors, and Dan Barss, Team Leader, Division of Preparedness and Response, Office of Nuclear Security and Incident Response, provided testimony for the Staff.⁷⁷ Chapters 11 through 19 of the Fermi 3 SER were also subject to our examination during the second safety panel.⁷⁸

c. Summary of the Environmental Panels

The first environmental panel provided an overview of the Staff's review process for the Fermi Unit 3 FEIS, including a summary of its development, the Staff's analysis of alternatives, and a summary of the Staff's conclusions and recommendations.⁷⁹ Peter Smith testified for DTE, with Randall Westmoreland,

⁷² Tr. at 82; Scheduling Note at 2.

⁷³ Tr. at 85-92; Scheduling Note at 2. During her review of DTE's application, Ms. Tabatabai worked in the Office of New Reactors. Tr. at 87.

⁷⁴ Scheduling Note at 2-3.

⁷⁵ See Ex. DTE000007, Fermi 3, Combined License Mandatory Hearing, Safety — Panel 2 (Jan. 28, 2015) (DTE Safety Panel 2 Presentation); Ex. NRC000013, Combined License Application Review, Fermi 3, Safety Panel 2 (Jan. 28, 2015) (Staff Safety Panel 2 Presentation).

⁷⁶ Tr. at 114; Scheduling Note at 3.

⁷⁷ Tr. at 116-17; Scheduling Note at 3.

⁷⁸ Scheduling Note at 3.

⁷⁹ See Scheduling Note at 4; Ex. DTE000008, Fermi 3, Combined License Mandatory Hearing, Environmental Overview — Panel 1 (Jan. 28, 2015) (DTE Environmental Panel 1 Presentation); Ex. NRC000014, Combined License Application Review, Fermi 3, Environmental Panel 1 (Jan. 28, 2015) (Staff Environmental Panel 1 Presentation).

Technical Expert and Environmental Lead, DTE, and Steven Thomas from Black and Veatch.⁸⁰ Jennifer Dixon-Herrity, Chief of the Environmental Projects Branch in the Office of New Reactors, Mallecia Sutton, Lead Environmental Project Manager, Environmental Projects Branch, Office of New Reactors, and Andrew Kugler, Senior Environmental Project Manager, Technical Support Branch, Office of New Reactors, provided testimony for the Staff.⁸¹ The second environmental panel focused on compliance with the National Historic Preservation Act with regard to the permanently shutdown Fermi Unit 1, which DTE plans to demolish, as well as interactions between the Staff and international organizations over the course of the Staff's environmental review.⁸² The same witnesses for the first environmental panel testified for the second environmental panel.⁸³

3. *Post-Hearing Questions*

After the hearing, we issued additional questions for written answers from DTE and the Staff.⁸⁴ In addition to admitting DTE's and the Staff's responses as exhibits, as well as additional exhibits from DTE, we adopted corrections to the hearing transcript.⁸⁵ In its response to our post-hearing questions, the Staff provided a clarification to its hearing testimony.⁸⁶ The Staff also filed four additional exhibits — NRC000018, NRC000019, NRC000020, and NRC000021 — relating to recent Staff activities under the Endangered Species Act.⁸⁷ We admit these exhibits and close the evidentiary record for the uncontested hearing.

⁸⁰ Tr. at 139; Scheduling Note at 4.

⁸¹ Tr. at 142; Scheduling Note at 5.

⁸² See Ex. DTE000009, Fermi 3, Combined License Mandatory Hearing, Environmental Overview — Panel 2 (Jan. 28, 2015) (DTE Environmental Panel 2 Presentation); Ex. NRC000015, Combined License Application Review, Fermi 3, Environmental Panel 2 (Jan. 28, 2015) (Staff Environmental Panel 2 Presentation).

⁸³ Tr. at 180.

⁸⁴ Order of the Secretary (Transmitting Post-Hearing Questions) (Feb. 11, 2015) (unpublished).

⁸⁵ Transcript Correction Order at 1.

⁸⁶ Ex. NRC000017, NRC Staff Responses to Commission Post-Hearing Questions (Feb. 19, 2015) at 1 (Staff Responses to Post-Hearing Questions). Although we allow this clarification, which reiterated statements in the Staff's response to Prehearing Question 33, Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 30, we remind the Staff that when a party requests action from the presiding officer in an NRC adjudicatory proceeding, the request must come in the form of a motion. See 10 C.F.R. § 2.323.

⁸⁷ See Roach, Kevin C., Counsel for the Staff, Letter to the Commissioners (Apr. 5, 2015) at 1 (April 5 Commission Notification); Ex. NRC000018, Supplemental Biological Assessment, U.S. Fish and Wildlife Service, Enrico Fermi Unit 3 Combined License Application (Feb. 2015) (Supplemental Biological Assessment); Ex. NRC000019, Hicks, Scott, U.S. Fish and Wildlife Service, Letter to
(Continued)

II. DISCUSSION

A. Site-Specific Issues Addressed in the Proceeding

Although our review encompassed the entire application, we discuss here a brief selection of the topics discussed at the hearing and in responses to written questions before and after the hearing.

1. Safety-Related Issues

a. Soil-Structure-Interaction Analysis

The first safety issue that the Staff identified in its information paper and the first safety topic discussed at the hearing involved the soil-structure-interaction analysis for the Fermi site.⁸⁸ The design control document for the ESBWR is based on a generic set of site parameters. When evaluating an application that references the ESBWR for a specific site, the Staff focuses on whether the characteristics of the specific site fall within the parameters specified in the design control document.⁸⁹ As the Staff explained in its information paper, the partial bedrock embedment of the Reactor Building/Fuel Building and Control Building structures at the Fermi 3 site “deviates from the foundation configurations considered in the ESBWR [design control document]. In addition, the Fermi 3 site does not meet the minimum backfill shear wave velocity requirement of the ESBWR [design control document].”⁹⁰ Consequently, “site-specific soil structure interaction . . . analyses need[ed] to be performed to confirm that the certified design is adequate for the site.”⁹¹ DTE thus provided analyses to address these issues.⁹²

Jennifer L. Dixon-Herrity, NRC (Mar. 23, 2015) (March 23 Letter from the Fish and Wildlife Service); Roach, Kevin C., Counsel for the Staff, Letter to the Commissioners (Apr. 29, 2015), at 1 (April 29 Commission Notification); Ex. NRC000020, Supplemental Biological Assessment to the U.S. Fish and Wildlife Service for the Enrico Fermi Unit 3 Combined License Application (Apr. 3, 2015) (Supplemental Biological Assessment (Northern Long-Eared Bat)); Ex. NRC000021, Hicks, Scott, U.S. Fish and Wildlife Service, Letter to Jennifer L. Dixon-Herrity, NRC (Apr. 28, 2015) (April 28 Letter from the Fish and Wildlife Service); *see also* Smith, Tyson R., Counsel for DTE, Letter to the Commissioners (Apr. 10, 2015), at 1-2. The exhibits were not accompanied by a motion. *See supra* note 86. Nevertheless, DTE has not opposed their admission and we find that they further contribute to the record.

⁸⁸ *See* Ex. NRC000001, Staff Information Paper at 14; Tr. at 83 (Mr. Smith).

⁸⁹ *See* Ex. NRC000001, Staff Information Paper at 14; *see also* 10 C.F.R. § 52.79(d)(1) (requiring applicants referencing a certified design to provide sufficient information for the Staff to determine whether the site’s characteristics fall within the design’s parameters).

⁹⁰ Ex. NRC000001, Staff Information Paper at 14; *see also* Ex. DTE000006, DTE Safety Panel 1 Presentation at 3 (depicting partial embedment and backfill).

⁹¹ Ex. NRC000001, Staff Information Paper, at 14.

⁹² *Id.*; Tr. at 83 (Mr. Smith).

At the hearing, Peter Smith, testifying for DTE, explained that because the timing of its analyses coincided with the Staff's post-Fukushima activities, DTE voluntarily updated its soil-structure-interaction analyses using inputs from the Central and Eastern U.S. Seismic Source Characterization for Nuclear Facilities (CEUS-SSC).⁹³ DTE also added margin to these inputs. DTE provided the results of its analyses, showing that the Fermi Unit 3 foundation response spectra using the updated inputs as well as updated inputs with added margin fell within the seismic design response spectra for the ESBWR.⁹⁴ DTE also provided comparisons of the in-structure response spectra and concluded that the ESBWR certified design envelopes the Fermi 3 site with "considerable margin."⁹⁵ The Staff reviewed DTE's analyses, performed additional analyses, and "confirmed that at the Fermi 3 site, the site-specific seismic demand is bounded by the [ESBWR design control document] analyses."⁹⁶ The Staff concluded that DTE provided sufficient information to demonstrate the suitability of the ESBWR for the Fermi site.⁹⁷

b. Regulatory Treatment of Non-Safety Systems Equipment

In another area that focused on features of the ESBWR design and their applicability to the Fermi site, we asked prehearing questions on the protection of Regulatory Treatment of Non-Safety Systems (RTNSS) equipment from external hazards at the site.⁹⁸ This equipment is used to maintain core, containment, and spent fuel pool cooling after the reactor has been shut down for 72 hours

⁹³ Tr. at 83; Ex. DTE000006, DTE Safety Panel 1 Presentation at 2; *see also* Tr. at 87 (Ms. Tabatabai) (explaining that applicants like DTE were requested, not required, to consider using the updated model). The CEUS-SSC constitutes a key input to a probabilistic seismic hazard analysis. The probabilistic seismic hazard analysis is used as a method for accounting for uncertainty in seismic design and in calculating seismic risk. The seismic source characterization model describes where earthquakes will occur, how big they will be, and how often they will happen. The CEUS-SSC model includes consideration of an up-to-date database, full assessment and incorporation of uncertainties, and the range of diverse technical interpretations from the larger technical community. Central and Eastern United States Seismic Source Characterization for Nuclear Facilities, NUREG-2115, Vol. 1 (Jan. 2012), at ix-x (ADAMS Accession No. ML12048A804).

⁹⁴ Ex. DTE000006, DTE Safety Panel 1 Presentation at 4; Tr. at 84 (Mr. Smith).

⁹⁵ Tr. at 85 (Mr. Smith); *see also* Ex. DTE000006, DTE Safety Panel 1 Presentation at 5.

⁹⁶ Ex. NRC000001, Staff Information Paper at 14; *see also* Ex. NRC000012, Staff Safety Panel 1 Presentation at 5-6 (showing similar results between the Staff's confirmatory probabilistic seismic hazard analysis and DTE's analyses and that they are enveloped by the ESBWR certified seismic design response spectrum).

⁹⁷ Ex. NRC000001, Staff Information Paper at 14; Ex. NRC000012, Staff Safety Panel 1 Presentation at 10; *see also* Tr. at 89 (Ms. Tabatabai).

⁹⁸ Initial Pre-Hearing Questions at 6-7, 12-13.

following an accident.⁹⁹ RTNSS equipment is not relied on in the first instance in an accident or event; rather, the ESBWR's passive safety system performs that function.¹⁰⁰ DTE's application for Fermi Unit 3 incorporates by reference the RTNSS equipment from the ESBWR design control document; there are no departures from the ESBWR design with respect to the RTNSS equipment.¹⁰¹ Nevertheless, we considered certain aspects of RTNSS equipment in the uncontested hearing because it may be relied on to address certain post-Fukushima mitigation strategies for beyond-design-basis external events requirements after 72 hours.¹⁰² These post-Fukushima requirements are discussed further in Section C, below.

In its letter summarizing its independent review of the safety aspects of DTE's application, the ACRS noted that seismic Category NS (nonseismic) and Category II structures that house RTNSS equipment must be evaluated for hurricane-generated missiles, but it also noted that there is no corresponding requirement for tornado-generated missiles.¹⁰³ The ACRS expressed some concern

⁹⁹ Ex. NRC000008B, SER at 20-11. "RTNSS" refers to the regulatory oversight given to items that are not safety-related but perform risk-significant functions in passive reactor designs. *See, e.g.*, Ex. NRC000008A, SER at 3-1. As the Staff explained, "[b]y definition, RTNSS [structures, systems, and components] are nonsafety equipment and should not be treated as safety-related." Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 14. The RTNSS concept was developed in the 1990s, in the context of the Staff's review of reactor designs with passive safety systems that also use active systems (as a backup to the passive system) to replenish coolant after a 72-hour period following an accident. The Staff sought to ensure that proper regulatory oversight was given to these systems, even though they were not safety-related, given uncertainties associated with passive safety system performance identified by the Staff. The Staff therefore determined that it "will not require that these active systems meet all the safety-related criteria, but will expect a high level of confidence that active systems which have a significant safety role are available when challenged." *See* Policy and Technical Issues Associated with the Regulatory Treatment of Non-Safety Systems (RTNSS) in Passive Plant Designs (SECY-94-084), Commission Paper SECY-95-132 (May 22, 1995), Attachment 2, at 2-3 (ADAMS Accession No. ML003708005); Staff Requirements — SECY-95-132 — Policy and Technical Issues Associated with the Regulatory Treatment of Non-Safety Systems (RTNSS) in Passive Plant Designs (SECY-94-084) (June 28, 1995) (ADAMS Accession No. ML003708019); *see also* Callan, L. Joseph, Executive Director for Operations, to Commissioners, Implementation of Staff Position in SECY-96-128, "Policy and Key Technical Issues Pertaining to the Westinghouse AP600 Standardized Passive Reactor Design," Related to Post-72 Hour Actions (June 23, 1997), at 2-3 (ADAMS Accession No. ML003708229); Policy and Key Technical Issues Pertaining to the Westinghouse AP600 Standardized Passive Reactor Design, Commission Paper SECY-96-128 (June 12, 1996) (ADAMS Accession No. ML003708224); Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 14.

¹⁰⁰ *See* Tr. at 96 (Mr. Nolan); Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 14.

¹⁰¹ Tr. at 97 (Mr. Smith).

¹⁰² Ex. NRC000008B, SER at 20-11.

¹⁰³ ACRS Letter at 4; *see also* ESBWR Design Control Document, Tier 2, Chapter 3, Design of
(Continued)

that the ability of these structures to withstand tornado-driven missiles had not been evaluated either with regard to the ESBWR design or for the Fermi Unit 3 site, making it “unclear that structures . . . hous[ing] RTNSS equipment that is credited for mitigation of beyond-design-basis external events will survive” the impact of a tornado-driven missile.¹⁰⁴ Nonetheless, the ACRS acknowledged the ESBWR’s passive design and the ESBWR’s ability to maintain passive core cooling, containment functions, and spent fuel cooling for at least 72 hours after the plant is shut down.¹⁰⁵ It noted that RTNSS equipment would not be required for the first 72 hours after loss of AC power, and that equipment from national response centers could provide defense-in-depth mitigating strategies if RTNSS equipment is not available thereafter.¹⁰⁶

In its response to our prehearing questions, the Staff explained that when it developed the policy for the protection of RTNSS equipment from certain external events in the 1990s, it required some RTNSS equipment to withstand hurricane loads and missiles, but not tornado loads or tornado missiles.¹⁰⁷ The Staff focused on the external events that could potentially result in widespread damage — hurricanes, floods, and seismic events — over the more localized damage from a tornado.¹⁰⁸ The Staff represented that it has applied this approach consistently since that time to all passive reactor designs, including the ESBWR.¹⁰⁹

Structures, Components, Equipment, and Systems, Rev. 10 (Apr. 2010), at 3.3-1 (ADAMS Accession No. ML14104A929 (package)) (ESBWR DCD) (“Seismic Category I structures are designed for tornado and extreme wind phenomena. Seismic Category II structures are designed for extreme and tornado wind (excluding tornado missiles),” and “Seismic Category NS buildings that house RTNSS equipment are designed to withstand hurricane Category 5 wind velocity at 87.2 m/s (195 mph), 3-second gust.”). Section 3.2.1 of the ESBWR design control document defines the seismic categories: Seismic Category I structures “must remain integral with systems and components (including their foundations and supports) that must remain functional or retain their pressure integrity in the event of a safe-shutdown earthquake.” Seismic Category II structures, systems, and components “perform no safety-related function, but . . . [their] structural failure or interaction could degrade the functioning of a Seismic Category I item to an unacceptable level of safety or could result in incapacitating injury to occupants of the main control room.” They “are designed to structurally withstand the effects of a [safe-shutdown earthquake].” “Seismic Category II structures, systems and components that are also classified as . . . [RTNSS] Criterion B in [design control document] Tables 19A-2 and 19A-3 are required to remain functional following a seismic event.” All other structures, systems, and components are designated Seismic Category NS, and “are designed for seismic requirements in accordance with the International Building Code.” ESBWR DCD at 3.2-1 to 3.2-2.

¹⁰⁴ ACRS Letter at 4.

¹⁰⁵ *See id.*

¹⁰⁶ *Id.*

¹⁰⁷ Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 14.

¹⁰⁸ *Id.* at 14-15.

¹⁰⁹ *Id.* at 15. In its response to the ACRS on this issue, the Staff stated that it has since updated
(Continued)

Specifically with regard to the application for Fermi Unit 3, the RTNSS B long-term cooling equipment is located in a seismic Category I structure that is “designed to provide protection from design-basis storms, tornados, and floods” so that the effects of natural phenomena do not adversely affect long-term core and spent fuel pool cooling.¹¹⁰ The Staff stated that the diesel-driven or motor-driven fire pumps housed within that enclosure can be used to provide makeup water to the passive safety system after the first 72 hours following an external event.¹¹¹ For the ancillary diesel generator, an item that is housed within a Category II structure and used to power the motor-driven fire pump, the Staff explained that the diesel-driven pumps or power sources brought from offsite could support mitigation if the structure housing the ancillary diesel generator does not survive an external event.¹¹²

c. Staff Activities Relating to Fukushima Lessons Learned

The Staff, in its prehearing information paper, described its review of DTE’s combined license application relative to regulatory actions that the NRC has taken in response to lessons learned from the Fukushima Dai-ichi accident.¹¹³ The Staff requested DTE to “provide an evaluation of the Fermi 3 site for updated seismic hazards”; “develop mitigating strategies for beyond-design-basis external events”; “provide reliable spent fuel pool instrumentation”; and “evaluate emergency preparedness staffing and communications.”¹¹⁴ The Staff stated that DTE provided the requested information and updated its application accordingly.¹¹⁵ We asked the Staff a prehearing question regarding the Staff’s verification of the adequacy of DTE’s use of the Electric Power Research Institute’s (EPRI) 2004/2006 ground motion model rather than EPRI’s 2013 ground motion model to update its seismic hazard analysis.¹¹⁶

its RTNSS guidance to include tornado-missiles. *See* Staff Response to ACRS at 6. The Staff was asked at the hearing whether it was concerned that the updated guidance was not used in the review of DTE’s application. Tr. at 108-09 (Commissioner Baran). Ryan Nolan, Reactor Systems Engineer, Balance of Plant Branch, Office of New Reactors, stated that the Staff had no concern and reiterated that the RTNSS equipment is not safety-related and therefore not held to the standard of safety-related equipment and that the conservatism of the new guidance may vary depending on the site. *Id.* (Mr. Nolan).

¹¹⁰ Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 28; *see also* Ex. DTE000002, DTE Response to Initial Pre-Hearing Questions at 11.

¹¹¹ *Id.*

¹¹² *Id.*

¹¹³ Ex. NRC000001, Staff Information Paper at 14-15.

¹¹⁴ *Id.*

¹¹⁵ *Id.* at 15.

¹¹⁶ Initial Pre-Hearing Questions at 11-12.

In Safety Panel 2, DTE and the Staff addressed the Fukushima-related requests for additional information.¹¹⁷ Mr. Smith for DTE stated that its responses to the Staff's information requests were primarily administrative in nature and none of them required changes to the design.¹¹⁸ He explained that the Staff will impose license conditions for: (1) implementing mitigation strategies under the NRC-endorsed "FLEX" approach proposed by the Nuclear Energy Institute (NEI);¹¹⁹ (2) operator training on external power for the ESBWR's spent fuel pool instrumentation; and (3) reevaluating staffing and communications for emergency preparedness.¹²⁰

The Staff described three of its Fukushima-related requests for additional information and provided its findings at the hearing.¹²¹ First, the Staff discussed its assessment of the agency's 2012 order imposing requirements for mitigation strategies for beyond-design-basis external events.¹²² The Staff explained that the ESBWR passive design provides mitigation for 72 hours following a beyond-design-basis external event, or "initial phase mitigation."¹²³ Because the passive design provides mitigation for up to 72 hours without AC power, and installed RTNSS equipment could enhance the time period for transition to 7 days, the Staff found that it provides sufficient time to transition to the final stage "without necessarily relying upon a transition phase."¹²⁴ After that time frame, DTE will rely on the ESBWR's passive design and offsite resources to maintain cooling for the core, containment, and spent fuel pool for "final phase mitigation."¹²⁵ The

¹¹⁷ See Ex. DTE000007, DTE Safety Panel 2 Presentation at 2; Ex. NRC000013, Staff Safety Panel 2 Presentation at 3-16.

¹¹⁸ Tr. at 115.

¹¹⁹ See NEI 06-12, *Diverse and Flexible Coping Strategies (FLEX) Implementation Guide*, Rev. 0 (Aug. 2012) (ADAMS Accession No. ML12242A378) (proposing the flexible use of onsite and offsite equipment to cope with beyond-design-basis external events). The Staff endorsed the FLEX approach in JLD-ISG-2012-01, *Interim Staff Guidance, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events*, Rev. 0 (Aug. 29, 2012) (ADAMS Accession No. ML12229A174).

¹²⁰ *Id.* at 115-16; see also Ex. DTE000007, DTE Safety Panel 2 Presentation at 2.

¹²¹ With respect to the Staff's request for additional information concerning DTE's seismic hazard analysis, DTE updated the information in its application using inputs from the Central and Eastern U.S. Seismic Source Characterization Model. Ex. NRC000001, Staff Information Paper at 15. The Staff then performed its own calculations and confirmed that DTE's updated calculations "accurately characterize the ground motion at the Fermi 3 site." *Id.*; see also *supra* notes 88-97 and accompanying text.

¹²² Ex. NRC000013, Staff Safety Panel 2 Presentation at 3 (citing Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" (ADAMS Accession No. ML12054A736 (package))).

¹²³ Tr. at 120 (Mr. Stubbs).

¹²⁴ Ex. NRC000008B, SER at 20-10.

¹²⁵ Ex. NRC000013, Staff Safety Panel 2 Presentation at 4-7; Tr. at 121 (Mr. Stubbs).

Staff concluded that the Fermi 3 mitigating strategies provide the core cooling, containment, and spent fuel pool cooling capabilities required in the mitigation strategies order.¹²⁶ The Staff also discussed the proposed license condition that would require DTE to implement the guidance and strategies in the NEI “FLEX” plan prior to fuel load.¹²⁷

Second, with regard to spent fuel pool instrumentation, the Staff explained that the ESBWR design provides instruments that measure the level of water in the spent fuel pool which are full-range, safety-related, Seismic Category I, and permanently installed. The instruments are also protected from internally and externally generated missiles, physically separated from each other, and powered from separate power sources.¹²⁸ The ESBWR level instrument description will include “independent power source connectivity and instrument design accuracy.”¹²⁹ The Staff proposed a license condition that would require DTE to implement a training program on establishing the alternate power connections to the level instruments.¹³⁰

Finally, the Staff discussed the license condition that it would impose to ensure that DTE performs an assessment of communications systems and equipment needed during a prolonged station blackout and the staffing capability needed to respond to a multiunit event.¹³¹ DTE would need to complete this assessment 18 months before the last date scheduled for completing the inspections, tests, analyses, and acceptance criteria (ITAAC) in the combined license.¹³² The Staff found this approach acceptable because it would be imposed as a condition in the license and because DTE committed to using NRC-endorsed guidance when conducting its assessment.¹³³

d. Emergency Planning

In its prehearing information paper, the Staff identified the proximity of the Fermi site to the Canadian border as a novel issue in its environmental review.¹³⁴ We considered this issue in the context of the safety review as well and asked the Staff prehearing questions in recognition of the fact that the Canadian border lies

¹²⁶ Tr. at 121 (Mr. Stubbs).

¹²⁷ *Id.* (Mr. Stubbs); Ex. NRC000013, Staff Safety Panel 2 Presentation at 9.

¹²⁸ Ex. NRC000013, Staff Safety Panel 2 Presentation at 11; Tr. at 122 (Mr. Hernandez).

¹²⁹ Ex. NRC000013, Staff Safety Panel 2 Presentation at 11.

¹³⁰ *Id.* at 12; Tr. at 123 (Mr. Hernandez).

¹³¹ Ex. NRC000013, Staff Safety Panel 2 Presentation at 13.

¹³² *Id.* at 15. The Staff modified the license condition proposed by DTE from a completion date of 2 years before initial fuel load. *Id.*

¹³³ *Id.* at 15-16; Tr. at 124 (Mr. Barss).

¹³⁴ Ex. NRC000001, Staff Information Paper at 17-19.

within the 10-mile emergency planning zone for Fermi Unit 3.¹³⁵ In particular, we asked whether NRC regulations require an applicant to make protective action recommendations to Canadian officials in the event of an emergency at the Fermi site.¹³⁶ In addition, we asked how protective action recommendations to state, local, or provincial officials would be made regarding members of the public (for example, boaters) within the United States and Canadian portions of the plume exposure pathway emergency planning zone.¹³⁷ We also asked how the proximity of proposed Fermi Unit 3 to Canada affected the Staff's emergency planning review overall.¹³⁸

In response, the Staff noted that the NRC's emergency planning regulations do not address areas outside of the United States and therefore there is no requirement for DTE to make protective action recommendations to Canada.¹³⁹ The Staff explained, however, that DTE's emergency plan takes the Canadian border into account. It provides for an initial notification to the Province of Ontario, Canada, in several circumstances: in the event of an initial emergency classification; a classification escalation; the issuance of, or change to, a protective action recommendation for the general public; the state of a radiological release status; and event de-escalation, termination, or entry into recovery phase.¹⁴⁰ The Staff also stated that state and local officials are responsible for implementing protective action recommendations and that if informed of a general emergency, the State of Michigan would request assistance from the U.S. Coast Guard (through the National Response Framework) for protective actions affecting activities on Lake Erie, including Canadian waters.¹⁴¹ The Province of Ontario and the appropriate local officials would be responsible for implementing protective actions in the Province and would respond in accordance with the Provincial Nuclear Emergency Response Plan.¹⁴² In addition, the Staff noted that our agency and the Canadian Nuclear Safety Commission have formally agreed to notify each other "promptly of any significant radiological event, accident, or emergency that occurs in activities under . . . [our] respective jurisdictions."¹⁴³ The Staff stated that its review "was not materially affected by the proximity to Canada."¹⁴⁴

¹³⁵ Initial Pre-Hearing Questions at 3-4.

¹³⁶ *Id.* at 3.

¹³⁷ *Id.*

¹³⁸ *Id.*

¹³⁹ Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 4-5.

¹⁴⁰ *Id.* at 5.

¹⁴¹ *Id.* at 6.

¹⁴² *Id.* at 5-6.

¹⁴³ *Id.* at 5 (citing "Arrangement Between USNRC and CNSC for the Exchange of Technical Information and Cooperation in Nuclear Safety Matters" (ADAMS Accession No. ML12152A096)).

¹⁴⁴ *Id.*

e. Squib Valves

We also asked the Staff to discuss its review of squib valves, which were the topic of considerable discussion during the mandatory hearings for the Vogtle and Summer combined license applications, which referenced the AP1000 certified design.¹⁴⁵ This topic was of particular focus for the *Vogtle* and *Summer* hearings because the inservice testing and inspection program for squib valves in those applications would have relied on an American Society of Mechanical Engineers (ASME) code provision that was still under development at the time.¹⁴⁶

In the event of a severe accident in an AP1000, squib valves, which are explosively activated, reduce pressure and inject water as needed into the reactor vessel.¹⁴⁷ The squib valves are subject to ITAAC specified in the AP1000 DCD. The purpose of the testing program required by ITAAC is to ensure that the valves operate as intended under design conditions.¹⁴⁸ Although we found the Staff's review of the Vogtle and Summer applications rigorous, we shared a concern initially raised by ACRS regarding the status of the inservice inspection/in-service testing program for this component and imposed a condition in the Vogtle and Summer licenses that requires the implementation of a squib-valve surveillance program prior to fuel load.¹⁴⁹

The Vogtle and Summer applications and the Fermi Unit 3 application reference entirely different reactor designs: the Vogtle and Summer applications referenced the AP1000 certified design, and the Fermi Unit 3 application, as discussed above, references the ESBWR certified design. Nevertheless, the ESBWR also uses squib valves as part of its passive safety system, and the Staff has proposed a license condition, based on the experience licensing Vogtle and Summer, that would require a surveillance program for squib valves prior to fuel load to supplement the inservice testing requirements.¹⁵⁰ We asked the Staff a prehearing question on this issue; the Staff also provided testimony at the hearing.¹⁵¹

The Staff explained that the 2012 edition of the ASME code, which the Staff is in the process of incorporating by reference into 10 C.F.R. § 50.55a, includes

¹⁴⁵ See *Vogtle*, CLI-12-2, 75 NRC at 90-96; *Summer*, CLI-12-9, 75 NRC at 460-64.

¹⁴⁶ *Vogtle*, CLI-12-2, 75 NRC at 91; *Summer*, CLI-12-9, 75 NRC at 461.

¹⁴⁷ See *Vogtle*, CLI-12-2, 75 NRC at 90; *Summer*, CLI-12-9, 75 NRC at 461.

¹⁴⁸ See *Vogtle*, CLI-12-2, 75 NRC at 90; *Summer*, CLI-12-9, 75 NRC at 461.

¹⁴⁹ *Vogtle*, CLI-12-2, 75 NRC at 93-95; *Summer*, CLI-12-9, 75 NRC at 461-63.

¹⁵⁰ Tr. at 98-99 (Mr. Scarbrough) (explaining that there is a wider size range of squib valves in the ESBWR than in the AP1000); Ex. NRC000008A, SER at 3-88 to 3-90; Ex. NRC000002, Draft Combined License, Enrico Fermi Nuclear Plant Unit 3, DTE Electric Company, Docket No. 52-033 (Dec. 4, 2014), at 12-14 (Draft Combined License).

¹⁵¹ Initial Pre-Hearing Questions at 9-10; Tr. at 98-100.

preservice and inservice surveillance provisions for squib valves.¹⁵² After the rule-making is completed, licensees for new reactors will be required to comply with the ASME code surveillance provisions under 10 C.F.R. § 50.55a(f)(4)(i).¹⁵³ Until that time, however, the surveillance provisions will be imposed by a condition in the license.¹⁵⁴ At the hearing, Thomas Scarbrough, Senior Mechanical Engineer, Mechanical Engineering Branch, Office of New Reactors, explained that the proposed license condition for Fermi Unit 3 has more specific requirements than the ASME code provision.¹⁵⁵ He stated that the license condition specifically requires surveillance of squib valves in the gravity-driven cooling system and the automatic depressurization system but that it is consistent with the ASME code provision.¹⁵⁶

f. Knowledge Management

DTE has not set a date to begin construction of Fermi Unit 3 and has acknowledged that construction may not begin immediately after the issuance of a license for Fermi Unit 3.¹⁵⁷ At the hearing, we explored DTE's and the Staff's plans to maintain the knowledge gained during the combined license review, should DTE receive our approval for a license and wait for some period of months or years to begin construction.¹⁵⁸ DTE and the Staff were asked to address the challenges they see, if any, in preserving knowledge between receipt of a combined license and future construction.¹⁵⁹

Mr. Smith for DTE explained that over the past 2 years DTE has been in the process of establishing a "holder project" that will provide the "infrastructure" to comply with NRC requirements as a licensee "for an indefinite period of time," including funds in its "long-term planning budget."¹⁶⁰ Mr. Smith also explained that the continued operation of Fermi Unit 2 provides a "ready pool of resource[s]."¹⁶¹

Mr. Tracy, responding for the Staff, explained that the question goes to the heart of the Staff's plans for the future of the new reactor program.¹⁶² He acknowledged

¹⁵² Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 19.

¹⁵³ *Id.*; Tr. at 100 (Mr. Scarbrough).

¹⁵⁴ Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 19.

¹⁵⁵ Tr. at 99.

¹⁵⁶ *Id.*; *see also* Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 20.

¹⁵⁷ *See* Tr. at 209 (Mr. Smith).

¹⁵⁸ *See id.* at 209-12.

¹⁵⁹ Tr. at 209 (Chairman Burns).

¹⁶⁰ *Id.* at 209-10.

¹⁶¹ *Id.* at 210.

¹⁶² *See id.*

the need to retain knowledge and experience between NRC Headquarters and NRC Region II for license issuance and proper oversight.¹⁶³ Mr. Akstulewicz expanded on this response, breaking down the knowledge-management issue into two time periods — the near term (5 years) and the long term (beyond 5 years).¹⁶⁴ Over the next 5 years, Mr. Akstulewicz stated that the Staff will remain busy working through the detailed design of the ESBWR as the licensing review continues for the North Anna combined license application, whose applicant is again referencing the ESBWR design.¹⁶⁵ Beyond that time frame, as DTE provides its regular updates to the Final Safety Analysis Report (FSAR), Mr. Akstulewicz stated that the Staff will need to ensure that knowledge and staffing resources are maintained to address potentially evolving technical issues.¹⁶⁶

2. *Environmental Issues*

a. *Historic Preservation of Fermi Unit 1*

The Staff identified two novel environmental issues in its information paper that it discussed at the hearing — the historic preservation of Fermi Unit 1, and the Staff’s interaction with international organizations due to the Fermi site’s proximity to the Canadian border.¹⁶⁷ DTE’s plans for constructing Fermi Unit 3 require the demolition of Fermi Unit 1, a prototype 94-megawatt electric fast breeder reactor that began commercial operation in 1957 and was permanently shut down in 1972.¹⁶⁸ The American Nuclear Society designated Fermi Unit 1 as a Nuclear Historic Landmark in 1986.¹⁶⁹ In addition, Fermi Unit 1 is eligible for listing in the National Register of Historic Places.¹⁷⁰

As part of its compliance with section 106 of the National Historic Preservation Act, the Staff determined that “if demolition of Fermi Unit 1 is required to build Fermi 3, this will result in a finding of adverse effect under [the] applicable

¹⁶³ *Id.*

¹⁶⁴ *Id.* at 211.

¹⁶⁵ *Id.*

¹⁶⁶ *Id.* at 212.

¹⁶⁷ Ex. NRC000001, Staff Information Paper at 16-19. The Staff also discussed its implementation of the Continued Storage Rule, but this became a potentially contested issue after the Staff submitted its paper and responded to prehearing questions on the topic. *See* Ex. NRC000001, Staff Information Paper at 19-20; Ex. NRC000004, Staff Responses to Initial Pre-Hearing Questions at 42-44. The parties were asked not to discuss the issue at the uncontested hearing. Tr. at 176-77 (Chairman Burns).

¹⁶⁸ Tr. at 180-81 (Ms. Sutton).

¹⁶⁹ Tr. at 181 (Ms. Sutton); Ex. NRC000015, Staff Environmental Panel 2 Presentation at 2.

¹⁷⁰ Ex. NRC000015, Staff Environmental Panel 2 Presentation at 2.

. . . criteria in 36 CFR [§] 800.5.”¹⁷¹ The Staff, the Michigan State Historic Preservation Officer, and DTE entered into a memorandum of agreement to mitigate the adverse effect finding.¹⁷² DTE agreed to preserve artifacts from Fermi Unit 1 in a permanent exhibit at the Monroe County Community College; the exhibit opened in August 2013.¹⁷³ It also sent a documentation package on Fermi Unit 1 to the Michigan State Archives.¹⁷⁴ On January 31, 2014, DTE notified the Staff that it had completed work on the exhibit.¹⁷⁵ The Staff concluded that DTE had met the terms of the memorandum of agreement.¹⁷⁶

b. International Cooperation

The Staff found its interactions with international organizations to be an important part of its environmental review for Fermi Unit 3, given that the international boundary between the United States and Canada is just over 7 miles (11 kilometers) from the Fermi site.¹⁷⁷ Even though NRC regulations do not require the Staff to analyze the environmental impacts of NRC licensing actions “upon the environment of foreign nations,” the Staff explained that it extended its outreach to international organizations “to inform its analysis of the potential environmental impacts of the Fermi project.”¹⁷⁸ DTE, for its part, explained that cross-border interaction with Canada, although not usually pertaining to environmental concerns, is not new; it meets regularly with Canadian officials primarily with regard to emergency planning for Fermi Unit 2.¹⁷⁹ Mr. Smith testified for DTE; he explained that DTE addressed the potential trans-boundary impacts in its Environmental Report and that none of them were unique or unusual.¹⁸⁰

The Staff stated that it contacted two environmental organizations — the International Joint Commission’s Great Lakes Water Quality Board and the Great Lakes Fisheries Commission.¹⁸¹ The International Joint Commission’s Great

¹⁷¹ Tr. at 181 (Ms. Sutton). *See generally* National Historic Preservation Act of 1966, as amended, § 106, 16 U.S.C. § 470f.

¹⁷² Tr. at 181 (Ms. Sutton).

¹⁷³ *Id.* at 182 (Ms. Sutton); Ex. DTE000009, DTE Environmental Panel 2 Presentation at 3.

¹⁷⁴ Ex. NRC000015, Staff Environmental Panel 2 Presentation at 3.

¹⁷⁵ Tr. at 182 (Ms. Sutton).

¹⁷⁶ *Id.* (Ms. Sutton).

¹⁷⁷ Ex. NRC000001, Staff Information Paper at 17-18.

¹⁷⁸ *Id.* (quoting 10 C.F.R. § 51.10(a)).

¹⁷⁹ Ex. DTE000009, DTE Environmental Panel 2 Presentation at 4; Tr. at 179 (Mr. Smith).

¹⁸⁰ Ex. DTE000009, DTE Environmental Panel 2 Presentation at 4; Tr. at 180.

¹⁸¹ Ex. NRC000001, Staff Information Paper at 18; Tr. at 183 (Ms. Sutton); *see also* Ex. NRC-000010B, FEIS at D-7, D-77 to D-78.

Lakes Water Quality Board is made up of federal, state, provincial, local, and tribal government officials in the United States and Canada, as well as representatives from business and environmental organizations.¹⁸² The Great Lakes Fisheries Commission is made up of federal, state, and provincial government officials from the United States and Canada, as well as academic experts.¹⁸³ The information that the Staff gathered from these organizations informed the Staff's analysis in the FEIS.¹⁸⁴ For example, in a letter responding to the Staff's request for comments, the Great Lakes Water Quality Board cited a number of its reports on water quality in the Great Lakes Basin, and the Staff considered this information when evaluating the impacts from operation of Fermi Unit 3.¹⁸⁵

The Staff also contacted the U.S. Fish and Wildlife Service for information relating to trans-boundary impacts to the Detroit River International Wildlife Refuge, which Fish and Wildlife manages jointly with the Canadian government.¹⁸⁶ In 2003, DTE placed portions of the Fermi site under management of the Detroit River International Wildlife Refuge.¹⁸⁷ Fish and Wildlife commented during the scoping process for the Fermi Unit 3 application that it would "continue to work with DTE on wildlife management during the Fermi 3 planning process."¹⁸⁸ The Staff used the information obtained from Fish and Wildlife regarding the refuge to inform its land use and terrestrial ecology impact determinations.¹⁸⁹ Overall, the Staff found that the information it obtained through its international outreach "supported the thoroughness of . . . [its] review."¹⁹⁰

c. Proposed Transmission-Line Corridor

In its Environmental Report, DTE described a proposed transmission corridor to deliver electricity from the new plant to the grid.¹⁹¹ DTE explained that the International Transmission Company (ITC*Transmission*) plans to install three new 345-kV transmission lines from Unit 3 to a substation northwest of the plant.¹⁹² The proposal would place the lines in existing corridors of Fermi and

¹⁸² Ex. NRC000001, Staff Information Paper at 18.

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ See Ex. NRC000010B, FEIS at D-78.

¹⁸⁶ Ex. NRC000001, Staff Information Paper at 18.

¹⁸⁷ *Id.*; see also Ex. NRC000010B, FEIS at D-54.

¹⁸⁸ Ex. NRC000001, Staff Information Paper at 18.

¹⁸⁹ *Id.*

¹⁹⁰ *Id.* at 19.

¹⁹¹ Ex. NRC000006F, DTE Combined License Application at 1-4 to 1-5, 2-22 to 2-26.

¹⁹² *Id.* at 1-4 to 1-5.

non-Fermi lines for 18.6 miles (29.9 kilometers).¹⁹³ The lines would then continue to the Milan substation in a mostly undeveloped corridor for 10.8 miles (17.4 kilometers).¹⁹⁴ DTE stated that ITCTransmission would own and operate the lines in the proposed corridor.¹⁹⁵

DTE's Environmental Report discussed potential environmental impacts along the potential transmission corridor.¹⁹⁶ DTE concluded that the environmental impacts of transmission-line development likely would be small because most of the development would likely take place along an existing corridor.¹⁹⁷ Further, DTE reasoned that the proposed shorter, 10.8-mile (17.4-kilometer) undeveloped corridor would be expected to experience minimal impacts because best management practices likely would be used and only a limited area around the bases of the towers would be disturbed.¹⁹⁸ The NRC Staff incorporated this information into the FEIS along with its own review. Appendix M of the FEIS provides a roadmap of the Staff's discussion of transmission-line impacts.¹⁹⁹

As discussed above, Intervenor in the contested proceeding twice proposed a contention challenging DTE's and the Staff's discussion of transmission-corridor impacts. The Board dismissed those challenges as impermissibly late, but requested our permission to review the adequacy of the Staff's consideration of transmission-corridor impacts *sua sponte*. We denied the Board's request, which left the issue uncontested and therefore suitable for our review in the mandatory hearing. Thereafter, we explored with DTE and the Staff the environmental impacts of the proposed transmission-line corridor before and during the hearing.²⁰⁰

Building transmission lines is not considered "construction" within the scope of the NRC's regulatory authority.²⁰¹ As such, the Staff ordinarily evaluates the environmental impacts of building transmission lines as part of its cumulative impacts analysis.²⁰² However, the U.S. Army Corps of Engineers — a cooperating

¹⁹³ *Id.* at 2-23.

¹⁹⁴ *Id.*

¹⁹⁵ *Id.* at 1-5.

¹⁹⁶ See, e.g., Ex. NRC000006F, NRC000006G, NRC000006H, DTE Combined License Application at 2-22 to 2-26, 2-469 to 2-473, 4-12 to 4-22, 5-5 to 5-10.

¹⁹⁷ See Ex. NRC000006G, DTE Combined License Application at 4-12 to 4-22.

¹⁹⁸ See *id.* at 4-15 to 4-16.

¹⁹⁹ Ex. NRC000010D, FEIS at M-1 to M-2.

²⁰⁰ See Transmission-Line Corridor Questions; Tr. at 154-58 (Commissioner Baran); Ex. NRC-000016, NRC Staff Responses to Commission Additional Pre-Hearing Questions, Proposed Corrections to Draft COL, and Updated Exhibit Table (Jan. 30, 2015).

²⁰¹ See *id.* §§ 50.10(a)(2)(vii), 51.4 (defining "construction"); see also Final Rule: "Limited Work Authorizations for Nuclear Power Plants," 72 Fed. Reg. 57,416, 57,417 (Oct. 9, 2007) (Limited Work Authorization Rule) (requiring NRC authorization "only before undertaking activities that have a reasonable nexus to radiological health and safety and/or common defense and security").

²⁰² Limited Work Authorization Rule, 72 Fed. Reg. at 57,421.

agency in the environmental review of DTE's combined license application — considered preconstruction activities like the proposed transmission-line corridor to be within the direct impacts of the Fermi Unit 3 project.²⁰³ Therefore, the Staff considered the impacts of the proposed transmission-line corridor for Fermi Unit 3, normally a “preconstruction activity,” together with the impacts of “construction” activities within the NRC's regulatory purview.²⁰⁴ The Staff also discussed measures to mitigate any adverse impacts from the transmission lines, as well as considered transmission-line impacts in its alternatives analysis.²⁰⁵

The Staff explained at the hearing that there would have been no difference in its FEIS analysis of transmission-corridor impacts had the Staff considered their development a “direct impact” of licensing Fermi Unit 3.²⁰⁶ Given that there has been no formal proposal by *ITCTransmission* announcing the route of the proposed transmission line for Fermi Unit 3, the Staff performed its analysis using the best information available.²⁰⁷ The Staff expected that the U.S. Army Corps of Engineers and state agencies, including the Michigan Department of Environmental Quality, would perform additional environmental analyses when *ITCTransmission* applies for the permits it will need to build any new transmission lines.²⁰⁸

d. Consultation Under the Endangered Species Act

Section 7 of the Endangered Species Act requires an agency, in consultation with and with the assistance of the Secretary of the Interior or the Secretary of Commerce (as appropriate), to ensure 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.”²⁰⁹ As part of its environmental review, the Staff prepared a biological assessment discussing the potential impacts of constructing and operating Fermi Unit 3 on federally listed

²⁰³ See Ex. NRC000010A, FEIS at 1-7 to 1-8, 4-1 to 4-4.

²⁰⁴ See *id.* at 4-3; Ex. NRC000010D, FEIS at M-1 to M-2.

²⁰⁵ See, e.g., *id.* at 4-25 (citing the Environmental Protection Agency's recommendation that when clearing forested land for transmission lines that DTE “consider establishing low-growing native plants conducive to periodic mowing”); *id.* at 4-9 (noting *ITCTransmission*'s statement that it would use best practices for minimizing environmental impacts); Ex. NRC000010B, FEIS at 9-4 (discussing transmission-corridor impacts relative to alternative sources of energy); *id.* at 9-81, 9-95 to 9-96, 9-263 (considering transmission-corridor impacts in the comparison of alternative sites).

²⁰⁶ See Tr. at 155-58.

²⁰⁷ See *id.* at 155; Ex. NRC000010A, FEIS at 2-10.

²⁰⁸ See, e.g., Ex. NRC000010A, FEIS at 2-61, 4-8, 4-11.

²⁰⁹ Endangered Species Act § 7(a)(2), 16 U.S.C. § 1536(a)(2).

threatened or endangered species and species that are candidates for federal listing.²¹⁰ The Staff found that no listed species were likely to be adversely affected by the project, and the respective federal resource agencies agreed.²¹¹ After the Staff finalized the FEIS, and shortly before the hearing, however, the U.S. Fish and Wildlife Service listed a new threatened species, the rufa red knot bird.²¹²

At the hearing, the Staff provided the status of ongoing interactions with Fish and Wildlife concerning the rufa red knot bird.²¹³ Mallecia Sutton testified that the Staff contacted Fish and Wildlife and planned to issue a supplemental biological assessment for the rufa red knot.²¹⁴ The Staff has since notified us that it submitted its biological assessment to Fish and Wildlife on February 20, 2015.²¹⁵ The Staff determined that the proposed action may affect but is not likely to adversely affect the rufa red knot.²¹⁶ The Fish and Wildlife Service concurred with the Staff's conclusion.²¹⁷

The Staff also provided a status update on Fish and Wildlife's then-proposed listing of the northern long-eared bat as a threatened or endangered species.²¹⁸ We note that the Fish and Wildlife Service listed the northern long-eared bat as a threatened species on April 2, 2015.²¹⁹ Subsequently, the Staff submitted a biological assessment to the Fish and Wildlife Service that concluded that construction and operation of Fermi Unit 3 may affect but is not likely to adversely affect the northern long-eared bat.²²⁰ The listing of the northern long-eared bat will not be effective until May 4, 2015.²²¹ In the meantime, however, the Fish and Wildlife Service has concurred with the Staff's conclusion.²²²

²¹⁰ See Ex. NRC000010D, App. F.

²¹¹ Tr. at 152 (Ms. Sutton).

²¹² See Ex. NRC000014, Staff Environmental Panel 1 Presentation at 12.

²¹³ See *id.*

²¹⁴ Tr. at 152, 158-59.

²¹⁵ See April 5 Commission Notification at 1.

²¹⁶ *Id.*; see also Ex. NRC000018, Supplemental Biological Assessment at 25.

²¹⁷ April 5 Commission Notification; see also Ex. NRC000019, March 23 Letter from the Fish and Wildlife Service at 1-2.

²¹⁸ Ex. NRC000014, Staff Environmental Panel 1 Presentation at 12.

²¹⁹ See Endangered and Threatened Wildlife and Plants; Threatened Species Status for the Northern Long-Eared Bat with 4(d) Rule, 80 Fed. Reg. 17,974 (Apr. 2, 2015) (Northern Long-Eared Bat Listing); April 5 Commission Notification at 1.

²²⁰ Ex. NRC000020, Supplemental Biological Assessment (Northern Long-Eared Bat).

²²¹ Northern Long-Eared Bat Listing, 80 Fed. Reg. at 17,974.

²²² April 29 Commission Notification; Ex. NRC000021, April 28 Letter from the Fish and Wildlife Service.

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. Our findings, however, are based on the entire record. Based on the evidence presented in the uncontested hearing, including the Staff's review documents and the testimony provided, we find that the applicable standards and requirements of the Atomic Energy Act and the NRC regulations have been met. The required notifications to other agencies or bodies have been duly made. DTE is technically and financially qualified to engage in the activities authorized.²²³ We find that there is reasonable assurance that the facility will be constructed and operated in conformity with the license, the provisions of the Atomic Energy Act, and the NRC'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. Additionally, we find that the Staff's proposed license conditions are appropriately drawn²²⁴ and sufficient to provide reasonable assurance of adequate protection of public health and safety.

We also conducted an independent review of the Staff's environmental analysis in the FEIS taking into account the particular requirements of NEPA. 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.²²⁵ We find that the environmental review team used the systematic, interdisciplinary

²²³ As part of its financial qualification review, the Staff found that DTE had met the requirements for financial protection and onsite property insurance for Fermi Unit 3. Ex. NRC000008A, SER at 1-37 to 1-38. The Staff stated that it would issue DTE an amended indemnity agreement to include Fermi Unit 3 upon issuance of the combined license. *Id.* at 1-38. The Staff has since provided an update on the status of its amendment to the indemnity agreement. Particularly, the Staff represented that American Nuclear Insurers has committed to "endorse a site insurance policy that includes the Fermi 3 site concurrent with the NRC's issuance of a . . . [combined license] to DTE" and concurrent with the amendment of the indemnity agreement. Roach, Kevin C., Counsel for the Staff, Letter to the Commissioners (Mar. 24, 2015) at 1. The Staff further represented that it will coordinate with DTE and American Nuclear Insurers so that the amended policy is effective as of the date of the combined license and the amended indemnity agreement. *Id.* The Staff thus confirmed its financial protection finding. *Id.* at 1-2 (citing Ex. NRC000002, Draft Combined License at 1 ("The Fermi owner has satisfied the applicable provisions of 10 [C.F.R.] Part 140, "Financial Protection Requirements and Indemnity Agreements[.]")).

²²⁴ However, we direct the Staff to make the changes to the draft combined license that it identified during this proceeding. See Ex. NRC000004, NRC Staff Responses to Commission Initial Pre-Hearing Questions at 28-30; Ex. NRC000016, Staff Responses to Additional Pre-Hearing Questions, Attachment B; April 5 Commission Notification; see also Ex. NRC000002, Draft Combined License.

²²⁵ NEPA § 102(2)(A), 42 U.S.C. § 4332(2)(A).

approach that NEPA requires.²²⁶ The environmental review team consisted of more than forty individuals with expertise in disciplines including ecology, geology, hydrology, radiological health, socioeconomics, and cultural resources.²²⁷

NEPA § 102(2)(E) calls for agencies to study, develop, and describe appropriate alternatives.²²⁸ The alternatives analysis is the “heart of the environmental impact statement.”²²⁹ Based on the Staff’s testimony at the hearing, as well as the discussion in the FEIS, we find that the environmental review identified an appropriate range of alternatives with respect to alternative power sources, alternative sites, and alternative system designs and adequately described the environmental impacts of each alternative.²³⁰ We find reasonable the Staff’s conclusion that none of the alternatives considered is environmentally preferable to the proposed action.²³¹

NEPA § 102(2)(C) requires us to assess the relationship between local short-term uses and long-term productivity of the environment, to consider alternatives, and to describe the unavoidable adverse environmental impacts and the irreversible and irretrievable commitments of resources associated with the proposed action.²³² The discussion of alternatives is in Chapter 9 of the FEIS; the other items are discussed in Chapter 10.²³³ The environmental review team found extensive short-term benefits of the project from the production of electrical energy and the economic productivity of a site that “is not currently available for agricultural or industrial uses.”²³⁴ In terms of long-term productivity, the review team found that “the enhancement of regional productivity that would result from the electrical energy produced by Fermi 3 would lead to a correspondingly large increase in regional long-term productivity that would not be equaled by any other long-term use of the site.”²³⁵

Chapter 10 of the FEIS includes a chart of the unavoidable adverse environmental impacts during preconstruction, construction, and operation, along with actions to mitigate those impacts.²³⁶ The environmental review team found that the unavoidable adverse impacts during preconstruction and construction

²²⁶ See, e.g., Tr. at 144-48 (Ms. Dixon-Herrity) (providing an overview of the Staff’s environmental review methodology); Ex. NRC000014, Staff Environmental Panel 1 Presentation at 3-8.

²²⁷ See Ex. NRC000010B, FEIS at A-1 to A-2.

²²⁸ NEPA § 102(2)(E), 42 U.S.C. § 4332(2)(E).

²²⁹ 10 C.F.R. Part 51, Subpart A, App. A, § 5.

²³⁰ See, e.g., Tr. at 148-50 (Mr. Kugler); Ex. NRC000010B, FEIS Ch. 9.

²³¹ See, e.g., Tr. at 149-50 (Mr. Kugler); Ex. NRC000010B, FEIS at 10-25 to 10-26.

²³² NEPA § 102(2)(C)(ii)-(v), 42 U.S.C. § 4332(2)(C)(ii)-(v).

²³³ Ex. NRC000010B, FEIS Ch. 9-10.

²³⁴ *Id.* at 10-21.

²³⁵ *Id.* at 10-22.

²³⁶ *Id.* at 10-4 to 10-21.

would be small for all resource areas except for terrestrial and wetland resources, socioeconomics, and historical and cultural resources, which could be small to moderate based on potential impacts to the eastern fox snake, increased traffic during construction, and demolition of Fermi Unit 1, respectively.²³⁷ For operation, the review team found that the unavoidable adverse impacts during operation would be small for all resource areas with the exception of terrestrial and wetland resources and socioeconomics, which could be small to moderate based on potential impacts to the eastern fox snake and increased traffic during outages, respectively.²³⁸

Finally, with regard to irreversible and irretrievable commitments of resources, the environmental review team concluded that preconstruction and construction activities on the Fermi site, including the proposed transmission corridor, “would permanently convert some portions of terrestrial and aquatic habitats.”²³⁹ The Staff also concluded that during the construction of Fermi Unit 3, the materials used and energy consumed, “while irretrievable, would be of small consequence with respect to the quantities of such resources that are available.”²⁴⁰ With regard to operation of Fermi Unit 3, the review team determined that uranium would be irretrievably committed, “but that this irreversible and irretrievable commitment . . . [would] be negligible.”²⁴¹

We must weigh these unavoidable adverse environmental impacts and resource commitments — the environmental “costs” of the project — against the project’s benefits.²⁴² Considering the need for power in the region and the expected increase in productivity, jobs, and tax revenue as described during the hearing and in the FEIS, we find that the benefits of the project outweigh the costs described above. Moreover, we have considered 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.

In sum, for each of the topics discussed at the hearing and in today’s decision, we find that the Staff’s review was reasonably supported in logic and fact and sufficient to support the Staff’s conclusions.²⁴³ Based on our review of the FEIS,

²³⁷ See *id.* at 10-5 to 10-9.

²³⁸ See *id.* at 10-12 to 10-19.

²³⁹ *Id.* at 10-23.

²⁴⁰ *Id.* at 10-25.

²⁴¹ *Id.*

²⁴² 10 C.F.R. § 51.107(a).

²⁴³ Our finding includes the Staff’s consideration of the proposed transmission-line corridor for Fermi Unit 3. We are satisfied that the Staff took a hard look at the environmental impacts of the transmission-line corridor, regardless of whether the Staff’s analysis is characterized as a cumulative impacts analysis or a direct impacts analysis. In substance, the Staff reviewed and discussed potential

(Continued)

we also find that the remainder of the FEIS was reasonably supported and sufficient to support the Staff's conclusions.

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. We find, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, that the combined license should be issued.

III. CONCLUSION

We find that, with respect to the safety and environmental issues before us today, the Staff's review of DTE's combined license application was sufficient to support the findings in 10 C.F.R. §§ 52.97(a) and 51.107(a). We *authorize* the Director of the Office of New Reactors to issue the combined license for the construction and operation of Fermi Nuclear Power Plant Unit 3 subject to the directions and modifications contained herein.²⁴⁴ We *authorize* the Staff to issue the record of decision, subject to its revision as necessary to reflect the findings in this decision and the results of the Staff's analysis of environmental impacts on recently listed species.²⁴⁵

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 30th day of April 2015.

transmission-corridor impacts together with other preconstruction and construction impacts on the environment from construction and operation of Fermi Unit 3. We find that the Staff's approach was reasonable and that its consideration of this issue satisfied NEPA.

²⁴⁴ See *supra* note 224.

²⁴⁵ See Ex. NRC000003, Draft Record of Decision, U.S. Nuclear Regulatory Commission Docket No. 52-033, Combined License Application for Enrico Fermi Nuclear Plant Unit 3 (Dec. 5, 2014). The Staff may issue the license notwithstanding the pendency of a petition for reconsideration under 10 C.F.R. § 2.345, a petition for review under 10 C.F.R. § 2.341, a motion for stay under 10 C.F.R. § 2.342, or a petition for action under 10 C.F.R. § 2.206. 10 C.F.R. § 2.340(i).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
Dr. Gary S. Arnold
Dr. Richard E. Wardwell

In the Matter of

Docket No. 50-391-OL
(ASLBP No. 09-893-01-OL-BD01)

TENNESSEE VALLEY AUTHORITY
(Watts Bar Nuclear Plant, Unit 2)

April 22, 2015

MEMORANDUM AND ORDER
(Denying Motion to Reopen)

Before the Board are motions to reopen the record¹ and for leave to file a new contention² submitted by the Southern Alliance for Clean Energy (SACE). Because SACE has failed to satisfy the stringent requirements the Commission has established for reopening a closed record, we deny the first motion and need not reach the second.

¹ Southern Alliance for Clean Energy's Motion to Reopen the Record (Feb. 5, 2015) [hereinafter SACE Motion to Reopen].

² Southern Alliance for Clean Energy's Motion for Leave to File a New Contention Concerning TVA's Failure to Comply with 10 C.F.R. § 50.34(b)(4) (Feb. 5, 2015) [hereinafter SACE Motion for Leave to File].

I. BACKGROUND

This proceeding concerns the application of the Tennessee Valley Authority (TVA) for a license to operate a second reactor unit at the Watts Bar Nuclear Generating Station in Rhea County, Tennessee. The background is set forth in more detail in earlier Licensing Board orders.³

On July 15, 2013, SACE submitted an unopposed motion to withdraw voluntarily its only remaining admitted contention, asserting that “we think our resources would not be well utilized by continuing with a hearing before the ASLB” on the questions that were still at issue.⁴ Although the Board granted SACE’s motion,⁵ it did not immediately terminate the proceeding at that time because SACE had previously moved for leave to file a new contention concerning storage and disposal of spent nuclear fuel.⁶ Instead, at the Commission’s direction,⁷ the Board held that motion in abeyance pending further order of the Commission.⁸

On August 26, 2014, in light of its adoption of a revised rule regarding the environmental impacts associated with storage of spent nuclear fuel, the Commission directed all affected Licensing Boards to reject proffered contentions on this issue.⁹ Accordingly, SACE’s then-pending motion for leave to file a new contention was denied, and the adjudicatory proceeding concerning TVA’s application for an operating license for a second nuclear reactor at the Watts Bar Nuclear Plant was terminated.¹⁰ Thereafter, on September 29, 2014, SACE filed a motion to reopen this proceeding regarding spent nuclear fuel,¹¹ which was denied by the Commission on February 26, 2015.¹²

On February 5, 2015, SACE filed its second motion to reopen the record and

³ See, e.g., LBP-09-26, 70 NRC 939, 945-46 (2009); Licensing Board Order (Granting TVA’s Unopposed Motion to Dismiss SACE Contention 1) (June 2, 2010) at 1 (unpublished).

⁴ Southern Alliance for Clean Energy’s Unopposed Motion to Withdraw Contention 7 (July 15, 2013) at 2.

⁵ See Licensing Board Order (Granting Motion to Withdraw Contention 7) (July 17, 2013) (unpublished).

⁶ Southern Alliance for Clean Energy’s Motion for Leave to File a New Contention Concerning Temporary Storage and Ultimate Disposal of Spent Reactor Fuel at Watts Bar Unit 2 (July 9, 2012).

⁷ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 68-69 (2012).

⁸ See Licensing Board Order (Holding Waste Confidence Contention in Abeyance) (Aug. 9, 2012) (unpublished).

⁹ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 80 (2014).

¹⁰ See LBP-14-13, 80 NRC 142 (2014).

¹¹ Southern Alliance for Clean Energy’s Motion to Reopen the Record (Sept. 29, 2014).

¹² *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2), CLI-15-4, 81 NRC 221 (2015).

an associated motion for leave to file a different new contention — the motions now before this Board.¹³ TVA and the NRC Staff oppose both motions.¹⁴

II. DISCUSSION

A. SACE's Motion to Reopen and Proffered Contention

SACE seeks to reopen this adjudicatory proceeding to proffer the following contention:

TVA's Final Safety Analysis Report (FSAR) . . . is deficient under 10 C.F.R. § 50.34(b)(4) because it does not include the information provided in TVA's Dec. 30, 2014 Expedited Seismic Evaluation Process ("ESEP") Report for Watts Bar Nuclear Plant.¹⁵

The essence of SACE's contention is that the ESEP Report — which TVA submitted to the NRC at the NRC's request and which purports to demonstrate the continued safety of the Watts Bar facility — must also be placed in a second document submitted to the agency (i.e., the FSAR) because section 50.34(b)(4) requires the FSAR to provide certain information about the reactor's "design and performance of structures, systems and components," taking into account "any pertinent information developed since the submittal of the preliminary safety analysis report."¹⁶ According to SACE, "[w]hile the NRC has stated that it will review the information in the ESEP as part of its post-Fukushima deliberations, that review will take place outside the scope of this operating license proceeding."¹⁷ SACE contends that "TVA has updated its analysis under . . . 50.34(b)(4), but sent it to the NRC outside the licensing process."¹⁸ As a

¹³ See Order of the Secretary (Referring Motions to Reopen and Associated Pleadings to the Atomic Safety and Licensing Board) (Feb. 18, 2015); Establishment of Atomic Safety and Licensing Board, 80 Fed. Reg. 10,727, 10,727 (Feb. 27, 2015).

¹⁴ Tennessee Valley Authority's Answer Opposing Southern Alliance for Clean Energy's Motion to Reopen the Record (Feb. 17, 2015); NRC Staff's Answer to Southern Alliance for Clean Energy's Motion to Reopen the Record (Feb. 18, 2015); Tennessee Valley Authority's Answer Opposing Southern Alliance for Clean Energy's Motion for Leave to File a New Contention (Mar. 3, 2015); NRC Staff's Answer to Southern Alliance for Clean Energy's Motion for Leave to File a New Contention (Mar. 3, 2015) [hereinafter NRC Staff Answer]. SACE submitted a reply in support of its motion for leave to file a new contention on March 10, 2015. Southern Alliance for Clean Energy's Reply to Oppositions to Motion for Leave to File a New Contention Concerning TVA's Failure to Comply with 10 C.F.R. § 50.34(b)(4) (Mar. 10, 2015).

¹⁵ SACE Motion for Leave to File at 1.

¹⁶ *Id.*

¹⁷ SACE Motion for Leave to File at 4-5.

¹⁸ SACE Motion to Reopen at 4.

result, SACE asserts, the information in the ESEP Report might be reviewed by the NRC under a less stringent safety standard.¹⁹

SACE acknowledges that “TVA submitted the ESEP Report in response to a request for information by the NRC in the aftermath of the Fukushima accident.”²⁰ As SACE also acknowledges, “[t]he ESEP Report is intended to show that [the proposed second reactor at the Watts Bar Nuclear Plant] can operate safely despite the fact that the seismic risk to [the reactor] is now known to be greater than the safe shutdown earthquake (SSE) to which the reactor was designed.”²¹ SACE admits that its proposed contention “relies entirely on factual statements made by TVA.”²²

B. Legal Standards

The applicable requirements to reopen a case are set forth in 10 C.F.R. § 2.326. Pursuant to 10 C.F.R. § 2.326(a), a motion to reopen must (1) be timely;²³ (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. Pursuant to 10 C.F.R. § 2.326(b), a motion to reopen must also 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.” Among other things, such affidavits “must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised.”²⁴

Given the need for finality in adjudications, the Commission has described reopening the record as an “extraordinary” action.²⁵ The Commission’s rules therefore impose “a ‘deliberately heavy’ burden upon an intervenor who seeks

¹⁹ See SACE Motion for Leave to File at 4-5.

²⁰ *Id.* at 2.

²¹ *Id.*

²² *Id.* at 6.

²³ The rule allows a discretionary exception if the motion presents “an exceptionally grave issue.” 10 C.F.R. § 2.326(a)(1).

²⁴ Section 2.326(b) further specifies: “Evidence contained in affidavits must meet the admissibility standards of this subpart. Each of the criteria must be separately addressed, with a specific explanation of why it has been met. When multiple allegations are involved, the movant must identify with particularity each issue it seeks to litigate and specify the factual and/or technical bases which it believes support the claim that this issue meets the criteria in paragraph (a) of this section.”

²⁵ *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 338 (2011) (citing Final Rule: “Criteria for Reopening Records in Formal Licensing Proceedings,” 51 Fed. Reg. 19,535, 19,538 (May 30, 1986)).

to supplement the evidentiary record after it has been closed.”²⁶ Otherwise, the Commission has cautioned, “‘there would be little hope’ of completing administrative proceedings if each newly arising allegation required an agency to reopen its hearings.”²⁷ Moreover, the Commission has clarified that this heavy barrier to reopen applies whenever an adjudication has been closed and not merely after a case has been terminated following a full evidentiary hearing on the merits.²⁸

C. Board Ruling

A motion to reopen must satisfy all the above requirements.²⁹ SACE’s motion fails at least three of them.³⁰

First, SACE does not demonstrate how the location of the information provided in TVA’s ESEP Report presents a significant safety or environmental issue. Regardless of its location within the NRC’s files, the purpose of the ESEP Report is to demonstrate that there is no significant safety or environmental issue with respect to the continued operation of the Watts Bar facility at this time. As SACE concedes that its proffered contention relies entirely on the ESEP Report itself,³¹ SACE has provided the Board with no grounds on which to reach a different conclusion.

Second, SACE fails to show that consideration of its proffered contention would likely produce a materially different result in this proceeding. Quite apart from the fact that the information in the ESEP Report is already in the possession of

²⁶ *Id.* (quoting *AmerGen Energy Co. LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 674 (2008)).

²⁷ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-12, 61 NRC 345, 350 n.18 (2005) (quoting *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 555 (1978)).

²⁸ See *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-14, 75 NRC 692, 692 (2012); *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).

²⁹ Additionally, although we need not address it, section 2.326(d) imposes a further requirement for a motion to reopen that relates to a contention not previously in controversy: that is, satisfying the section 2.309(c) requirements for new or amended contentions filed after the original hearing petition deadline.

³⁰ Both TVA and the NRC Staff also challenge the timeliness of SACE’s motions, asserting that relevant information concerning post-Fukushima seismic hazards was available long before TVA submitted the ESEP Report. TVA Answer at 1, 12-13; NRC Staff Answer at 6. Because SACE submitted its motions within 30 days of the date on which the ESEP Report was posted on the NRC’s public document system, however, the Board does not find SACE’s motion to be untimely.

³¹ SACE Motion for Leave to File at 6.

SACE, TVA, and the NRC, the benefits SACE claims will result from mandating inclusion of that information in the FSAR are rank speculation. SACE postulates that, upon reviewing the information in that format, the NRC “may” require that more information be submitted and/or that TVA make unspecified changes to the facility and that “members of the public will have the benefit of a more thorough and adequate NRC licensing review.”³² But SACE provides no factual support for these speculative benefits, much less sufficient support to justify reopening the record of this closed proceeding.

Third, SACE fails to provide an affidavit to demonstrate the existence of a significant safety or environmental issue, as required by 10 C.F.R. § 2.326(b). The affidavit of SACE’s counsel provides no support for the proposition that duplicating in the FSAR information that is already in the ESEP Report — which concludes that the Watts Bar facility *can* continue to operate safely — will somehow identify significant safety issues. Even assuming for the sake of argument that counsel possesses appropriate qualifications and expertise, she makes no effort in her affidavit (and SACE makes none in its pleadings) to demonstrate how the ESEP Report presents any underlying facts that might support a different conclusion.

Because SACE’s motion to reopen the record is insufficient, the Board need not address SACE’s motion for leave to file a new contention.³³

III. ORDER

For the reasons stated, SACE’s motion to reopen the record is *denied* and the Board does not address the sufficiency of the motion to admit a new contention that accompanied SACE’s motion.

This adjudicatory proceeding remains *terminated*. In accordance with 10 C.F.R. § 2.341, any petition for review of this Memorandum and Order must be filed within twenty-five (25) days after it is served.

³² *Id.* at 4.

³³ As the Staff observes, “because the Board should deny SACE’s Motion to Reopen, it need not separately address whether SACE’s subsequent Motion to File a New Contention satisfies the applicable Commission requirement.” NRC Staff Answer at 7.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary Arnold
ADMINISTRATIVE JUDGE

Dr. Richard E. Wardwell
ADMINISTRATIVE JUDGE

Rockville, Maryland
April 22, 2015

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael M. Gibson, Chairman
Dr. Richard E. Wardwell
Brian K. Hajek
Alan S. Rosenthal (Special Assistant to the Board)

In the Matter of

Docket No. 40-8943
(ASLBP No. 08-867-02-OLA-BD01)
(License Renewal)

CROW BUTTE RESOURCES, INC.
(In Situ Leach Facility, Crawford,
Nebraska)

April 28, 2015

**EPA AUTHORITY: INTERPRETATION OF NOTICE OF
PROPOSED RULEMAKING**

An EPA notice of proposed rulemaking has been issued to address the shift toward in situ leach recovery as the dominant form of uranium recovery in the United States. 80 Fed. Reg. at 4156. When final, these rules will be implemented by the NRC.

**EPA AUTHORITY: INTERPRETATION OF NOTICE OF
PROPOSED RULEMAKING**

Proposed rules are not binding upon administrative agencies and are not ripe for review by this Board. *American Petroleum Institute v. Environmental Protection Agency*, 683 F.3d 382, 387 (D.C. Cir. 2012). However, studies or data disclosed in the notice of proposed rulemaking preamble, if timely utilized, may form the basis for an admissible contention.

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
ADMISSIBILITY)**

To be admissible, a new or amended contention must satisfy the substantive contention admissibility standards set forth in 10 C.F.R. § 2.309(f)(1).

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
ADMISSIBILITY)**

Pursuant to 10 C.F.R. § 2.309(c), if a party submits a proposed contention after the initial filing deadline for submitting a hearing request, it “will not be entertained absent a determination by the presiding officer that a participant has demonstrated good cause.”

**MEMORANDUM AND ORDER
(Denying Motion to Admit Additional Contentions
Based on EPA Proposed Rules)**

I. INTRODUCTION

This proceeding involves a challenge to the application of Crow Butte Resources, Inc. (Crow Butte) to renew its Source Materials License No. SUA-1534 for continued operation of its in-situ leach uranium recovery (ISL) facility near Crawford, Nebraska.¹ On January 26, 2015, the U.S. Environmental Protection Agency (EPA) published a notice of proposed rulemaking (NPR) “to add new health and environmental protection standards to regulations promulgated under the Uranium Mill Tailings Radiation Control Act of 1978.”² EPA explained that “these proposed standards are intended to address the shift toward [ISL]³ as the dominant form of uranium recovery” in the United States.⁴ According to the

¹ Crow Butte, Application for 2007 License Renewal USNRC Source Materials License SUA-1534 Crow Butte License Area (Nov. 2007) (ADAMS Accession No. ML073480264) [hereinafter LRA].

² Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, Proposed Rule, 80 Fed. Reg. 4156, 4156 (Jan. 26, 2015). In the same notice, EPA also proposed “to amend specific provisions in the current Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings.” *Id.* The proposed regulatory language starting from page 4183 of the *Federal Register* notice onwards is hereinafter called “Proposed Rules.”

³ EPA’s NPR abbreviates in-situ leach uranium recovery as “ISR,” but for consistency, we use the abbreviation “ISL” throughout.

⁴ 80 Fed. Reg. at 4156.

NOPR, “[t]he general standards proposed today, when final, will be implemented by the Nuclear Regulatory Commission (NRC).”⁵

On February 24, 2015, Consolidated Intervenor⁶ informed the Board that they intended to file new contentions based on the content of the NOPR,⁷ and the Board set a schedule for pleadings.⁸ On March 16, 2015, Consolidated Intervenor⁹ moved to admit eleven contentions.⁹ On March 27, 2015, Crow Butte and the NRC Staff filed their answers.¹⁰ Consolidated Intervenor¹¹ filed their reply to the Crow Butte and the NRC Staff answers on April 1, 2015.¹¹ The Board concludes that all eleven proposed contentions are inadmissible because, *inter alia*, Consolidated Intervenor¹¹’s new contentions either mistakenly assume that EPA’s Proposed Rules are enforceable at this time, are based on EPA’s tentative policy determinations, or are untimely filed.

II. LEGAL STANDARDS

To be admissible, a new or amended contention must satisfy the substantive contention admissibility standards set forth in 10 C.F.R. § 2.309(f)(1). Namely, the contention 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;

⁵ *Id.*

⁶ Consolidated Intervenor⁶ and the Oglala Sioux Tribe, the other intervening party in this proceeding, are collectively referred to herein as “Intervenor⁶.”

⁷ E-mail from David Frankel, Consolidated Intervenor⁶’s Counsel, to Nicholas Sciretta, Board Law Clerk (Feb. 24, 2015).

⁸ Licensing Board Order (Establishing a Briefing Schedule for Additional New/Amended Contentions) (Mar. 9, 2015) (unpublished).

⁹ Consolidated Intervenor⁶’s Motion for Additional Contentions Based on EPA Proposed Rules (Mar. 16, 2015) [hereinafter Motion].

¹⁰ Crow Butte Resources’ Response to Motion for Additional Contentions Based on EPA Proposed Rules (Mar. 27, 2015) [hereinafter Crow Butte Answer]; NRC Staff’s Answer to Consolidated Intervenor⁶’s New Contentions Based on Proposed EPA Rule (Mar. 27, 2015) [hereinafter NRC Staff Answer].

¹¹ Consolidated Intervenor⁶’s Combined Reply to NRC Staff’s and Applicant’s Answers (Apr. 1, 2015). The broader procedural history of this proceeding is otherwise set forth in LBP-15-11, 81 NRC 401 (2015).

- (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's 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.¹²

These rules are “strict by design,”¹³ and exist to “focus litigation on concrete issues and result in a clearer and more focused record for decision.”¹⁴ Failure to comply with any of these requirements is grounds for the Board not to admit a contention.

Additionally, pursuant to 10 C.F.R. § 2.309(c),¹⁵ if a party submits a proposed contention after the initial filing deadline for submitting a hearing request, it “will not be entertained absent a determination by the presiding officer that a participant has demonstrated good cause.”¹⁶ “[G]ood cause” exists when:

- (i) [t]he information upon which the filing is based was not previously available;
- (ii) [t]he information upon which the filing is based is materially different from information previously available; and
- (iii) [t]he filing has been submitted in a timely fashion based on the availability of the subsequent information.¹⁷

The first two “good cause” factors relate to the nature of the information that serves as the basis for the new/amended contention. The third factor concerns whether the new/amended contention and any supporting information — even if newly available and materially different from any information that was previously available — nonetheless was seasonably submitted. In contrast to section 2.309(b)’s provisions relating to an initial hearing petition, section 2.309(c)(1)(iii) does not stipulate when such a contention is considered to be “timely” filed. The Board has discussed this issue in a prior order.¹⁸

¹² 10 C.F.R. § 2.309(f)(1).

¹³ *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003).

¹⁴ Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

¹⁵ The current section 2.309(c) was promulgated on August 3, 2012. Amendments to Adjudicatory Process Rules and Related Requirements, 77 Fed. Reg. 46,562, 46,591 (Aug. 3, 2012). Shortly thereafter, the Board advised the parties that the standards set forth in the now-current section 2.309(c) would apply to any new or amended contentions in this proceeding. Licensing Board Order (Concerning Amended Rules of Practice) (Aug. 17, 2012) at 1 (unpublished).

¹⁶ 10 C.F.R. § 2.309(c)(1).

¹⁷ *Id.* § 2.309(c)(1)(i)-(iii).

¹⁸ LBP-15-11, 81 NRC at 407-09. As noted by the NRC Staff, Consolidated Intervenor’s motion to admit new contentions was timely filed pursuant to the Board’s March 9, 2015 Scheduling Order. NRC Staff Answer at 3-4. It is a separate question, however, whether the information on which these proposed contentions are based was previously publicly available. *See infra* section III.B.

III. PROPOSED CONTENTIONS

Consolidated Intervenor propose eleven contentions. The first two contentions challenge Crow Butte’s financial and decommissioning plans,¹⁹ the third alleges the NRC Staff failed to perform an Environmental Impact Statement (EIS) instead of an Environmental Assessment (EA),²⁰ the next seven challenge specific portions of the agency’s EA,²¹ and the final contention challenges Crow Butte’s LRA and the NRC Staff’s Safety Evaluation Report (SER).²² All are summarized *seriatim* below.

A. Contention F1: Failures Concerning Financial Assurances

The LRA, SER and Final EA fail to meet the requirements of the [Atomic Energy Act (AEA)], [National Environmental Policy Act (NEPA)], Part 40, Appendix A to Part 40, and Part 51 and [Council on Environmental Quality (CEQ)] regulations because each lacks an adequate description of adequate financial assurances sufficient to ensure the payment of the costs of restoration and long-term monitoring of up to 30 years under the Proposed Rules.²³

In Contention F1, Consolidated Intervenor assert that Crow Butte’s certification of financial assurance for decommissioning, which is included in section 6.6 of the LRA and section 5.2 of the NRC Staff’s SER, does not satisfy 10 C.F.R. § 40.31(i).²⁴ Consolidated Intervenor argue that the financial assurance provided in the LRA and SER does not reflect financial strains caused by (1) new restoration standards that would be imposed under EPA’s Proposed Rules; (2) \$1.5 billion and \$32 million in tax charges levied by the Canadian Revenue Agency and the U.S.

¹⁹ Motion at 28-36.

²⁰ *Id.* at 36-39; Office of Nuclear Material Safety & Safeguards, Final Environmental Assessment for the License Renewal of U.S. Nuclear Regulatory Commission License No. SUA-1534 (Oct. 2014) (ADAMS Accession No. ML14288A517) [hereinafter EA].

²¹ Motion at 40-68.

²² *See id.* at 69; Office of Federal & State Materials & Environmental Management Programs, Safety Evaluation Report (Revised), License Renewal of the Crow Butte Resources [ISL] Facility Dawes County, Nebraska Materials License No. SUA-1534 (Aug. 2014) (ADAMS Accession No. ML14149A433) [hereinafter SER].

²³ Motion at 29. “Appendix A to Part 40” refers to 10 C.F.R. Part 40, Appendix A, which “establishes technical, financial, ownership, and long-term site surveillance criteria” for those seeking “a license to possess and use source material in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling.”

²⁴ *Id.* at 29-30.

Internal Revenue Service, respectively;²⁵ and (3) low uranium market prices.²⁶ Consolidated Intervenor argue that EPA's Proposed Rules would increase the extent of aquifer restoration and the scope of long-term monitoring, and that this will add \$1.50 per pound of U₃O₈, or \$9 to \$15 million total in restoration costs "[o]ver the ten-year period of the [renewed] license."²⁷

B. Contention F2: Crow Butte Is Now in Restoration per Its Plans

The Final EA fails to meet the requirements of the AEA, NEPA, Part 40, Appendix A to Part 40, and Part 51 and CEQ regulations because it fails to describe that Crow Butte has or will soon cease production and move into restoration and decommissioning.²⁸

In Contention F2, Consolidated Intervenor argue that since the SER indicates that production was expected to be completed in 2014, Crow Butte should already have begun restoration and decommissioning of the site for all inactive mines, i.e., Mine Unit 1 through Mine Unit 11.²⁹ Consolidated Intervenor claim that under EPA's Proposed Rules, any break in extraction would trigger restoration; therefore, "standby is inappropriate for the Crow Butte mine."³⁰ Consolidated Intervenor demand that Crow Butte submit a decommissioning plan, pursuant to 10 C.F.R. § 40.42(d), and updated financial plans related to decommissioning, pursuant to 10 C.F.R. § 40.42(e) and (g)(4)(v).³¹

C. Contention F3: Failure of the NRC Staff to Do EIS, Scoping Instead of EA

The Final EA fails to meet the requirements of the AEA, NEPA, Part 40, Appendix A to Part 40, and Part 51 and CEQ regulations because it is not an EIS as required because of the special circumstances in this case under the Proposed Rules. The

²⁵ Consolidated Intervenor attach two exhibits consisting of newspaper articles attesting to tax charges faced by Crow Butte and its parent corporation. *Id.*, Exs. A, B.

²⁶ *Id.* at 30-32.

²⁷ *Id.* at 27, 31-32.

²⁸ *Id.* at 33.

²⁹ *Id.* (citing SER § 6.1.3.6); *see also id.* at 35. Consolidated Intervenor also contend that due to the Proposed Rules, it is unlikely "Crow Butte will ever commence productions on [Mine Unit 12], or others at the original Licensed Area." *Id.* at 35.

³⁰ *Id.*

³¹ *Id.* at 36.

Final EA fails to satisfy the NRC's requirement for an EIS when there are unresolved conflicts concerning reasonable alternatives under Section 102(E) of NEPA.³²

Consolidated Intervenor claim that the LRA is not only a major federal action "significantly affecting the quality of the human environment," but also presents "[s]pecial circumstances . . . involv[ing] unresolved conflicts concerning alternative uses of available resources" per 10 C.F.R. § 51.22(b).³³ Thus, according to Consolidated Intervenor, the Commission's rules require development of a more expansive EIS in lieu of a more abbreviated EA.³⁴ Consolidated Intervenor contend that "special circumstances" exist due to the increased demands that would be imposed under EPA's Proposed Rules, including those related to aquifer restoration and long-term monitoring.³⁵

D. Contention F4: Failure to Address Aquifer Restoration Under New Standards

The Environmental Assessment fails to adequately describe and analyze aquifer restoration goals in light of new standards for determining alternative control limits in the proposed rules.³⁶

In Contention F4, Consolidated Intervenor allege that the restoration procedures in the EA related to Mine Units 7 to 11 are insufficient to meet the new standards that would be imposed under EPA's Proposed Rules, specifically those related to "water consumption, long-term stability monitoring and Alternative Control Limit determinations."³⁷ As a result, Consolidated Intervenor argue that the EA's finding of no significant impact cannot be supported and a full EIS should be developed.³⁸

E. Contention F5: Inadequate Baseline Data

The Environmental Assessment, License Renewal Application and associated mon-

³² *Id.* at 36-37.

³³ *Id.* at 38, 39 (internal quotation marks omitted; emphasis removed).

³⁴ *Id.*

³⁵ *Id.* at 37, 39.

³⁶ *Id.* at 40.

³⁷ *Id.* Although Consolidated Intervenor use the term "Alternative *Control* Limit[s]," they appear to refer to the Proposed Rules' discussion regarding Alternative *Concentration* Limits. *See id.* (emphasis added); 80 Fed. Reg. at 4173.

³⁸ Motion at 40-41.

itoring values and restoration goals rely on baseline data calculations that are inadequate and unacceptable under the proposed rules.³⁹

Contention F5 proceeds in two parts. First, Consolidated Intervenor contend that the Proposed Rules would implement recommendations from the Radiation Advisory Committee (RAC) of EPA's Science Advisory Board.⁴⁰ According to Consolidated Intervenor, the RAC proposed that EPA "[i]dentify indicators, both chemical and radioactive, for establishing conditions pre- and post-operationally," devote more effort to defining the background groundwater characterization and "preoperational groundwater quality," build flexibility into monitoring programs, and refine its hydrogeological modeling efforts, among other recommendations.⁴¹

Second, Consolidated Intervenor argue that EPA's Proposed Rules would require baseline values established by monitoring wells to account for the impacts on groundwater created by constructing the monitoring wells themselves.⁴² Consolidated Intervenor quote from the NOPR: "[t]he physical act of penetrating the aquifer to install the well can cause localized changes in constituent concentrations or chemical parameters, which can lead to a misleading picture of background conditions."⁴³ Consolidated Intervenor add that "[w]ithout an accurate 'picture of background conditions'" the NRC Staff has no basis on which to ground its EA.⁴⁴ Consolidated Intervenor state that their expert Dr. Richard Abitz noted this very concern in conjunction with the filing of their initial petition to intervene.⁴⁵ While acknowledging that flawed baseline data cannot necessarily be fixed, Consolidated Intervenor claim that the use of this data means that the EA's finding of no significant impact cannot be supported and a full EIS is warranted.⁴⁶

F. Contention F6: Failure to Analyze New Porosity and Permeability Concerns

The Environmental Assessment fails to describe and analyze the environmental impacts of new porosity and permeability in the aquifer caused by mining activity.⁴⁷

³⁹ *Id.* at 41.

⁴⁰ *Id.* at 41-42.

⁴¹ *Id.* (quoting 80 Fed. Reg. at 4166-67) (internal quotation marks omitted).

⁴² *Id.* at 42-43.

⁴³ *Id.* at 42 (quoting 80 Fed. Reg. at 4174) (internal quotation marks omitted).

⁴⁴ Reply at 15-16 (quoting 80 Fed. Reg. at 4174).

⁴⁵ Motion at 42 (citing Letter from Richard J. Abitz, Ph.D., Geochemical Consulting Services, LLC, to David Frankel, Counsel for Consolidated Petitioners at 9 (July 28, 2008)).

⁴⁶ *Id.* at 43.

⁴⁷ *Id.*

In Contention F6, Consolidated Intervenor state that EPA's Proposed Rules identify environmental impacts that can result from ISL recovery, including the alteration of subsurface areas and changes to rock porosity and permeability⁴⁸ — concerns allegedly raised by Consolidated Intervenor's expert Dr. Hannan LaGarry in 2008.⁴⁹ Consolidated Intervenor allege that a full EIS must be developed because the EA does not contain an analysis of either of these porosity pathways or of permeability, and "[w]ithout a description and analysis of the underground features that are altered by in situ leach mining, the NRC Staff's finding of no significant impact is meaningless and must be rejected."⁵⁰

G. Contention F7: Failure to Analyze Hazardous Waste Impacts of Wellfields

The Environmental Assessment fails to adequately describe and analyze the impacts of maintaining post-operational wellfields as long term hazardous waste facilities.⁵¹

In Contention F7, Consolidated Intervenor state that EPA's Proposed Rules would adopt the hazardous waste control standards of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 *et seq.*, to ensure that post-operational wells do not present long-term hazards.⁵² Consolidated Intervenor quote from the NOPR, which asserts that wellfield behavior decades after ISL operations have ended has not been examined, and that "only a combination of longer stability monitoring and geochemical modeling using site-specific data can provide confidence that the [ISL] site poses no long-term hazards."⁵³ Since the EA does not include a description of such long-term monitoring, Consolidated Intervenor contend that it is inadequate and a full EIS is warranted.⁵⁴

H. Contention F8: Failure to Consider All Reasonable Alternatives

Under NEPA, an agency is required to consider all reasonable alternatives as

⁴⁸ *Id.* at 43-44 (citing 80 Fed. Reg. at 4164-55).

⁴⁹ *Id.* at 44.

⁵⁰ *Id.* at 44-45.

⁵¹ *Id.* at 45.

⁵² *Id.*

⁵³ 80 Fed. Reg. at 4166.

⁵⁴ Motion at 46.

required by 10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations.⁵⁵

In Contention F8, Consolidated Intervenor allege that the EA’s description of the range of reasonable alternatives is inadequate.⁵⁶ According to Consolidated Intervenor, “[a]n agency violates NEPA by failing to ‘rigorously explore and objectively evaluate all reasonable alternatives’ to the proposed action.”⁵⁷ Consolidated Intervenor maintain, in line with their Contention F2, that EPA’s Proposed Rules would ban “standby” status for non-operational ISL facilities, and therefore decommissioning should begin immediately.⁵⁸ Consolidated Intervenor also argue that the Proposed Rules will generate long-term employment opportunities to address increased restoration, decommissioning, and monitoring requirements, none of which are discussed in the No-Action Alternative section of the EA.⁵⁹

I. Contention F9: Failure to Take a Hard Look at Impacts Related to Restoration Standards and Alternate Standards Due to NRC Staff “Cozy” Relationship with Industry Compared to EPA

The Final EA violates 10 C.F.R. §§ 51.10, 51.70, 51.71, the National Environmental Policy Act and implementing regulations, by failing to conduct the required “hard look” analysis at impacts of the proposed mine associated with restoration standards, difficulty and cost in achieving the same and the use of the alternative standards permitted under the Proposed Rules, especially in light of and due to the “cozy” relationship between NRC Staff and Industry compared to EPA as evidenced by the Proposed Regulations.⁶⁰

In Contention F9, Consolidated Intervenor generally allege that EPA proposed its new rules because it is dissatisfied with the allegedly “confused” regulation of ISL facilities by the NRC and Agreement States.⁶¹ According to Consolidated

⁵⁵ *Id.* Consolidated Intervenor also assert that “[n]umerous unexplored and unreviewed alternatives exist, especially including those set forth by EPA in the Proposed Rules.” *Id.* at 47.

⁵⁶ *Id.* at 46-47.

⁵⁷ *Id.* at 46 (quoting *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14) (internal quotation marks omitted)). According to Consolidated Intervenor, “NEPA requires that an actual ‘range’ of alternatives be considered, so that the Act will ‘preclude agencies from defining the objectives of their actions in terms so unreasonably narrow [] they can be accomplished by only one alternative (i.e. the applicant’s proposed project).’” *Id.* at 47 (quoting *Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162, 1174 (10th Cir. 1999)).

⁵⁸ *Id.* (citing 80 Fed. Reg. at 4176).

⁵⁹ *Id.* at 47-48 (citing EA §§ 1.5, 4.6.3).

⁶⁰ *Id.* at 49.

⁶¹ *Id.* at 50.

Intervenors, “regulators and operators have used high-end values as baselines and [] operators have been allowed to adopt alternates without showing efforts to achieve the regulatory standards.”⁶² Consolidated Intervenors quote from a large portion of the NOPR, emphasizing EPA’s statements that current industry practices may not lead to adequate groundwater restoration and discussion of current, improper implementation of Alternate Concentration Limits.⁶³ Consolidated Intervenors also cite to a 1987 congressional oversight report critical of the NRC’s relationship with the nuclear power industry at the time.⁶⁴ Referring to the many pages of cited commentary, Consolidated Intervenors assert that “the NRC Staff failed to take a ‘hard look’ at restoration standards” in the EA.⁶⁵

J. Contention F10: Failure to Take a Hard Look or Adequately Analyze or Describe Restoration Standards and Schedules, Including Delays, Resulting from Proposed Rules

The Final EA violates 10 C.F.R. §§ 51.10, 51.70, 51.71, the National Environmental Policy Act and implementing regulations, by failing to conduct the required “hard look” analysis at impacts of the Proposed Regulations associated with restoration standards and schedules, including delays, resulting from the Proposed Rules, and failure to describe such impacts in the Final EA. Accordingly, the Final EA is inaccurate and violates NEPA.⁶⁶

In Contention F10, Consolidated Intervenors first allege that the Proposed Rules would revise 10 C.F.R. Part 40, Appendix A, Criteria 5 and 7, thus making the restoration and decommissioning schedules in the EA inaccurate and misleading.⁶⁷ Second, Consolidated Intervenors allege that the Proposed Rules would expand the number of activities to be addressed within current groundwater restoration plans, none of which are reflected in the EA.⁶⁸ Consolidated Intervenors lastly allege that “all aspects of the Final EA concerning background concentrations, restoration standards, impacts on ground water quality and the like must be analyzed and re-done” to come into compliance with the Proposed

⁶² *Id.*

⁶³ *Id.* at 50-57 (citing 80 Fed. Reg. at 4164-75).

⁶⁴ *Id.* at 57-58 (citing Subcomm. on General Oversight & Investigations of the Comm. on Interior & Insular Affairs, An Investigative Report, H.R. Rep. No. 81-694, at 1-2 (1987)).

⁶⁵ *Id.* at 58.

⁶⁶ *Id.*

⁶⁷ *Id.*

⁶⁸ *Id.* at 60.

Rules.⁶⁹ Consolidated Intervenor quote large portions of the EA in support of their arguments.⁷⁰

K. Contention F11: In Light of the Proposed Rules, the SER Fails to Adequately Evaluate Adverse Impacts on Public Health and Safety

The LRA and SER fail to meet the requirements of the AEA, NEPA, Part 40, Appendix A to Part 40, and Part 51 regulations because each lacks an adequate description.⁷¹

In Contention F11, Consolidated Intervenor allege that, when viewed in light of EPA's Proposed Rules, various parts of the NRC's SER contain insufficient data and descriptions of the affected environment to satisfy the AEA, NEPA, and the NRC's regulations.⁷² Consolidated Intervenor suggest that the Proposed Rules would impact the SER's analysis of: (1) the suitability of groundwater in the Pierre Shale for domestic use;⁷³ (2) the scope of required operational monitoring;⁷⁴ (3) the costs associated with extra pore volumes for restoration and stability and long-term monitoring;⁷⁵ (4) the adequacy of Crow Butte's monitoring programs;⁷⁶ (5) the stability of Mine Unit 1;⁷⁷ (6) the LRA's minimum required demonstrations;⁷⁸ (7) the effort required by Crow Butte prior to requesting an Alternate Concentration Limit;⁷⁹ and (8) the adequacy of current and proposed restoration methods.⁸⁰ Consolidated Intervenor quote large portions of the SER and the NOPR in support of their arguments.⁸¹

⁶⁹ *Id.* at 63.

⁷⁰ *Id.* at 59-68.

⁷¹ *Id.* at 69.

⁷² *Id.* (citing SER § 2.4.3.2.2).

⁷³ *Id.*

⁷⁴ *Id.* at 72.

⁷⁵ *Id.*

⁷⁶ *Id.* at 74, 79.

⁷⁷ *Id.* at 75.

⁷⁸ *Id.* at 80.

⁷⁹ *Id.* at 82.

⁸⁰ *Id.* at 84-85.

⁸¹ *See generally id.* at 69-90.

IV. BOARD RULING

A. The Entirety of Contentions F2, F4, F7, F8, F9, F10, and F11, and Portions of Contentions F1, F3, and F5, Impermissibly Rely on EPA's Proposed Rules

At the outset, Consolidated Intervenor's "admit that the Proposed Rules are just that, 'proposed,' and acknowledge that after the notice and comment period, the Proposed Rules may be amended significantly or withdrawn entirely."⁸² Nonetheless, Consolidated Intervenor's base a number of their contentions in whole or in part on the substantive requirements of EPA's Proposed Rules as if such rules had already been adopted.

The law is clear that proposed rules are not binding upon administrative agencies and are not ripe for review by this Board.⁸³ As the licensing board stated in the *South Texas* combined license proceeding, "a proposed rule or proposed law may not support an admissible contention" as "its ultimate effect is at best speculative."⁸⁴ Reviewing such proposed actions "improperly intrudes into the agency's decisionmaking process."⁸⁵ Precedence requires a licensing board to let EPA's rulemaking run its course, allowing "intelligent resolution of any remaining claims" instead of piecemeal and repetitive litigation.⁸⁶

Consolidated Intervenor's dispute that EPA's findings are tentative. According to Consolidated Intervenor's, "by publishing its [NOPR], the EPA is bound to address the inadequacies and shortcomings its analyses uncovered," and, therefore, Consolidated Intervenor's can rely on the concerns EPA identified to form the bases of new contentions.⁸⁷ They contend that courts have relied on language accompanying proposed rulemakings to determine agency intent.⁸⁸ Consolidated Intervenor's challenge the licensing board's conclusion in *South Texas* that pro-

⁸² *Id.* at 2; *see also* Reply at 2.

⁸³ *American Petroleum Institute v. Environmental Protection Agency*, 683 F.3d 382, 387 (D.C. Cir. 2012) ("Courts decline to review 'tentative' agency positions because doing so 'severely compromises the interests' the ripeness doctrine protects." (quoting *Public Citizen Health Research Group v. Commissioner, Food and Drug Administration*, 740 F.2d 21, 31 (D.C. Cir. 1984))); *see also Public Citizen, Inc. v. Shalala*, 932 F. Supp. 13, 18 n.6 (D.D.C. 1996) ("[A] tentative conclusion articulated in a nonfinal, proposed rule does not command deference from the Court nor is it binding on the agency." (citing *Pub. Citizen Health Research Group*, 740 F.2d at 32)).

⁸⁴ *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), LBP-11-7, 73 NRC 254, 290 n.233, *petition for review denied as premature*, CLI-11-6, 74 NRC 203 (2011).

⁸⁵ *Utility Air Regulatory Group v. Environmental Protection Agency*, 320 F.3d 272, 279 (D.C. Cir. 2003) (quoting *Ciba-Geigy Corp. v. Environmental Protection Agency*, 801 F.2d 430, 436 (D.C. Cir. 1986)) (internal quotation marks omitted).

⁸⁶ *Am. Petroleum Inst.*, 683 F.3d at 387.

⁸⁷ *See* Reply at 4-5.

⁸⁸ *Id.* at 4 (citing *Anderson Brothers Ford v. Valencia*, 452 U.S. 205, 212-13 (1981)).

posed rules are speculative, since, in this case, the “prior interpretations/activities of NRC Staff” have already been found to be incorrect in the NOPR.⁸⁹ Consolidated Intervenor argue that the NOPR “contains immediately effective legal interpretations of existing Part 192 regulations, over which EPA has primacy,”⁹⁰ and that the requirements of Part 192 “are already applicable,” and “the last word on groundwater protection.”⁹¹

Consolidated Intervenor fundamentally misinterpret the purpose of NOPRs. The purpose of an NOPR is not to set binding law or policy, but instead “to provide interested members of the public an opportunity to comment in a meaningful way on the agency’s proposal,” pursuant to the requirements of section 552(b) of the Administrative Procedure Act (APA).⁹² In an NOPR, an agency need not submit a full draft of a rule.⁹³ Likewise, even a statement of the subjects and issues involved can suffice as long as it provides notice to the public.⁹⁴ Moreover, an agency is free to make significant changes from the NOPR, and is not bound by it. An agency is generally not required to issue a new NOPR if it changes its position, as long as the final rule is a “logical outgrowth” of the proposed rule.⁹⁵ In addition, an agency can cease a rulemaking all together after an NOPR has been issued. As such, we are not persuaded by Consolidated Intervenor’s arguments on the significance of EPA’s notice.⁹⁶

⁸⁹ *Id.* at 9-11. Consolidated Intervenor emphasize that EPA has definitively found that “the way the requirements were being applied by NRC Staff was wrong.” *Id.* at 12, 13, 14, 15, 19, 20.

⁹⁰ *Id.* at 10.

⁹¹ *Id.* at 12-13.

⁹² Pierce, Richard J., Jr., *Administrative Law* § 7.3 (5th Ed. 2010). According to Pierce, the legislative history of the APA emphasized the notice requirement in order to “fairly apprise” the public of the agency’s potential action. *Id.* (citing Sen. Doc. No. 248, 79 Cong. 200, 248 (1946)).

⁹³ 5 U.S.C. § 553(b)(3).

⁹⁴ *Id.*; *Tucker v. Atwood*, 880 F.2d 1250, 1250 (11th Cir. 1989) (“The APA requires no more than ‘. . . a description of the subjects and issues involved.’” (quoting 5 U.S.C. § 553(b)(3))); *Pennzoil Co. v. Federal Energy Regulatory Commission*, 645 F.2d 360, 371 (5th Cir. 1981) (“This requirement is to sufficiently and fairly apprise interested parties of the issues involved, rather than to specify every precise proposal that the agency may ultimately adopt.”); Pierce, *Administrative Law* § 7.3.

⁹⁵ *National Mining Association v. Mine Safety and Health Administration*, 512 F.3d 696, 699 (D.C. Cir. 2008) (internal quotation omitted); *International Union, United Mine Workers of America v. Mine Safety and Health Administration*, 407 F.3d 1250, 1259 (D.C. Cir. 2005); see also *Natural Resources Defense Council, Inc. v. Thomas*, 838 F.2d 1224, 1242 (D.C. Cir. 1988) (noting that “a contrary rule would lead to the absurdity that . . . the agency can learn from the comments on its proposals only at the peril of starting a new procedural round of commentary” (quoting *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 632 n.51 (D.C. Cir. 1973)) (internal quotation marks omitted; modification in original)).

⁹⁶ Consolidated Intervenor claim that the licensing board in *South Texas* ruled that “intervenor . . . were correct to file contentions based on proposed rules.” Reply at 10. In actuality, the licensing board

(Continued)

Consolidated Intervenor discusses at length the decision of the United States Court of Appeals for the District of Columbia Circuit in *Center for Auto Safety v. National Highway Traffic Safety Administration* to argue that a nonfinal rulemaking action can be ripe for review.⁹⁷ *Center for Auto Safety*, however, concerned an agency actively withdrawing a proposed rule.⁹⁸ Although the court determined that the basis behind the determination not to proceed with the rulemaking was a final agency ruling allowing for judicial review, the earlier advance notice of proposed rulemaking itself was not held to have any binding effect on the public.⁹⁹ There is no functional difference between the advance notice of proposed rulemaking addressed in *Center for Auto Safety* and EPA's NOPR on ISL facilities.¹⁰⁰

Consolidated Intervenor in their reply also make the point that apart from the substantive regulations, EPA's NOPR contains a 26-page preamble, containing "studies, data, analyses and rationale" that themselves constitute "final agency action."¹⁰¹ According to Consolidated Intervenor, "[i]t is this preamble that forms the substance of the Consolidated Intervenor's proposed new contentions."¹⁰² Consolidated Intervenor state that the preamble addresses "the agency's duty 'to

ruled that intervenors were correct to file contentions on a "newly adopted rule" because, unlike a proposed rule, "it now has indisputable legal effect." *South Texas*, LBP-11-7, 73 NRC at 290 n.233.

⁹⁷ Reply at 3 (citing *Center for Auto Safety v. National Highway Traffic Safety Administration*, 710 F.2d 842, 846 (D.C. Cir. 1983)).

⁹⁸ 710 F.2d at 844-45 (withdrawing an advance notice of proposed rulemaking due to changes in market demand).

⁹⁹ See *id.* at 846.

¹⁰⁰ See also *A Guide to the Rulemaking Process*, Office of the Fed. Register, at 3-4 (2011), available at https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf (An advance notice of proposed rulemaking "is a formal invitation to participate in shaping the proposed rule.").

Consolidated Intervenor also argue that under the District of Columbia Circuit's decision in *Batterton v. Marshall*, 648 F.2d 694, 700 (D.C. Cir. 1980), the APA "broadly defines [] 'rule' to include nearly every statement an agency may make," thus implying even proposed rules have force and effect under the APA. Reply at 14 (internal quotation marks omitted; modification in original). However, the statement quoted by Consolidated Intervenor actually refers only to those circumstances where the APA's procedural requirements apply. It does not apply to whether particular agency statements have force and effect. The District of Columbia Circuit in *Batterton* clarified that many agency statements, including statements sometimes called "rules," do not have force and effect, and that "[a]dvance notice and public participation are required for [rules] that carry the force of law." 648 F.2d at 701. EPA's Proposed Rules, having not yet benefited from public participation, do not carry force under *Batterton* and thus do not bind the NRC.

¹⁰¹ Reply at 2-3.

¹⁰² *Id.* at 2.

identify and make available technical studies and data that it has employed in reaching the decisions to propose particular rules.”¹⁰³

While Consolidated Intervenorors have accurately stated how studies or data disclosed by EPA in its NOPR preamble, if timely utilized, might have formed the basis for an admissible contention, in fact, Consolidated Intervenorors have not availed themselves of such studies or data as support for the bulk of their new contentions. Rather, Consolidated Intervenorors have instead based several of these new contentions on the substance and effect that would result from EPA’s adoption of its Proposed Rules *as described* by the NOPR’s preamble. For example, in Contention F4, Consolidated Intervenorors contend that “the restoration procedures accepted in the Environmental Assessment are likely to be insufficient to meet the more stringent requirements *under the Proposed Rules*.”¹⁰⁴ In Contention F7, although Consolidated Intervenorors cite to the NOPR’s preamble, they argue that the EA is insufficient because “[t]he EPA’s decision to apply RCRA standards” in the Proposed Rules “belies [Crow Butte’s] and NRC Staff’s descriptions of aquifer ‘restoration.’”¹⁰⁵

In other instances, Consolidated Intervenorors have relied, not on the substance and effect of a proposed rule itself, but on the preamble’s discussion of EPA’s policy determinations. These, however, are tied to the substance of the Proposed Rules and, like them, can change. For example, in Contention F9 Consolidated Intervenorors rely on EPA’s policy determinations behind the rulemaking,¹⁰⁶ including statements such as “we believe it is necessary to take a longer view of groundwater protection than has been typical of current [ISL] industry practices,” and “current industry practices for restoration and monitoring of the affected aquifer may not be adequate to prevent . . . the further degradation of water quality.”¹⁰⁷ Similarly, in Contention 11, Consolidated Intervenorors cite to policy determinations for support,¹⁰⁸ such as “the Agency believes that it is in the national interest to preserve the quality of groundwater resources to the extent practicable, and that the best way to do so is to prevent contamination by addressing its source.”¹⁰⁹

EPA is recognized as an expert in environmental protection, and its final

¹⁰³ *Id.* at 2-3 (quoting *Solite Corp. v. Environmental Protection Agency*, 952 F.2d 473, 484-85 (D.C. Cir. 1991) (internal quotation marks omitted) (quoting *Connecticut Light & Power Co. v. NRC*, 673 F.2d 525, 530-31 (D.C. Cir.), *cert. denied*, 459 U.S. 835 (1982))).

¹⁰⁴ Motion at 40 (emphasis added).

¹⁰⁵ *Id.* at 45 (citing 80 Fed. Reg. at 4169).

¹⁰⁶ *Id.* at 50-58.

¹⁰⁷ *Id.* at 51 (quoting 80 Fed. Reg. at 4164) (internal quotation marks omitted; emphasis removed).

¹⁰⁸ *Id.* at 69-71.

¹⁰⁹ *Id.* at 70 (quoting 80 Fed. Reg. at 4164) (internal quotation marks omitted).

policy determinations certainly deserve consideration.¹¹⁰ Its initial statements, however, like its Proposed Rules, are tentative and can change after receiving comments from the public, and thus do not in any way bind EPA, much less the Applicant or the NRC Staff. As the District of Columbia Circuit has made clear, debating compliance with another agency's proposed policies before they have been finalized would subject administrative agencies to needless and repetitive litigation.¹¹¹

B. Contention F6 (Along with the Other Proposed Contentions) Is Untimely Filed Based on New Information

Insofar as Consolidated Intervenor's contentions rely on information and findings discussed in the NOPR, as opposed to tentative rules or policy determinations, they are not timely filed, as required by 10 C.F.R. § 2.309(c)(1)(iii).

This particularly is the case with Contention F6, which brings attention to EPA's discussion of environmental impacts that can result from ISL recovery, including the alteration of subsurface areas and changes to rock porosity and permeability.¹¹² However, the portion of EPA's NOPR quoted by Consolidated Intervenor only provides a well-known general description of the ISL recovery process.¹¹³ None of this information is timely, new, or materially different to what was known before Crow Butte's LRA was submitted. Indeed, Consolidated Intervenor asserts that the NOPR here "echo[es] certain concerns raised early in

¹¹⁰ See *National Association of Clean Water Agencies v. Environmental Protection Agency*, 734 F.3d 1115, 1138 (D.C. Cir. 2013).

¹¹¹ *Am. Petroleum Inst.*, 683 F.3d at 387.

The Board briefly notes that Contentions F9 and F11 are inadmissible on other grounds as well. Contention F9 raises general concerns that the NRC has a "cozy" relationship with industry. Although Contention F9 quotes text from the NOPR for eight pages, it never ties the statements from the NOPR to any specific section of the EA, and thus fails to raise a genuine dispute with the EA. See 10 C.F.R. § 2.309(f)(1)(vi); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 337 (1999); cf. *Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 267, *aff'd*, CLI-09-22, 70 NRC 932 (2009). Further, although Consolidated Intervenor claims at the outset that Contention F11 challenges the LRA, the discussion of Contention F11 focuses exclusively on the SER. See *generally* Motion at 59-90. This contention must fail as it contests the NRC Staff's safety review rather than the Crow Butte LRA. See *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 123 n.39 (2009); *Pa'ina Hawaii, LLC*, CLI-08-3, 67 NRC 151, 168 n.73 (2008).

¹¹² Motion at 43-44 (citing 80 Fed. Reg. at 4164-55).

¹¹³ 80 Fed. Reg. at 4164-65. The section of the *Federal Register* Notice quoted by Consolidated Intervenor is entitled "What are the environmental impacts of uranium [ISL]?" *Id.* at 4164 (emphasis omitted).

these proceedings by the Consolidated Intervenor's expert Dr. LaGarry," back in 2008.¹¹⁴

C. The Remaining Portions of Contentions F1, F3, and F5 Are Inadmissible on Other Grounds

Contention F1 alleges in part that tax charges levied on Crow Butte, as well as low uranium prices, risk forcing Crow Butte into bankruptcy, affecting Crow Butte's ability to restore affected areas in or near the ISL facility.¹¹⁵ However, Crow Butte's financial assurance plan, discussed in its LRA, includes a "USNRC-approved financial surety arrangement consistent with 10 CFR 40, Appendix A, Criterion 9 to cover the estimated costs of reclamation activities."¹¹⁶ A surety is a financial instrument assuring "that the cost of decommissioning will be paid by another party should the licensee default."¹¹⁷ Consolidated Intervenor's contend that once EPA's rules go into effect, "the surety will need to be increased from the current \$45 [million] to some greater number."¹¹⁸ The NRC Staff correctly responds that "[s]hould the proposed EPA rule go into effect, when it is implemented by NRC, [Crow Butte's] next annual surety update would

¹¹⁴Motion at 44. We note that Dr. LaGarry's opinion was used to support the admission of previously admitted Contention D. *See* LBP-08-24, 68 NRC 691, 726-27 (2008).

In addition, in their reply, Consolidated Intervenor's cite to 10 C.F.R. § 2.319 as support for the notion that this Board has the power to take "necessary and appropriate actions consistent with the Atomic Energy Act" to conduct a fair hearing. Reply at 8-9 (citing 10 C.F.R. § 2.319). Specifically, Consolidated Intervenor's argue that "it never seems to be a 'good' time to bring new contentions as far as Applicant and the NRC Staff are concerned." *Id.* at 8. In fact, Consolidated Intervenor's contentions would be inadmissible even if they were timely filed. Although the Board is accorded considerable discretion to manage a proceeding before it under 10 C.F.R. § 2.319, we need not exercise it here. *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-10, 80 NRC 157, 164 n.38 (2014) ("[W]e give broad discretion to our licensing boards in the conduct of NRC adjudicatory proceedings, and we generally defer to board case-management decisions." (citing 10 C.F.R. § 2.319)); *id.* at 164 n.39 ("The Commission's Rules of Practice provide the board with substantial authority to regulate hearing procedures." (quoting *Statement of Policy on Conduct of Licensing Proceedings*, CLI-81-8, 13 NRC 452, 453 (1981)) (internal quotation marks omitted)). Not admitting these contentions, however, does not mean that Intervenor's cannot attempt to rely on the studies and data contained in the NOPR as evidence in support of already-admitted contentions regarding water quality and restoration.

¹¹⁵Motion at 30-32.

¹¹⁶LRA § 6.6.2. Criterion 9 in 10 C.F.R. Part 40 Appendix A requires that financial surety arrangements "be established by each mill operator before the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas." The NRC Staff found that Crow Butte's financial surety was satisfactory pursuant to Criterion 9. SER § 6.5.3.

¹¹⁷*Financial Assurance for Decommissioning*, NRC, <http://www.nrc.gov/waste/decommissioning/finan-assur.html> (last updated Dec. 9, 2013).

¹¹⁸Reply at 14.

have to reflect any additional costs associated with compliance.”¹¹⁹ There is no requirement to act now. Therefore, this portion of Contention F1 does not challenge the LRA.¹²⁰

Contention F3 calls for an EIS by the NRC Staff, instead of an EA, due to the alleged “special circumstances” surrounding this project.¹²¹ These special circumstances allegedly stem from certain monitoring requirements set forth in the Proposed Rules,¹²² and the presence of “unresolved conflicts concerning alternative uses of available resources,” per 10 C.F.R. § 51.22(b).¹²³ As discussed above, the former argument is impermissible as it relies on the substance of the Proposed Rules. The latter argument is impermissible per 10 C.F.R. § 2.309(c)(1), both because it is not based on any new or material information, and because the “unresolved conflicts” alleged by Consolidated Intervenors refer not to circumstances when an EIS is required for a project, but to circumstances when under section 51.22(b) it is inappropriate to issue a categorical exclusion for a proposed project.¹²⁴

The Commission has set forth the triggers for an EIS in 10 C.F.R. § 51.20, including, most notably, whether the proposed project “is a major Federal action significantly affecting the quality of the human environment.”¹²⁵ As discussed in LBP-15-11, the Board does not have sufficient information at this point to contravene the NRC Staff’s determination that there are no significant impacts from the license renewal.¹²⁶ However, the Board may, after a hearing, find that there are indeed significant impacts to the environment as a result of the proposed license renewal, warranting an EIS instead of an EA.

Consolidated Intervenors assert in Contention F5 that the Proposed Rules make available EPA RAC’s recommendations regarding monitoring, restoration, and groundwater characterization.¹²⁷ Consolidated Intervenors, however, do not

¹¹⁹ NRC Staff Answer at 10.

¹²⁰ Consolidated Intervenors also assert that Crow Butte failed to alert NRC to certain tax litigation, in contravention of 10 C.F.R. § 40.9. Motion at 31-32. That regulation only requires that Crow Butte inform the NRC “of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security.” 10 C.F.R. § 40.9. There is nothing about pending tax litigation that would have a “significant implication” on public health and safety in this circumstance. In addition, to the extent this claim is viable, it would be better handled through a 10 C.F.R. § 2.206 enforcement action.

¹²¹ Motion at 37-39.

¹²² *Id.* at 37.

¹²³ *Id.* at 38-39 (internal quotation marks omitted; emphasis removed).

¹²⁴ *See* 10 C.F.R. § 51.22.

¹²⁵ *Id.* § 51.20(a)(1).

¹²⁶ LBP-15-11, 81 NRC at 415 (citing Environmental Assessment and Finding of No Significant Impact; Issuance, 79 Fed. Reg. 64,629, 64,630 (2014)).

¹²⁷ Motion at 41-42 (citing 80 Fed. Reg. at 4166-67).

identify specifically how this alleged new information challenges the EA, but posit generally that it “appl[ies] to the collection of accurate baseline data and the integration of that data into meaningful monitoring values and post-operational restoration goals.”¹²⁸ This does not raise a genuine dispute with the EA.¹²⁹ Nonetheless, the RAC study and other studies cited in the NOPR may be relevant to already-admitted contentions, such as Contentions C and D, and EA Contention 9, which concern water quality and mitigation.¹³⁰ In addition, any information supporting Consolidated Intervenor’s general claim that the NRC Staff failed to use recent research may apply to already-admitted Contention F.¹³¹

V. CONCLUSION

For the reasons stated above, we deny Consolidated Intervenor’s motion to admit additional contentions based on EPA’s recent NOPR and Proposed Rules regarding the regulation of ISL facilities.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Michael M. Gibson, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard E. Wardwell
ADMINISTRATIVE JUDGE

Brian K. Hajek
ADMINISTRATIVE JUDGE

Rockville, Maryland
April 28, 2015

¹²⁸ *Id.* at 42.

¹²⁹ See 10 C.F.R. § 2.309(f)(1)(vi); *Oconee*, CLI-99-11, 49 NRC at 337.

¹³⁰ See LBP-15-11, 81 NRC at 431-32, 451; LBP-08-24, 68 NRC at 724-27.

¹³¹ See LBP-08-24, 68 NRC at 739 (concerning “whether Crow Butte has simply cherry-picked its supporting data” instead of using the most recent research available).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

William J. Froehlich, Chairman
Dr. Mark O. Barnett

In the Matter of

Docket No. 40-9075-MLA
(ASLBP No. 10-898-02-MLA-BD01)

POWERTECH USA, INC.
(Dewey-Burdock In Situ Uranium
Recovery Facility)

April 30, 2015

ATOMIC ENERGY ACT (AEA): MATERIALS LICENSE

The AEA and the Uranium Mill Tailings Radiation Control Act of 1978 authorize the NRC to issue licenses for the possession and use of source material and byproduct material. Section 11e(2) byproduct material is regulated by the NRC under 10 C.F.R. Part 40. These statutes require the NRC to license facilities that meet NRC regulatory requirements developed to protect public health and safety from radiological hazards. To operate, ISL uranium recovery facilities must meet NRC regulatory requirements and obtain a source materials license.

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA):
ENVIRONMENTAL IMPACT STATEMENT**

NEPA requires that federal agencies prepare a detailed environmental impact statement for proposed actions “significantly affecting the quality of the human environment.” 42 U.S.C. § 4332(2)(C). The adverse environmental effects that must be assessed under NEPA include “aesthetic, historic, cultural, economic, social, or health” effects. 40 C.F.R. § 1508.8(b).

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): HARD LOOK

While reviewing any adverse effects, federal agencies must take a hard look at the environmental impacts of a proposed action. *See Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998). This hard look must emerge from engagement in informed and reasoned decisionmaking, as the agency “obtains opinions from its own experts, obtains opinions from experts outside the agency, gives careful scientific scrutiny and responds to all legitimate concerns that are raised.” *Hughes River Watershed Conservancy v. Johnson*, 165 F.3d 283, 288 (4th Cir. 1999) (citing *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378-85 (1989)).

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA):
ADJUDICATORY RECORD PART OF ENVIRONMENTAL
IMPACT STATEMENT**

In an NRC adjudicatory proceeding, the Board’s findings, as well as the adjudicatory record, “become, in effect, part of the [final EIS].” *Claiborne*, CLI-98-3, 47 NRC at 89.

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): BURDEN OF PROOF

The statutory obligation of complying with NEPA rests with the NRC. *See, e.g., Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983). When NEPA contentions are involved, the burden of proof lies with the NRC Staff, but because “the Staff, as a practical matter, relies heavily upon the Applicant’s [Environmental Report] in preparing the EIS, should the Applicant become a proponent of a particular challenged position set forth in the EIS, the Applicant, as such a proponent, also has the burden on that matter.” *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 339 (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).

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): SCOPE OF EFFECTS OF A PROJECT

Under NEPA regulations, defining the scope of effects of a project requires engagement with the governments of affected tribes through an “early and open process,” aimed at identifying concerns, potential impacts, relevant effects of past

actions, and possible alternative actions. 40 C.F.R. § 1501.7. The Commission's regulations in 10 C.F.R. § 51.71(b) require the NRC Staff to include in the FSEIS "an analysis of significant problems and objections raised by . . . any affected Indian tribes, and by other interested persons."

**NATIONAL HISTORIC PRESERVATION ACT (NHPA):
REASONABLE AND GOOD FAITH EFFORT**

Under the National Historic Preservation Act, a federal agency must make a reasonable and good faith effort to identify historic properties, determine whether identified properties are eligible for listing on the National Register based on the criteria in 36 C.F.R. § 60.4, assess the effects of the undertaking on any eligible historic properties found, determine whether the effect will be adverse, and avoid or mitigate any adverse effects. 36 C.F.R. §§ 800.4(b), (c); 800.5(c); 800.8(c); 800.9(b), (c).

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) NATIONAL
HISTORIC PRESERVATION ACT (NHPA): STATUTORY
COMPLIANCE**

Although the NHPA and NEPA resemble each other in certain respects, compliance with the NHPA "does not relieve a federal agency of the duty of complying with the [environmental] impact statement requirement 'to the fullest extent possible.'" *Preservation Coalition, Inc. v. Pierce*, 667 F.2d 851, 859 (9th Cir. 1982) (quoting 42 U.S.C. § 4332). It does not follow that a review that satisfies the NHPA necessarily satisfies NEPA requirements to take a hard look at cultural resources affected by a project.

**NATIONAL HISTORIC PRESERVATION ACT (NHPA): NATIONAL
REGISTER**

The NHPA requires federal agencies, prior to approving any "undertaking," to "take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register." 16 U.S.C. § 470f.

**NATIONAL HISTORIC PRESERVATION ACT (NHPA): TRIBAL
CONSULTATION**

The NHPA requires federal agencies to "consult with any Indian tribe . . . that attaches religious and cultural significance" to a site. 16 U.S.C. § 470a(d)(6)(B).

Consultation must provide the tribe “a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking’s effects on such properties, and participate in the resolution of adverse effects.” 36 C.F.R. § 800.2(c)(2)(ii)(A). The NHPA further requires that consultation with Indian tribes “recognize the government-to-government relationship between the Federal Government and Indian tribes.” *Id.*

NATIONAL HISTORIC PRESERVATION ACT (NHPA): ADEQUACY OF TRIBAL CONSULTATION

Adequate NRC face-to-face meaningful government-to-government consultation requirements are not satisfied by large group meetings, with members of many diverse tribes, all with varying degrees of attachment to the project area. Tribal Protocol Manual, NUREG-2173, at 10. Quantity of correspondence does not necessarily equate with meaningful or reasonable consultation, and “doesn’t in itself show the NHPA-required consultation occurred.” *Quechan Tribe of Fort Yuma Indian Reservation v. U.S. Department of Interior*, 755 F. Supp. 2d 1104, 1118 (S.D. Cal. 2010).

NATIONAL HISTORIC PRESERVATION ACT (NHPA): PROGRAMMATIC AGREEMENT

A Programmatic Agreement may be used to implement the section 106 process in situations where the effects to historic properties cannot be fully determined prior to the approval of an undertaking, such as where an applicant proposes a phased approach to developing its project. 36 C.F.R. §§ 800.13, 800.14(b)(1). In such cases, the Programmatic Agreement establishes a phased process for consultation, review, and compliance with the NHPA.

RULES OF PRACTICE: BOARD-ORDERED SUSPENSION OF NRC LICENSE

A Board can require the immediate suspension of an issued materials license. *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 238 (2008) (“If the Board determines after full adjudication that the license amendment should not have been granted, it may be revoked (or conditioned).”).

REGULATIONS: INTERPRETATION (10 C.F.R. PART 40, APPENDIX A, CRITERION 7)

Criterion 7 of 10 C.F.R. Part 40, Appendix A requires an applicant to establish “a preoperational monitoring program [that] must be conducted to provide complete baseline data on a milling site and its environs.” These criteria were developed for conventional uranium milling facilities, but have been applied, in at least limited fashion, to ISL facilities. *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 8-9 (1999).

REGULATIONS: INTERPRETATION (WATER QUALITY DATA)

Background water quality data are used to establish existing hazardous constituent concentrations in an aquifer, which can then be used to set 10 C.F.R. Part 40, Appendix A, Criterion 5B(5) post-operational concentration limits. Both NUREG-1569 and Regulatory Guide 4.14 also discuss environmental monitoring.

REGULATIONS: INTERPRETATION (WATER QUALITY DATA)

The language of Appendix A regarding the relationship between Criteria 5 and 7 is ambiguous and the terms “baseline” and “background” are not explicitly defined. But in *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 6 (2006), the Commission affirmed that given the sequential development of ISL wellfields, waiting until after licensing (although before mining operations begin) to establish definitively the groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology.

TECHNICAL ISSUES DISCUSSED: CONFINEMENT OF THE OVERALL ORE ZONE

Geologic confinement of an ore zone is required for an ISL license. This decision discusses issues surrounding the continuous thickness of the Fuson Shale, leakage shown by pumping tests, rapid groundwater flow, faults, fractures, and joints, breccia pipes, boreholes, the ability to contain fluid migration, artesian flow, and groundwater quantity impacts.

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA):
MITIGATION**

Mitigation under NEPA is defined as (a) avoiding an impact by not taking an action, (b) minimizing an impact by limiting the degree or magnitude of an action,

(c) rectifying the impact of an action by repairing, rehabilitating, or restoring the impacted area, (d) reducing or eliminating the impact over time by preservation and maintenance operations, or (e) compensating for the impact or replacing or substituting resources or environments. 40 C.F.R. § 1508.20.

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA): NRC STAFF
MITIGATION MONITORING REQUIREMENT**

The NRC Staff is required to confirm whether applicant/licensee mitigation measures are effective by establishing a monitoring program. 76 Fed. Reg. at 3849 (citing 40 C.F.R. § 1505.2(c)).

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA):
CONNECTED ACTIONS**

Actions are connected to the proposed project when they “(i) Automatically trigger other actions which may require environmental impact statements. (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously. (iii) Are interdependent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1)(i)-(iii). When drafting an EIS, an agency’s scope of review must include analysis of any connected or cumulative actions to the central proposed action. 40 C.F.R. § 1508.25; 10 C.F.R. § 51.14(b).

**NATIONAL ENVIRONMENTAL POLICY ACT (NEPA):
CUMULATIVE ACTIONS**

Cumulative impacts are impacts resulting “from the incremental impact of the [proposed] action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” 40 C.F.R. § 1508.7. All aspects of the FSEIS, including the connected and cumulative actions discussions, must have been subjected to a hard look by the NRC Staff.

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
ADMISSIBILITY)**

To be admissible, a new or amended contention must satisfy the substantive contention admissibility standards set forth in 10 C.F.R. § 2.309(f)(1).

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED;
ADMISSIBILITY)**

A new or amended contention must be timely filed under 10 C.F.R. § 2.309(c).

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PARTIAL INITIAL DECISION

I. INTRODUCTION

Today, the Licensing Board rules on seven contentions raised by the Oglala Sioux Tribe and the Consolidated Intervenors that were the subject of an evidentiary hearing held on August 19, 20, and 21, 2014, at the Hotel Alex Johnson in Rapid City, South Dakota. The evidentiary record in this proceeding consists of the written direct testimony of 22 witnesses, 430 exhibits that were admitted into evidence, and the examination under oath of the witnesses by the Licensing Board, as recorded in the transcript of the evidentiary hearing. The parties were also afforded an opportunity to file initial and reply proposed findings of fact and conclusions of law after the hearing. This Partial Initial Decision upholds the NRC Staff issuance of Source Materials License No. SUA-1600, while imposing additional license conditions.

II. BACKGROUND

On February 25, 2009, Powertech (USA), Inc. (Powertech) submitted an application for a combined source¹ and 11e(2) byproduct material license² to construct

¹The Atomic Energy Act of 1954, as amended [hereinafter AEA] defines “source material” in section 11z. 42 U.S.C. § 2014(z); *see also* 10 C.F.R. § 40.4. “Source material” in this decision refers to the uranium being extracted through the ISL process.

²The AEA defines “byproduct material” in section 11e(2). 42 U.S.C. § 2014(e)(2); *see also* 10 C.F.R. §§ 30.4 and 40.4. “Byproduct material” in this decision refers to “the tailings or wastes

(Continued)

and operate the proposed Dewey-Burdock in-situ leach (ISL or ISR) uranium recovery facility³ in Custer and Fall River Counties, South Dakota.⁴ Powertech withdrew that application in June 2009 and revised it to provide additional information requested by the NRC Staff on hydrology/site characterization, waste disposal, location of extraction operations, protection of water resources, and operational issues.⁵ On August 10, 2009 Powertech resubmitted its Dewey-Burdock license application with additional data and information, including its Environmental Report.⁶ The NRC Staff accepted Powertech's application for docketing on October 2, 2009,⁷ and on January 5, 2010, published a notice of opportunity to request a hearing on the application, which included instructions on how to gain access to sensitive unclassified nonsafeguards information (SUNSI) associated with the application.⁸

Two groups submitted requests for access to SUNSI material. On January 15,

produced by the extraction or concentration of uranium or thorium from any ore processed for its source material content." 42 U.S.C. § 2014(e)(2).

³ ISL facilities are designed to remove underground uranium without physical mining. An aqueous solution, called a lixiviant, is injected into a naturally occurring underground aquifer through an injection well, dissolving the uranium. When pumped back to the surface, the uranium is removed from the lixiviant. This same lixiviant is then reinjected into the ground to dissolve more uranium, and the cycle is repeated until all the economically recoverable uranium in the ore body has been removed. *See* LBP-10-16, 72 NRC 361, 378-80 (2010) for further details on this process.

⁴ [Powertech's] Submission of an Application for a Nuclear Regulatory Commission Uranium Recovery License for Its Proposed Dewey-Burdock In-Situ Leach Uranium Recovery Facility in the State of South Dakota, Letter from Richard Blubaugh, Vice-President of Environmental Health and Safety Resources, Powertech, to Charles Miller, Director, Office of Federal and State Materials and Environmental Management Program, NRC (Feb. 25, 2009) (ADAMS Accession No. ML091030707).

⁵ Dewey-Burdock Project Supplement to Application for NRC Uranium Recovery License Dated February 2009 (Aug. 2009) (ADAMS Accession No. ML092870155).

⁶ Exs. NRC-008-A-1 through NRC-008-B-2, Office of Federal and State Materials and Environmental Management Programs, Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities, Final Report, NUREG-1910 (Supp. 4 Jan. 2014), Ex. NRC-008-A-1 at 1-1 (ADAMS Accession Nos. ML14024A477 (Chapters 1-5) and ML14024A478 (Chapters 6-11 and Appendices)) [hereinafter FSEIS, Exs. NRC-008-A-1 through NRC-008-B-2]; *see also* Exs. APP-040-A through APP-040-EE, Powertech Application for NRC Uranium Recovery License Proposed Action Fall River and Custer Counties South Dakota Environmental Report (Feb. 2009).

⁷ Results of Acceptance Review, Powertech (USA), Inc.'s Proposed Dewey-Burdock Facility, Fall River and Custer Counties, South Dakota, Letter from Ronald Burrows, Project Manager, NRC, to Richard Blubaugh, Vice-President of Environmental Health and Safety Resources, Powertech (Oct. 2, 2009) (ADAMS Accession No. ML092610201).

⁸ Notice of Opportunity for Hearing, License Application Request of Powertech (USA) Inc. Dewey-Burdock In Situ Uranium Recovery Facility in Fall River and Custer Counties, SD, and Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information (SUNSI) for Contention Preparation, 75 Fed. Reg. 467 (Jan. 5, 2010).

2010, the Oglala Sioux Tribe requested access to SUNSI in this proceeding,⁹ and was granted access by the NRC Staff on January 25, 2010.¹⁰ As a result, a Protective Order granting access to the requested information was issued by the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel on March 5, 2010.¹¹ The Oglala Sioux Tribe filed its Hearing Request and Petition for Leave to Intervene on April 6, 2010.¹² Powertech and the NRC Staff filed answers to the Oglala Sioux Tribe Petition on May 3, 2010,¹³ and the Oglala Sioux Tribe filed its reply to the Powertech and NRC Staff answers on May 14, 2010.¹⁴

Also on January 15, 2010, six individuals and two organizations sharing common counsel (Consolidated Petitioners) submitted a request for access to SUNSI material,¹⁵ which was denied by the NRC Staff.¹⁶ Consolidated Petitioners then joined a motion filed by the Oglala Sioux Tribe for a 90-day extension of time to file a hearing request, which was opposed by both Powertech and the NRC Staff, and was subsequently denied by the Commission on March 5, 2010.¹⁷ On March 8, 2010, Consolidated Petitioners filed their Request for Hearing and Petition for Leave to Intervene,¹⁸ and this Licensing Board was established on

⁹ The Oglala Sioux Tribe asserted that the water resources within the area to be mined were “known to have been favored camping sites of indigenous peoples, both historically and prehistorically, and the likelihood that cultural artifacts and evidence of burial grounds exist in these areas is strong.” Oglala Sioux Tribe Request for Sensitive Unclassified Non-Safeguards Information (Jan. 15, 2010) (ADAMS Accession No. ML100210203).

¹⁰ See NRC Staff Response to Grace Dugan Granting Access to SUNSI Information (Jan. 25, 2010) (ADAMS Accession No. ML100252221).

¹¹ Licensing Board Order (Protective Order Governing the Disclosure of Sensitive Unclassified Non-Safeguards Information (SUNSI)), (Mar. 5, 2010) (unpublished) (ADAMS Accession No. ML100640405).

¹² Ex. OST-010, Petition to Intervene and Request for Hearing of the Oglala Sioux Tribe at 22-23 (Apr. 6, 2010) [hereinafter Oglala Sioux Tribe Petition, Ex. OST-010].

¹³ Applicant Powertech (USA) Inc.’s Response to Petitioner Oglala Sioux Tribe’s Request for a Hearing/Petition for Intervention (May 3, 2010) (ADAMS Accession No. ML101230722); NRC Staff’s Response to Oglala Sioux Tribe’s Hearing Request (May 3, 2010) (ADAMS Accession No. ML101230726).

¹⁴ Reply to NRC Staff and Applicant Responses to the Petition to Intervene and Request for Hearing of the Oglala Sioux Tribe (May 14, 2010) (ADAMS Accession No. ML101340870).

¹⁵ E-mail Request from David Cory Frankel, Legal Director for Aligning for Responsible Mining, *et al.* for Access to Sensitive Unclassified Non-safeguards Information (SUNSI) (Jan. 15, 2010) (ADAMS Accession No. ML100192098).

¹⁶ NRC Staff Response to David Frankel Denying Request for Access to SUNSI Information (Jan. 25, 2010) (ADAMS Accession No. ML100252219).

¹⁷ Order of the Secretary (Mar. 5, 2010) (unpublished) (ADAMS Accession No. ML100640426).

¹⁸ Ex. INT-016, Consolidated Request for Hearing and Petition for Leave to Intervene (Mar. 8, 2010) (Continued)

March 12, 2010.¹⁹ After requesting and being granted an extension of time by this Licensing Board,²⁰ Powertech and the NRC Staff filed their answers to the Consolidated Petition on April 12, 2010,²¹ and Consolidated Petitioners filed their reply to the Powertech and NRC Staff answers on April 22, 2010.²²

On April 30, 2010, Consolidated Petitioners filed a new contention, Contention K, based on SUNSI material provided to Consolidated Petitioners' expert by the NRC Staff on April 1, 2010.²³ Answers to Contention K were timely filed by the NRC Staff and Powertech on May 21, 2010, and May 23, 2010 respectively.²⁴ The Consolidated Petitioners did not file a reply to these answers.²⁵

The Board held oral argument on standing and contention admissibility in Custer, South Dakota, on June 8 and 9, 2010.²⁶ On August 5, 2010, the Board ruled on both petitions to intervene and requests for hearings,²⁷ admitting the Oglala Sioux Tribe and the Consolidated Petitioners (re-designated Consolidated Intervenor) as Intervenor.²⁸ The Board also admitted four of the contentions

2010) [hereinafter Consolidated Intervenor's Petition, Ex. INT-016]. David Frankel, Esq., filed the Petition on his own behalf and on behalf of the following persons and organizations: Theodore P. Ebert, Gary Heckenlaible, Susan Henderson, Dayton Hyde, Liliac C. Jones, the Clean Water Alliance, and Aligning for Responsible Mining. *Id.* at 1.

¹⁹ Establishment of Atomic Safety and Licensing Board (Mar. 12, 2010) (unpublished); *see also* Powertech (USA), Inc.; Establishment of Atomic Safety and Licensing Board, 75 Fed. Reg. 13,141 (Mar. 18, 2010).

²⁰ *See* Joint Motion for Extension of Time for Late-Filed Contentions and to Respond to Request for Hearing (Mar. 31, 2010) (ADAMS Accession No. ML100900058); Licensing Board Order (Granting Motion for Extension of Time) (Apr. 1, 2010) (unpublished) (ADAMS Accession No. ML100910251). This Order also granted Consolidated Petitioners additional time to file new or amended contentions based on information recently released by the NRC Staff. *Id.* at 2.

²¹ Applicant Powertech (USA) Uranium Corporation's Response to Consolidated Petitioners' Request for a Hearing/Petition for Intervention (Apr. 12, 2010) (ADAMS Accession No. ML101020722); NRC Staff Response to Hearing Request of Consolidated Petitioners (Apr. 12, 2010) (ADAMS Accession No. ML101020723).

²² Petitioners' Consolidated Reply to Applicant and NRC Staff Answers to Hearing Request/Petition to Intervene (Apr. 19, 2010) (ADAMS Accession No. ML101100001) [hereinafter Consolidated Intervenor's New Petition].

²³ Petitioners' Request for Leave to File a New Contention Based on SUNSI Material (Apr. 30, 2010) (ADAMS Accession No. ML101200675).

²⁴ NRC Staff's Response to Consolidated Petitioners' Contention filed April 30, 2010 (May 21, 2010) (ADAMS Accession No. ML1014105410); Applicant Powertech (USA) Uranium Corporation's Response to Consolidated Petitioners' Request for Leave to File a New Contention Based on SUNSI Material (May 23, 2010) (ADAMS Accession No. ML1014300009).

²⁵ Tr. at 381.

²⁶ Tr. at 1-405.

²⁷ LBP-10-16, 72 NRC at 361.

²⁸ *Id.* at 376.

proposed by the Oglala Sioux Tribe²⁹ and three of the contentions proffered by the Consolidated Intervenor.³⁰

In the meantime, the NRC Staff began preparing the environmental and safety reviews related to the Powertech application. The NRC Staff issued a Safety Evaluation Report (SER) in March 2013³¹ and an SER (Revised) in April 2014.³²

The NRC Staff issued requests for additional information (RAIs) to Powertech on environmental matters,³³ and on November 26, 2012, the NRC Staff issued a Draft Supplemental Environmental Impact Statement (DSEIS) for public comment.³⁴ On January 25, 2013, both the Oglala Sioux Tribe and the Consolidated Intervenor filed proposed contentions relating to the DSEIS.³⁵ On March 7, 2013, the NRC Staff filed its response to the proposed contentions,³⁶ followed on March 11, 2013, by the Powertech response.³⁷ On March 25, 2013, both the Oglala Sioux Tribe and the Consolidated Intervenor submitted replies in support of their respective motions for new contentions.³⁸

On July 22, 2013, the Board concluded that three new contentions proposed in

²⁹ *Id.* at 444.

³⁰ *Id.* at 443.

³¹ Ex. NRC-135, Office of Federal and State Materials and Environmental Management Programs, Safety Evaluation Report for the Dewey-Burdock Project (Mar. 2013) [hereinafter SER (Mar. 2013)], Ex. NRC-135].

³² Ex. NRC-134, Office of Federal and State Materials and Environmental Management Programs, Safety Evaluation Report (Revised) for the Dewey Burdock Project (Apr. 2014) [hereinafter SER (Revised) (Apr. 2014) Ex. NRC-134]. This revised SER corrected certain technical references.

³³ Ex. APP-050, Letter from Richard Blubaugh, Vice-President of Environmental Health and Safety Resources, Powertech, to Ron Burrows, Project Manager, NRC (Aug. 12, 2010); *see also* Powertech (USA) Inc.'s Response to the Request for Additional Information to Support the Environmental Review of its Application (Aug. 26, 2010) (ADAMS Accession No. ML102380530); Powertech (USA), Inc.'s Responses to the U.S. Nuclear Regulatory Commission (NRC) Staff's Verbal and Email Requests for Clarification of Selected Issues Related to the Dewey-Burdock Uranium Project Environmental Review (Nov. 4, 2010) (ADAMS Accession No. ML103140318).

³⁴ Exs. NRC-009-A-1 through NRC-009-B-2, Office of Federal and State Materials and Environmental Management Programs, Supplement to the Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities, Draft Report for Comment, NUREG-1910 (Supp. 4 Nov. 2014) [hereinafter DSEIS, Exs. NRC-009-A-1 through NRC-009-B-2].

³⁵ *See* List of Contentions of the Oglala Sioux Tribe Based on the [DSEIS] (Jan. 25, 2013); Consolidated Intervenor's New Contentions Based on DSEIS (Jan. 25, 2013).

³⁶ NRC Staff's Answer to Contentions on the [DSEIS] (Mar. 7, 2013).

³⁷ Applicant Powertech (USA) Uranium Corporation's Response to Consolidated Petitioners' Request for a Hearing/Petition for Intervention (Mar. 11, 2013).

³⁸ Consolidated Intervenor's Consolidated Reply Re: DSEIS (Mar. 25, 2013); Consolidated Reply of the Oglala Sioux Tribe (Mar. 25, 2013).

response to the DSEIS were admissible, and that seven of the original contentions were admissible because of the migration tenet.³⁹

On September 19 and 20, 2013, the Board conducted a site visit of the Dewey-Burdock site to which all parties and other interested participants were invited. Details regarding the site visit were made public before and after the visit.⁴⁰ At the site visit, the Board and other attendees viewed the Dewey-Burdock site, the entrance to one property owned by Intervenor Dayton Hyde, another by Intervenor Susan Henderson, and the exterior of the operational Cameco Crow Butte ISL facility in Crawford, Nebraska.⁴¹

On January 29, 2014, the NRC Staff issued a notice of public availability⁴² of the Final Supplemental Environmental Impact Statement (FSEIS),⁴³ updating the information in the DSEIS. The FSEIS added an Appendix E, which presents the public comments received on the DSEIS and the NRC Staff's responses. On March 17, 2014, both the Oglala Sioux Tribe and the Consolidated Intervenor filed "Statements of Contentions" with proposed contentions relating to the FSEIS.⁴⁴ The Oglala Sioux Tribe filed ten contentions and the Consolidated Intervenor filed five contentions. On April 4, 2014, Powertech and the NRC Staff filed answers opposing the proposed contentions.⁴⁵ On April 11, 2014, the Oglala Sioux Tribe and the Consolidated Intervenor filed replies to the NRC Staff and Powertech answers.⁴⁶ The Board concluded that the previously admitted

³⁹ LBP-13-9, 78 NRC 37, 43 (2013). The migration tenet applies when the information in the DEIS is sufficiently similar to the information in the applicant's environmental report, and allows previously admitted contentions challenging the environmental report to apply to relevant portions of the DSEIS. *See id.*; *see also Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 26 (2011).

⁴⁰ *See* Licensing Board Order (Site Visit Information and Schedule) (Sept. 17, 2013) (unpublished); Licensing Board Order (Amending Site Visit Schedule) (Sept. 5, 2013) (unpublished); Licensing Board Order (Scheduling Site Visit) (Aug. 21, 2013) (unpublished); Licensing Board Memorandum (Memorializing Site Visit) (Sept. 24, 2013) (unpublished).

⁴¹ Licensing Board Memorandum (Memorializing Site Visit) (Sept. 24, 2013) at 2-3 (unpublished).

⁴² In the Matter of Powertech (USA) Inc., Letter from Patricia Jehle, Counsel for NRC Staff, to Administrative Judges and Parties (Jan. 29, 2014).

⁴³ FSEIS, Exs. NRC-008-A-1 through NRC-008-B-2.

⁴⁴ Statement of Contentions of the Oglala Sioux Tribe Following Issuance of [FSEIS] (Mar. 17, 2014); Consolidated Intervenor's Statement of Contentions (Mar. 17, 2014).

⁴⁵ Applicant Powertech (USA) Inc.'s Response to Consolidated Petitioners' Request for Admission of New or Amended Contentions on NUREG-1910, Supplement 4 (Apr. 4, 2014); NRC Staff's Answer to Contentions on [FSEIS] (Apr. 4, 2014).

⁴⁶ Reply of the Oglala Sioux Tribe Regarding Contentions Following Issuance of [FSEIS] (Apr. 11, 2014); Consolidated Intervenor's Consolidated Reply to Applicant and NRC Staff Answers to Contentions on [FSEIS] (Apr. 11, 2014).

contentions that referred to the DSEIS migrated to the FSEIS, and that the additional proposed FSEIS contentions were inadmissible.⁴⁷

Meanwhile, on April 8, 2014, the NRC Staff issued NRC Source Materials License No. SUA-1600 to Powertech.⁴⁸ The license allows Powertech to possess and use source and byproduct material in connection with the Dewey-Burdock Project.⁴⁹ Pursuant to 10 C.F.R. § 2.1213 the Oglala Sioux Tribe and Consolidated Intervenor filed motions to stay the license.⁵⁰ The Oglala Sioux Tribe also filed an answer in support of the Consolidated Intervenor's stay motion.⁵¹ On April 24, 2014, the NRC Staff and Powertech filed oppositions to Intervenor's motions.⁵² Pending oral argument on the motions, the Board temporarily granted the stay request.⁵³

On May 13, 2014, the Board held a telephonic oral argument on the stay motion.⁵⁴ A week later, on May 20, 2014, the Board lifted its temporary stay and denied Intervenor's stay motions.⁵⁵

On April 11, 2014, both the NRC Staff and the Oglala Sioux Tribe filed motions for summary disposition.⁵⁶ On April 25, 2014, responses to the motions

⁴⁷ LBP-14-5, 79 NRC 377, 401 (2014).

⁴⁸ Ex. NRC-012, SUA-1600 Materials License, NRC Form 374 (Apr. 8, 2014) [hereinafter Powertech Materials License, Ex. NRC-012]; *see also* ADAMS Accession Package Number ML14043A052, which includes the license transmittal letter, the license, and the Final Safety Evaluation Report. The NRC Staff also issued its Record of Decision for the Dewey-Burdock Uranium In-Situ Recovery (ISR) Project at ADAMS Accession No. ML14066A466. The Final Programmatic Agreement was executed April 7, 2014, and is available in ADAMS Accession Package No. ML14066A344.

⁴⁹ Powertech Materials License, Ex. NRC-012, at 1.

⁵⁰ Oglala Sioux Tribe's Motion for Stay of Effectiveness of License (Apr. 14, 2014); Consolidated Intervenor's Application for a Stay of the Issuance of License No. SUA-1600 Under 10 CFR Section 2.1213 (Apr. 14, 2014).

⁵¹ Oglala Sioux Tribe's Answer in Support of Consolidated Intervenor's Motion for Stay of Effectiveness of License (Apr. 24, 2014).

⁵² NRC Staff's Opposition to Application for a Stay (Apr. 24, 2014); Powertech (USA) Inc.'s Response to Consolidated Intervenor and the Oglala Sioux Tribe Motions for Stay of the Effectiveness of NRC License No. SUA-1600 (Apr. 24, 2014).

⁵³ Licensing Board Order (Temporarily Granting Stay of Materials License Number SUA-1600) (Apr. 30, 2014) (unpublished).

⁵⁴ Tr. at 578-637.

⁵⁵ Licensing Board Order (Removing Temporary Stay and Denying Motions for Stay of Materials License Number SUA-1600) (May 20, 2014) at 6-8 (unpublished).

⁵⁶ NRC Staff's Motion for Summary Disposition on Safety Contentions 2 and 3 (Apr. 11, 2014) (seeking summary disposition on the safety aspects of Contentions 2 and 3); Oglala Sioux Tribe's Motion for Summary Disposition National Environmental Policy Act Contentions 1A and 6 — Mitigation Measures (Apr. 11, 2014) (seeking summary disposition of NEPA issues in Contentions 1A and 6).

for summary disposition were filed by all parties.⁵⁷ The Board denied both parties' motions on June 2, 2014.⁵⁸

On June 20, 2014, the Oglala Sioux Tribe voluntarily withdrew Contentions 14A and 14B.⁵⁹ On July 15, 2014, the Board dismissed these contentions based on this voluntary withdrawal.⁶⁰ On August 18, 2014, the Board held a Limited Appearance Session⁶¹ to allow members of the public who were not parties to the adjudication to provide the Board with oral statements setting forth their positions on matters related to the admitted contentions.⁶² On August 19, 20, and 21, 2014, the Board held an evidentiary hearing at the Hotel Alex Johnson in Rapid City, South Dakota, concerning the seven contentions raised by the Oglala Sioux Tribe and the Consolidated Intervenor.⁶³ At the hearing the Board heard argument from counsel and testimony from witnesses for each party, and admitted party exhibits into the evidentiary record, with an exhibit list bound into the hearing transcript.⁶⁴

On August 16, 2014, just prior to the evidentiary hearing, the Oglala Sioux Tribe filed a motion⁶⁵ seeking disclosure of certain data logs referred to by Powertech in an August 7, 2014 e-mail⁶⁶ and other documents referenced in a filing required by Canadian securities laws. At the hearing the Board heard argument from counsel and asked each party's geologic witnesses questions

⁵⁷ NRC Staff's Response to Oglala Sioux Tribe's Motion for Summary Disposition (Apr. 25, 2014); Powertech (USA) Inc's Response to Oglala Sioux Tribe and NRC Staff Motions for Summary Disposition (Apr. 25, 2014); Oglala Sioux Tribe's Response to NRC Staff's Motion for Summary Disposition (Apr. 25, 2014); Consolidated Intervenor's Response to NRC Staff's Motion for Summary Disposition on Contentions 2 and 3 (Apr. 25, 2014).

⁵⁸ Licensing Board Order (Denying Motions for Summary Disposition) (June 2, 2014) at 7 (unpublished).

⁵⁹ Oglala Sioux Tribe's Statement of Position on Contentions (June 20, 2014) at 41-42 [hereinafter Oglala Sioux Tribe Statement of Position].

⁶⁰ Licensing Board Order (Granting Request to Withdraw and Motion to Dismiss Contentions 14A and 14B) (July 15, 2014) (unpublished).

⁶¹ Atomic Safety and Licensing Board Hearing in the Matter of Powertech USA, Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), 79 Fed. Reg. 39,413 (July 10, 2014).

⁶² At the morning session, thirty-six people made oral limited appearance statements. Transcript of Limited Appearance Session (Aug. 18, 2014) (ADAMS Accession No. ML14234A068). During the evening session, twenty-nine people addressed the Board. Transcript of Limited Appearance Session (Aug. 18, 2014) (ADAMS Accession No. ML14234A067). Fifty-three written limited appearance statements were received.

⁶³ Notice of Evidentiary Hearing, 79 Fed. Reg. 42,836 (July 23, 2014).

⁶⁴ Tr. at 692-1328.

⁶⁵ Oglala Sioux Tribe's Motion to Enforce Mandatory Disclosure Duties Under 10 C.F.R. § 2.336 (Aug. 16, 2014).

⁶⁶ E-mail from Christopher Pugsley, Powertech Counsel, to Licensing Board Judges, RE: NRC Proceeding "Powertech USA 40-9075-MLA" (Aug. 7, 2014); *see also* Ex. OST-019, Powertech Press Release, Powertech Uranium (Azarga Uranium) Enters into Data Purchase Agreement for Dewey-Burdock Project (July 16, 2014).

regarding the relevancy of Powertech's newly acquired data logs.⁶⁷ The Board then ruled that the data logs were relevant to Contention 3 and that an "opportunity for this data to be viewed by all parties to the case" must be given by Powertech to fulfill its mandatory disclosure duties.⁶⁸ In a post-hearing Order ruling on this dispute, the Board reiterated its conclusion that the logs and certain other information were relevant and must be made available to the Intervenor and the NRC Staff immediately.⁶⁹

On October 9, 2014, the Oglala Sioux Tribe and Consolidated Intervenor jointly moved to extend the deadline for filing new contentions relative to the data log materials.⁷⁰ On October 14, 2014, the Oglala Sioux Tribe submitted new exhibits,⁷¹ and the NRC Staff submitted supplemental testimony and exhibits.⁷² On October 22, 2014, the Board granted Intervenor a 30-day extension to file any additional testimony/exhibits on Contention 3.⁷³ On November 7, 2014, the Oglala Sioux Tribe submitted two new contentions and further additional exhibits.⁷⁴ On November 13, 2014, the Board admitted the Oglala Sioux Tribe's and NRC Staff's new exhibits, and closed the record as it pertained to Contentions 1A, 1B, 2, 4, 6, and 9.⁷⁵ On November 21, 2014, the Oglala Sioux Tribe submitted its additional testimony and exhibits on Contention 3.⁷⁶ Powertech filed a response and additional exhibits/testimony on December 4, 2014,⁷⁷ and the NRC Staff filed its response and additional exhibits/testimony on December 9, 2014.⁷⁸ On December 10, 2014, the Board admitted all exhibits, requested further memoranda of law on whether any or all of the Oglala Sioux Tribe's

⁶⁷ Tr. at 880-966.

⁶⁸ Tr. at 967.

⁶⁹ Licensing Board Post-Hearing Order (Sept. 8, 2014) at 7-8, 11-12 (unpublished).

⁷⁰ Oglala Sioux Tribe and Consolidated Intervenor's Motion to Extend Deadline for Submission of Testimony and Amend or File New Contentions (Oct. 9, 2014) [hereinafter Motion to Extend].

⁷¹ Oglala Sioux Tribe Motion to Admit Additional Exhibits (Oct. 14, 2014).

⁷² NRC Staff's Motion to Admit Testimony and Exhibits Addressing Powertech's September 14, 2014 Disclosures (Oct. 14, 2014) (submitting testimony and exhibits addressing the information disclosed by Powertech on September 14, 2014).

⁷³ Licensing Board Order (Granting in Part Motion to Extend Deadline) (Oct. 22, 2014) (unpublished).

⁷⁴ Motion for Leave to File New or Amended Contention on Behalf of the Oglala Sioux Tribe (Nov. 7, 2014); Oglala Sioux Tribe Unopposed Motion to Admit Additional Exhibits (Nov. 7, 2014). The admission of both these contentions is denied in Parts G.1 and G.2 of this Order. *See* Licensing Board Notice (Pursuant to 10 C.F.R. § 2.309(j)(1)) (Jan. 14, 2015) (unpublished).

⁷⁵ Licensing Board Order (Admitting New Exhibits and Closing the Evidentiary Record on Contentions 1A, 1B, 2, 4, 6 and 9) (Nov. 13, 2014) (unpublished).

⁷⁶ Oglala Sioux Tribe Motion to Admit Additional Testimony and Exhibits (Nov. 21, 2014).

⁷⁷ Powertech (USA), Inc. Response to the Oglala Sioux Tribe's November 21, 2014, Motion to Admit Additional Testimony and Exhibits (Dec. 4, 2014).

⁷⁸ NRC Staff's Brief in Support of Answering Testimony (Dec. 9, 2014).

exhibits should be accorded nonpublic status, and closed the evidentiary record on Contention 3.⁷⁹ The parties filed their memoranda on the nonpublic status of exhibits on December 19, 2014,⁸⁰ and the Board subsequently ruled that newly submitted supplemental testimony would be made public, while other Oglala Sioux Tribe exhibits should remain nonpublic.⁸¹

On January 9, 2015, the parties submitted their Proposed Findings of Fact and Conclusions of Law,⁸² and on January 29, 2015, their Replies to these post-hearing filings.⁸³ On March 9, 2015, the Board issued a Notice that it anticipated issuing an Initial Decision no later than April 30, 2015.⁸⁴

This Partial Initial Decision makes a determination regarding the merits of the seven contentions that were the subjects of the evidentiary hearing in August 2014, and rules on the admissibility of two additional contentions proposed by the Oglala Sioux Tribe on November 7, 2014. In addressing each of the concerns raised by the Intervenor in their contentions, this Partial Initial Decision upholds the NRC Staff issuance of Source Materials License No. SUA-1600, albeit with the imposition of additional license conditions.

III. LEGAL STANDARDS

Contentions 1A, 1B, 2, 3, 4, 6, and 9 raise challenges to the Powertech

⁷⁹ Licensing Board Order (Admitting Additional Exhibits, Closing the Record on Contention 3 and Setting Briefing Dates) (Dec. 10, 2014) (unpublished).

⁸⁰ NRC Staff's Response to Board's December 10, 2014 Order (Dec. 19, 2014); Powertech (USA), Inc. Response to the Atomic Safety and Licensing Board's Request for Argument on Potential Non-Public Status of Oglala Sioux Tribe's Exhibits (Dec. 19, 2014); Oglala Sioux Tribe's Memorandum of Law in Response to the Board's December 9, 2014 Order in Regarding Public Disclosure of Admitted Testimony and Exhibits (Dec. 19, 2014).

⁸¹ Licensing Board Order (Ruling on Confidentiality of Exhibits OST-029 through OST-041) (Jan. 12, 2015) (unpublished).

⁸² NRC Staff's Proposed Findings of Fact and Conclusions of Law (Jan. 9, 2015); NRC Staff's Response to Post-Hearing Order (Jan. 9, 2015); Powertech (USA), Inc.'s Proposed Findings of Fact and Conclusions of Law (Jan. 9, 2015) [hereinafter Powertech Initial Findings of Fact and Conclusions of Law]; Consolidated Intervenor's Proposed Findings of Fact and Conclusions of Law and Response to Post-Hearing Order (Jan. 9, 2015); Oglala Sioux Tribe's Post-Hearing Initial Brief with Findings of Fact and Conclusions of Law (Jan. 9, 2015) [hereinafter Oglala Sioux Tribe Post-Hearing Initial Brief].

⁸³ Consolidated Intervenor's Reply to Post-Hearing Briefs (Jan. 29, 2015); NRC Staff's Reply Brief (Jan. 29, 2015) [hereinafter NRC Staff's Post-Hearing Reply Brief]; Errata to NRC Staff's Post-Hearing Briefs (Feb. 2, 2015); Powertech (USA), Inc.'s Reply to Proposed Findings of Fact and Conclusions of Law (Jan. 29, 2015); Oglala Sioux Tribe's Post-Hearing Reply Brief (Jan. 29, 2015) [hereinafter Oglala Sioux Tribe Post-Hearing Reply Brief].

⁸⁴ Licensing Board Notice (Regarding Expected Issuance of Initial Decision) (Mar. 9, 2015) (unpublished).

ISL license application under the Atomic Energy Act of 1954, as amended (AEA), the National Environmental Policy Act of 1969 (NEPA),⁸⁵ the National Historic Preservation Act (NHPA)⁸⁶ and the NRC regulations implementing the agency's responsibilities pursuant to these Acts.⁸⁷ Together, these statutes and the corresponding agency regulations govern an applicant's and the NRC Staff's roles in considering the safety and environmental effects of a proposed agency ISL licensing action under 10 C.F.R. Part 40. The NRC has a statutory obligation to assess each site-specific license application to ensure it complies with NRC regulations before issuing a license.

Additionally, the Council on Environmental Quality (CEQ) and the Advisory Council on Historic Preservation (ACHP) have issued regulations that provide guidance on agency compliance with NEPA⁸⁸ and the NHPA,⁸⁹ that, while not binding on the NRC when the agency has not expressly adopted them, are entitled to considerable deference.⁹⁰

A. AEA Requirements

The AEA and the Uranium Mill Tailings Radiation Control Act of 1978⁹¹ authorize the NRC to issue licenses for the possession and use of source material and byproduct material.⁹² These statutes require the NRC to license facilities that meet NRC regulatory requirements developed to protect public health and safety from radiological hazards. To operate, ISL uranium recovery facilities must meet NRC regulatory requirements and obtain a source materials license.

The AEA also provides hearing rights in licensing actions concerning "the granting . . . of any license . . . upon the request of any person whose interest may be affected by the proceeding."⁹³ Given that the licensing action in dispute

⁸⁵ 42 U.S.C. § 4321 *et seq.*

⁸⁶ 16 U.S.C. § 470 *et seq.* While the NHPA was previously codified at title 16 of the U.S. Code, effective December 19, 2014, it was moved to title 54. *See* 54 U.S.C. § 300101 *et seq.*

⁸⁷ 10 C.F.R. Part 51.

⁸⁸ *See* 40 C.F.R. Part 1500.

⁸⁹ 36 C.F.R. § 800 *et seq.*

⁹⁰ *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 725, 743 (3d Cir. 1989); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 222 n.21 (2007) (giving CEQ's regulations and guidance "substantial deference").

⁹¹ AEA, 42 U.S.C. 2011 *et seq.*; Uranium Mill Tailings Radiation Control Act of 1978, 42 U.S.C. §§ 2022 *et seq.*, 7901 *et seq.*

⁹² Section 11e(2) byproduct material is regulated by the NRC under 10 C.F.R. Part 40. In 10 C.F.R. § 40.4, the NRC clarified the definition of byproduct material by adding the clause "including discrete surface wastes resulting from uranium solution extraction processes." In simpler terms, it is the waste and tailings generated by the processing of ore for its uranium or thorium content.

⁹³ AEA § 189(a)(1)(A), 42 U.S.C. § 2239a(1)(a).

here is the grant of Powertech's combined source and 11e(2) byproduct materials license, AEA hearing rights attach. ISL license applications require a safety review to determine if a license applicant has met all relevant criteria in 10 C.F.R. Parts 20 and 40. These safety requirements include certain criteria in Appendix A to Part 40, which provides specific standards for operating uranium mills and disposing of waste material. However, because the Dewey-Burdock Project is not a conventional uranium mill, not all criteria in Appendix A must be met.⁹⁴

B. NEPA Requirements

NEPA requires that federal agencies prepare a detailed environmental impact statement for proposed actions "significantly affecting the quality of the human environment."⁹⁵ The adverse environmental effects that must be assessed under NEPA include "aesthetic, historic, cultural, economic, social, or health" effects.⁹⁶ While reviewing any adverse effects, federal agencies must take a hard look at the environmental impacts of a proposed action.⁹⁷ This hard look is intended to foster both informed agency decisionmaking and informed public participation so as to ensure that the agency does not act upon incomplete information.⁹⁸ The NRC Staff must provide "a reasonably thorough discussion of the significant aspects of the probable environmental consequences."⁹⁹ However, the hard look is subject to a "rule of reason," and consideration of environmental impacts need not address all theoretical possibilities, but only those that have some reasonable possibility

⁹⁴ See *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 9 (1999) ("We agree that those requirements in Part 40, such as many of the provisions in Appendix A, that, by their own terms, apply only to conventional uranium milling activities, cannot sensibly govern ISL mining.").

⁹⁵ 42 U.S.C. § 4332(2)(C).

⁹⁶ 40 C.F.R. § 1508.8(b) (2014).

⁹⁷ See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998).

⁹⁸ The NEPA hard look must emerge from an engagement in informed and reasoned decisionmaking, as the agency "obtains opinions from its own experts, obtains opinions from experts outside the agency, gives careful scientific scrutiny and responds to all legitimate concerns that are raised." *Hughes River Watershed Conservancy v. Johnson*, 165 F.3d 283, 288 (4th Cir. 1999) (citing *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378-85 (1989)).

⁹⁹ *Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974); *Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1026-27 (9th Cir. 1980); see also *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005) ("NEPA also does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts." (emphasis in original)).

of occurring.¹⁰⁰ As the Commission has emphasized, “an environmental impact statement is not intended to be ‘a research document.’”¹⁰¹

In an NRC adjudicatory proceeding, even if a Board finds an Environmental Impact Statement (EIS) prepared by the NRC Staff inadequate in certain respects, the Board’s findings, as well as the adjudicatory record, “become, in effect, part of the [final EIS].”¹⁰² Thus, the Board’s ultimate NEPA judgments are made on the basis of the entire adjudicatory record in addition to the NRC Staff’s FSEIS.¹⁰³ In this proceeding, the NRC Staff issued the license after it issued the FSEIS, but before the evidentiary hearing.¹⁰⁴

C. NHPA Requirements

The NHPA, like NEPA, is a procedural statute requiring government agencies to “stop, look, and listen” before proceeding with agency action.¹⁰⁵ Under the

¹⁰⁰ *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973); *see also Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 807 (2005); *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 7 (2002). The NRC Staff must have some discretion to draw the line and move forward with decisionmaking. *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 315 (2010) (citation omitted).

¹⁰¹ *Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010) (citation omitted). NEPA does not require the NRC Staff to analyze every conceivable aspect of the proposed project. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 (2002).

¹⁰² *Claiborne*, CLI-98-3, 47 NRC at 89.

¹⁰³ *See Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-05-13, 61 NRC 385, 404 (2005), *aff’d*, CLI-06-22, 64 NRC 37 (2006); *see also Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-7, 69 NRC 613, 733 (2009), *petition for review denied*, CLI-10-5, 71 NRC 90 (2010).

¹⁰⁴ Section 2.1202(a) of 10 C.F.R. instructs the NRC Staff “to promptly issue its approval or denial of the application” consistent with its findings, despite the pendency of a hearing. Nonetheless, the issued license can be revoked, conditioned, modified, or affirmed based on the evidence reviewed at the evidentiary hearing. *See* 10 C.F.R. § 40.41(e)(2) (“The Commission may incorporate in any license at the time of issuance, or thereafter, by appropriate rule, regulation or order, such additional requirements and conditions with respect to the licensee’s receipt, possession, use, and transfer of source or byproduct material as it deems appropriate or necessary in order to . . . protect health or to minimize danger of life or property.”); *see also Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 68 (1977) (quoting CLI-77-8, 5 NRC 503, 530 (1977) (“In granting a proposed license, the Board may condition it upon some precautionary measures required at the chosen site.”)).

¹⁰⁵ Ex. NRC-048, Council on Environmental Quality, Executive Office of the President, and Advisory Council on Historic Preservation, NEPA and NHPA: A Handbook for Integrating NEPA and Section 106 at 4 (Mar. 2013) [hereinafter NEPA and NHPA Handbook, Ex. NRC-048]; *see also* 16 U.S.C. § 470 *et seq.*

NHPA, a federal agency must make a reasonable and good faith effort to identify historic properties,¹⁰⁶ determine whether identified properties are eligible for listing on the National Register based on the criteria in 36 C.F.R. § 60.4, assess the effects of the undertaking on any eligible historic properties found,¹⁰⁷ determine whether the effect will be adverse,¹⁰⁸ and avoid or mitigate any adverse effects.¹⁰⁹ The federal agency must confer with a State Historic Preservation Officer and seek the approval of the ACHP.¹¹⁰

Section 106 of the NHPA requires federal agencies, prior to approving any “undertaking,” such as the Dewey-Burdock project, to “take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register.”¹¹¹ If an undertaking “may affect” an eligible site, the agency must make a reasonable and good faith effort to seek information from consulting parties, other members of the public, and Native American tribes to identify historic properties in the area of potential effect. The NHPA also requires that federal agencies “consult with any Indian tribe . . . that attaches religious and cultural significance” to the sites.¹¹² Consultation must provide the tribe “a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking’s effects on such properties, and participate in the resolution of adverse effects.”¹¹³ The NHPA further requires that consultation with Indian tribes “recognize the government-to-government relationship between the Federal Government and Indian tribes.”¹¹⁴

Agencies are directed by presidential memoranda and Executive Orders to undertake meaningful consultation with Indian tribes. In 1994, President Clinton called for agencies “to ensure that the Federal Government operates within a government-to-government relationship with federally recognized Native American tribes[,] . . . reflecting respect for the rights of self-government due the

¹⁰⁶ 36 C.F.R. § 800.4(b).

¹⁰⁷ 36 C.F.R. §§ 800.4(c), 800.5, 800.9(a).

¹⁰⁸ 36 C.F.R. §§ 800.5(c), 800.9(b).

¹⁰⁹ 36 C.F.R. §§ 800.8(c), 800.9(c).

¹¹⁰ *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 805 (9th Cir. 1999); *see also* 36 C.F.R. § 800.8(c)(1)(v) (An agency must “develop in consultation with identified consulting parties alternatives and proposed measures that might avoid, minimize or mitigate any adverse effects of the undertaking on historic properties and describe them in the [environmental assessment] EA or DEIS.”).

¹¹¹ 16 U.S.C. § 470f.

¹¹² 16 U.S.C. § 470a(d)(6)(B).

¹¹³ 36 C.F.R. § 800.2(c)(2)(ii)(A).

¹¹⁴ 36 C.F.R. § 800.2(c)(2)(ii)(C).

sovereign tribal governments.”¹¹⁵ In 2000, President Clinton issued an Executive Order “to establish regular and meaningful consultation and collaboration with tribal officials” through “an accountable process” at each agency.¹¹⁶ In 2009, President Obama issued a memorandum commenting that a lack of consultation with tribes “has all too often led to undesirable and, at times, devastating and tragic results,” but that “meaningful dialogue between Federal officials and tribal officials has greatly improved Federal policy toward Indian tribes.”¹¹⁷

An agency may fulfill its NHPA review responsibilities through several means, one of which includes the issuance of a Programmatic Agreement. A Programmatic Agreement may be used to implement the Section 106 process in situations where the effects to historic properties cannot be fully determined prior to the approval of an undertaking, such as where an applicant proposes a phased approach to developing its project.¹¹⁸ In such cases, the Programmatic Agreement establishes a phased process for consultation, review, and compliance with the NHPA.

The ACHP guidance on consultation reiterates that consultation must begin at the earliest possible time in an agency’s consideration of an undertaking, framing such early engagement with Indian tribes as an issue of respect for tribal sovereignty.¹¹⁹ Agencies must ensure that a tribe has “a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, . . . articulate its views on the undertaking’s effects on such properties, and participate in the resolution of adverse effects.”¹²⁰ Federal policy, as reflected in the American Indian Religious Freedom Act of

¹¹⁵ Memorandum on Government-to-Government Relations with Native American Tribal Governments, 30 Weekly Comp. Pres. Doc. 936 (May 2, 1994).

¹¹⁶ Exec. Order No. 13,175, 65 Fed. Reg. 67,249, 67,250 (Nov. 6, 2000). Independent regulatory agencies, including the NRC, were “encouraged to comply with the provisions of this order.” *Id.* at 67,251. The NRC has created a Tribal Protocol Manual, and stated that it would act in a manner consistent with the fundamental precepts expressed in the Executive Order. Division of Material, Safety, States, Tribal, and Rulemaking Programs, Office of Nuclear Material Safety and Safeguards, Tribal Protocol Manual, NUREG-2173, at 4 (Dec. 2014) (ADAMS Accession No. ML14274A014) [hereinafter Tribal Protocol Manual].

¹¹⁷ Memorandum on Tribal Consultation, 74 Fed. Reg. 57,881 (Nov. 5, 2009).

¹¹⁸ 36 C.F.R. §§ 800.13, 800.14(b)(1).

¹¹⁹ Advisory Council on Historic Preservation, Consultation with Indian Tribes in the Section 106 Review Process: A Handbook, at 3, 7, 12, 29 (Nov. 2008).

¹²⁰ 36 C.F.R. § 800.2(c)(2)(ii)(A).

1978¹²¹ and the 1996 Executive Order on Indian Sacred Sites¹²² also supports special consideration where tribal religious exercise is threatened.

D. NRC Regulations

The NRC's environmental protection regulations, which implement NEPA, are found in Title 10, Part 51 of the *Code of Federal Regulations*. Issuance of a license to possess and use source material for uranium milling and ISL mining requires an EIS or a supplement to an EIS, and the NRC has prepared a Generic Environmental Impact Statement (GEIS) for ISL mining, NUREG-1910, to help fulfill this requirement.¹²³ The GEIS assesses the potential environmental impacts associated with the construction, operation, aquifer restoration, and decommissioning of an ISL uranium recovery facility in four specified regions in the western United States. The intent of the GEIS is to determine which impacts would be essentially the same for all ISL facilities and which ones would result in varying levels of impacts for different facilities, thus requiring further site-specific information to determine the potential impacts. As such, the GEIS provides a starting point for the NRC's NEPA analyses for site-specific license applications for new ISL facilities, as well as for applications to amend or renew existing ISL licenses.

E. Burden of Proof

As the proponent of the agency action, an applicant generally has the burden of proof in a licensing proceeding.¹²⁴ The statutory obligation of complying with NEPA, however, rests with the NRC.¹²⁵ Consequently, when NEPA contentions are involved, the burden shifts to the NRC Staff.¹²⁶ Nonetheless, because “the

¹²¹ American Indian Religious Freedom Act, Pub. L. No. 95-341, 92 Stat. 469 (1978) (codified at 42 U.S.C. § 1996 (2012)).

¹²² Exec. Order No. 13,007, 61 Fed. Reg. 26,771 (May 24, 1996), *reprinted in* 42 U.S.C. § 1996 (2012).

¹²³ Issuing a license to possess and use source material to a uranium milling facility is identified as a major federal action. 10 C.F.R. § 51.20(b)(8); *see also* Ex. NRC-010-A-1 through NRC-010-B-2, Office of Federal and State Materials and Environmental Management Programs, Generic Environmental Impact Statement for In-Situ Leach Uranium Milling Facilities, NUREG-1910 (May 2009).

¹²⁴ *See* 10 C.F.R. § 2.325.

¹²⁵ *See, e.g., Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983).

¹²⁶ *See Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 34 (2010); *see also Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP
(Continued)

Staff, as a practical matter, relies heavily upon the Applicant's Environmental Report in preparing the EIS, should the Applicant become a proponent of a particular challenged position set forth in the EIS, the Applicant, as such a proponent, also has the burden on that matter."¹²⁷ And relative to factual matters, to carry that burden, the NRC Staff and/or Powertech¹²⁸ must establish that its position is supported by a preponderance of the evidence.¹²⁹

IV. DISCUSSION

Contentions 1A and 1B challenge the adequacy of the NRC Staff's FSEIS discussion of the protection of Native American religious and cultural resources.¹³⁰ In Contention 1A, the Intervenor alleges that the NRC Staff's FSEIS does not adequately address the environmental effects of the Dewey-Burdock project on Native American cultural, religious, and historic resources. In Contention 1B the Oglala Sioux Tribe challenges the consultation process employed, and alleges the NRC Staff failed to fulfill its responsibilities regarding consultation with Native American tribes.

Contentions 2, 3, and 4 question the adequacy of the FSEIS analysis of baseline groundwater quality (Contention 2), the potential for fluid migration and its impact on groundwater quality (Contention 3), as well as a failure to adequately analyze groundwater quantity impacts (Contention 4).

Contentions 6 and 9 allege an inadequate description and analysis of mitigation measures (Contention 6) and a failure to consider connected actions in the FSEIS (Contention 9).

A. Contentions 1A and 1B: Historical and Cultural Resources and Consultation

Based on the intertwined nature of Contentions 1A and 1B, the Board will

Site), CLI-07-17, 65 NRC 392, 395 (2007) (stating that "NRC hearings on NEPA issues focus entirely on the adequacy of the NRC Staff's work").

¹²⁷ *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 339 (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).

¹²⁸ On April 8, 2014, the NRC Staff issued NRC Source Materials License No. SUA-1600 to Powertech (USA), Inc. pursuant to 10 C.F.R. § 2.1202(a).

¹²⁹ See *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577 & n.22 (1984).

¹³⁰ Originally, this contention challenged the discussion of this subject in Powertech's ER. However, with the release of the NRC Staff's NEPA documents, the contention subsequently migrated into a challenge of the discussion of this subject in the NRC Staff's FSEIS.

consider these contentions jointly. For Contentions 1A and 1B at the evidentiary hearing, the Oglala Sioux Tribe offered witnesses Wilmer Mesteth¹³¹ and Michael CatchesEnemy.¹³² Consolidated Intervenors offered witness Louis Redmond.¹³³ Powertech offered witnesses Lynn Sebastian,¹³⁴ Adrien Hannus,¹³⁵ and Michael Fosha.¹³⁶ The NRC Staff offered witnesses Haimanot Yilma,¹³⁷ Kellee Jamerson,¹³⁸ Po-Wen (Kevin) Hsueh,¹³⁹ and Hope Luhman.¹⁴⁰

1. Contention 1A: Failure to Meet Applicable Legal Requirements Regarding Protection of Historical and Cultural Resources

Contention 1A was originally submitted as part of the Oglala Sioux Tribe's Contention 1 and Consolidated Intervenors' Contention K.¹⁴¹ The current form of Contention 1A challenges the NRC Staff's FSEIS.¹⁴²

2. Contention 1B: Failure to Involve or Consult All Interested Tribes as Required by Federal Law

The Board first addressed the adequacy of the consultation process in 2010, when the Board held, in LBP-10-16, that "the issue of the alleged failure to consult with the Tribe . . . is material and within the scope of this proceeding."¹⁴³ The Board found, however, that "the failure to consult" portion of the contention

¹³¹ Ex. OST-015, Declaration of Wilmer Mesteth (Apr. 1, 2010).

¹³² Ex. OST-014, Declaration of Michael CatchesEnemy (Apr. 14, 2014).

¹³³ Ex. INT-003, Louis Redmond Curriculum Vitae.

¹³⁴ Ex. APP-002, Lynne Sebastian Curriculum Vitae.

¹³⁵ Ex. APP-004, L. Adrien Hannus Curriculum Vitae.

¹³⁶ Ex. APP-011, Michael R. Fosha Curriculum Vitae.

¹³⁷ Ex. NRC-003-R, Revised Statement of Professional Qualifications of Haimanot Yilma.

¹³⁸ Ex. NRC-004-R, Revised Statement of Professional Qualifications of Kellee L. Jamerson.

¹³⁹ Ex. NRC-002-R, Revised Statement of Professional Qualifications of Po-Wen (Kevin) Hsueh.

¹⁴⁰ Ex. NRC-152, Statement of Professional Qualifications of Hope E. Luhman.

¹⁴¹ Contention 1, as filed, read in full, "Failure to meet applicable legal requirements regarding protection of historical and cultural resources, and failure to involve or consult the Oglala Sioux Tribe as required by Federal law." Oglala Sioux Tribe Petition, Ex. OST-010 at 12; Consolidated Intervenors' New Petition at 1-2. Contention K read, "The Application is not in conformance with 10 C.F.R. § 40.9 and 10 C.F.R. § 51.45 because the Application does not provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that cultural and historic resources . . . are identified and protected pursuant to Section 106 of the National Historic Preservation Act. As a result, the Application fails to comply with Section 51.60." Consolidated Intervenors' Petition, Ex. INT-016 at 1-2.

¹⁴² LBP-14-5, 79 NRC at 401.

¹⁴³ LBP-10-16, 72 NRC at 422; *see also* Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 350-51 (2009) (discussing the licensing board's ruling that tribal consultation is within the scope of the proceeding).

was not yet ripe and directed the Oglala Sioux Tribe to “wait until the [DSEIS] is issued by the NRC Staff to interpose the issue of the adequacy of the agency’s consultation efforts.”¹⁴⁴ The “failure to consult” contention was re-raised by the Oglala Sioux Tribe in response to the DSEIS, and admitted by the Board.¹⁴⁵ Thereafter, in LBP-14-5 the Board held that the contention migrated as a criticism of the FSEIS.¹⁴⁶

3. *Summary of Consultation Efforts and Cultural Surveys*

The disposition of Contentions 1A and 1B largely flows from the specific steps taken throughout the consultation process. With this in mind, the Board begins by laying out the details of consultation efforts and tribal cultural surveys pursued during the NEPA process for the Dewey-Burdock project as described in the FSEIS.¹⁴⁷

At the outset, the FSEIS notes that “the proposed action has the potential to affect certain sites of religious and cultural significance to Native American tribes; however, the impacts to such sites are expected to be reduced through mitigation strategies developed through the National Historic Preservation Act Section 106 consultation process.”¹⁴⁸ Beginning in 2010 the NRC Staff began its efforts to address cultural, religious, and historical Native American sites. The South Dakota State Historic Preservation Officer initially identified twenty Native American tribes that might attach historic, cultural, and religious significance to historic properties within the proposed Dewey-Burdock ISL Project area.¹⁴⁹ The NRC Staff contacted these twenty tribal governments by letters dated March 19, 2010, September 10, 2010, and March 4, 2011.¹⁵⁰ The NRC Staff invited the tribes to participate as consulting parties in the NHPA § 106 process and requested assistance in identifying tribal historic sites or cultural resources that might be affected by the proposed action.

By letter dated January 31, 2011, the Oglala Sioux Tribe Tribal Historic

¹⁴⁴ LBP-10-16, 72 NRC at 422.

¹⁴⁵ LBP-13-9, 78 NRC at 113.

¹⁴⁶ LBP-14-5, 79 NRC at 401.

¹⁴⁷ FSEIS, Ex. NRC-008-A-1, § 1.7.3.5.

¹⁴⁸ FSEIS, Ex. NRC-008-A-1, Executive Summary at xlv. Quoting an earlier study of the area, the FSEIS states, “most of the tribal members interviewed knew their people had regular ceremonial, cultural, and religious activity in the Black Hills prior to the establishment of reservations; however, no one could pinpoint present cultural, ceremonial, or religious use in the proposed area (Sprague, 2008, p. 14).” *Id.* § 1.7.3.1.

¹⁴⁹ The Cheyenne and Arapaho, Pawnee, and Omaha tribes were contacted later in February 2013. FSEIS, Ex. NRC-008-A-1, § 1.7.3.5.

¹⁵⁰ *Id.*

Preservation Officer accepted the invitation to participate as a consulting party and stated that the proposed Dewey-Burdock Project represented a substantial potential threat to the preservation of cultural and historic resources of the Oglala Sioux Tribe.¹⁵¹ The Oglala Sioux Tribal Historic Preservation Officer also declared that the proposed project site was located within an area about which various Sioux tribes, along with the Cheyenne, Arapahoe, Crow, and Arikara Tribes, possess intimate cultural knowledge.¹⁵² The Tribal Historic Preservation Officer further stated that impacts that could result from the proposed project include not only site-specific physical impacts, but intangible impacts to the integrity of the area from cultural, historical, spiritual, and religious perspectives.¹⁵³

The NRC Staff held an “informal information gathering meeting” on June 8, 2011, at the Prairie Winds Casino and Hotel on the Pine Ridge Reservation with representatives of six tribes.¹⁵⁴ At that meeting tribal officials expressed concerns about the identification and preservation of historic properties of traditional religious and cultural importance to tribes at the proposed Dewey-Burdock site and two Crow Butte ISL sites in Nebraska. Tribal officials stated that historic and cultural resource studies of the sites should be conducted with tribal involvement.¹⁵⁵ In conjunction with the June 8, 2011, informal information gathering meeting, Powertech hosted a visit to the project site on June 9, 2011.

The NRC Staff held a second meeting with representatives of thirteen Native American tribes¹⁵⁶ in Rapid City, South Dakota, on February 14-15, 2012. The purpose of this meeting was to solicit the views of interested tribes about the general types and descriptions of historic properties of religious and cultural significance that may be affected by the proposed project and how these properties could be identified and evaluated as part of the ongoing consultations under section 106 of the NHPA.¹⁵⁷ Tribal representatives requested another face-to-face meeting to review draft statements of work prepared by several tribes and applicants.¹⁵⁸ Although a followup meeting was scheduled for March 14-15, 2012, it was

¹⁵¹ *Id.*

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ The tribes with representatives in attendance were: the Oglala Sioux, Standing Rock Sioux, Flandreau-Santee Sioux, Sisseton-Wahpeton Oyate, Cheyenne River Sioux, and Rosebud Sioux. *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ The tribes in attendance were: Cheyenne River Sioux, Crow Creek Sioux, Crow Tribe of Montana, Eastern Shoshone, Fort Peak Assiniboiné Sioux, Northern Arapaho, Northern Cheyenne, Oglala Sioux, Rosebud Sioux, Yankton Sioux, Sisseton-Wahpeton Sioux, Santee Sioux Nation, and Standing Rock Sioux. *See id.*

¹⁵⁷ *Id.*

¹⁵⁸ These statements of work were for the preparation of traditional cultural properties for three proposed ISL projects in the greater Black Hills area; Dewey-Burdock ISR, Crow Butte License Renewal ISR in Nebraska, and the Crow Butte North Trend expansion area.

subsequently canceled. In lieu of this face-to-face meeting, the NRC Staff instead held a series of telephone conference calls and an exchange of letters and e-mails.¹⁵⁹

On September 5, 2012, the NRC Staff met with representatives of seven tribes in Bismarck, North Dakota.¹⁶⁰ During this meeting, participants discussed how to proceed with the development of a statement of work to identify religious and cultural properties within the area of potential effects. All parties agreed a survey was necessary for historic property identification. All parties also agreed further consultation was needed to develop a statement of work that focused survey efforts on the identification of properties directly and indirectly affected by the proposed project.¹⁶¹ Following this meeting, the NRC Staff asked participants from the September 5, 2012 meeting in Bismarck, North Dakota, to designate a preferred contractor to submit a proposal to conduct a survey on their behalf. The NRC Staff requested that the contractor's proposal be based on the area of direct effect that might be disturbed during the initial phase of the Dewey-Burdock ISL Project, and that the proposal include a cost estimate.¹⁶² The NRC Staff also indicated a Programmatic Agreement would need to be "developed to address the phased identification and evaluation of historic properties."¹⁶³

On June 19, 2012, the tribes provided the NRC Staff with a preliminary tribal statement of work for identifying properties of religious and cultural significance at the Dewey-Burdock ISL Project site. On September 27, 2012, the NRC Staff received a proposal and cost estimate from the tribes for a traditional cultural properties survey for the proposed Dewey-Burdock Project. The proposal and cost estimate were prepared by Makoche Wowapi/Mentz-Wilson Consultants, LLP, the contractor selected by the tribes to complete the cultural resources survey of the proposed project. On October 12, 2012, the NRC Staff informed the tribes of the significant differences between the Makoche Wowapi/Mentz-Wilson Consultants, LLP proposal and Powertech's proposal. The NRC Staff requested that the tribes propose alternative methods for identifying potential properties of traditional religious and cultural importance to the tribes. The NRC Staff suggested that alternative methods might include opening the site to interested tribal specialists over a period of several weeks with payment for survey costs

¹⁵⁹ FSEIS, Ex. NRC-008-A-1, § 1.7.3.5.

¹⁶⁰ Representatives of the Yankton Sioux, Sisseton-Wahpeton Oyate Sioux, Rosebud Sioux, Standing Rock Sioux, Northern Cheyenne, Oglala Sioux, and Crow Nation attended this meeting. *Id.*

¹⁶¹ *Id.*

¹⁶² *Id.*

¹⁶³ DSEIS, Ex. NRC-009-B-2, App. A at A-298, Request for Proposal, Letter from Kevin Hsueh, NRC Branch Chief, to Tribal Historic Preservation Officer (Sept. 18, 2012).

made to individual tribes or seeking ethno-historic and ethnographic information from tribal specialists in interviews at tribal headquarters.¹⁶⁴

Between October 15 and October 20, 2012, the NRC Staff received letters and e-mails from four tribes opposing the NRC Staff's request for alternative survey approaches.¹⁶⁵ These tribes maintained that the only level of effort sufficient for identifying historic properties would be an on-the-ground, 100% survey of the entire license boundary by tribal personnel from participating tribes.¹⁶⁶ On October 19, 2012, the NRC Staff received an alternative field survey proposal from four tribes (not including the Oglala Sioux Tribe) in collaboration with Kadramas, Lee, & Jackson (KLJ), a private consulting firm from North Dakota. This alternative field survey proposed investigation of previously recorded archaeological sites, use of light detection and ranging mapping technology to locate potential rock alignments, cairns, and other stone features, and a systematic pedestrian survey of the 2637 acres of the project.¹⁶⁷ The NRC Staff found that the proposed level of effort in the KLJ proposal was reasonable and appropriate to the project area and that the estimated costs were in line with the range of survey costs obtained in tribal surveys of other projects. On October 31, 2012, the NRC Staff endorsed the KLJ survey approach and invited all consulting tribes to participate in the survey with paid compensation for one representative per tribe. However, five tribes (including the Oglala Sioux Tribe) opposed the KLJ proposal.¹⁶⁸ KLJ subsequently withdrew its proposal.¹⁶⁹

The NRC Staff issued the DSEIS in November 2012, stating that it was using the NEPA process to satisfy the public participation requirements of the NHPA.¹⁷⁰ The guidance in the NHPA Handbook, admitted into evidence as an NRC Staff exhibit, notes that the term "cultural resources" covers a wider range of resources than just "historic properties," and includes "sacred sites, archaeological sites not eligible for the National Register of Historic Places,

¹⁶⁴ *Id.* at 81.

¹⁶⁵ The four tribes were the Standing Rock Sioux Tribe, the Sisseton-Wahpeton Oyate, the Rosebud Sioux Tribe, and the Yankton Sioux Tribe. FSEIS, Ex. NRC-008-A-1, § 1.7.3.5.

¹⁶⁶ *Id.* The entire license boundary of the proposed Dewey-Burdock ISL project encompasses 10,580 acres. FSEIS, Ex. NRC-008-A-2 § 4.12.2.

¹⁶⁷ FSEIS, Ex. NRC-008-A-1, § 1.7.3.5. These 2637 acres represent the area of immediate direct effects. FSEIS, Ex. NRC-008-B-2, § E5.11.

¹⁶⁸ FSEIS, Ex. NRC-008-A-1, § 1.7.3.5. The other tribes that opposed this proposal were the Standing Rock Sioux Tribe, Rosebud Sioux Tribe, Sisseton-Wahpeton Oyate, and Yankton Sioux Tribe.

¹⁶⁹ *Id.*

¹⁷⁰ This approach, referred to as "substitution," is permitted under NHPA regulations. 36 C.F.R. § 800.8; *see also* NEPA and NHPA Handbook, Ex. NRC-048 at 29-33 (describing the substitution process).

and archaeological collections.”¹⁷¹ The NRC Staff explained that, consistent with this broader approach, after completion of the DSEIS it continued “working to facilitate a field survey of the Dewey-Burdock site in order to obtain additional information on historic properties. When the survey is complete, the Staff will supplement its analysis in the DSEIS and circulate the new analysis for public comment.”¹⁷²

In December 2012 the NRC Staff invited all interested consulting parties to provide information relevant to the development of a Programmatic Agreement.¹⁷³ The NRC Staff also stated that it intended to move forward with an alternative field survey approach in the spring of 2013.¹⁷⁴

On February 8, 2013, the NRC Staff invited twenty-three tribes¹⁷⁵ to participate in a field survey between April 1 and May 1, 2013, and described procedures for site access, and compensation for survey participation. Tribes interested in participating in the field survey were advised to respond by March 12, 2013. On March 22, 2013, the Oglala Sioux Tribe objected to the terms of the survey proposal and indicated that the proposed April 1, 2013 date for the start of the field survey did not allow sufficient time for formal authorization from its Tribal Council and constituents. The Oglala Sioux Tribe expressed concern that (1) the scope of the work methodology was inadequate, (2) the funds allocated for the survey were insufficient, (3) the NRC Staff lacked cultural sensitivity on these issues, and (4) the NRC Staff was not fully addressing the direct and indirect effects on cultural resources and burial grounds, and the protection of intellectual property generated during the survey. The Oglala Sioux Tribe declared that the existing NHPA § 106 consultation did not satisfy the required formal government-to-government consultation.¹⁷⁶

Despite these objections from the Oglala Sioux Tribe, the field survey of the Dewey-Burdock site began on April 1, 2013, with three tribes subsequently

¹⁷¹ NEPA and NHPA Handbook, Ex. NRC-048, at 4.

¹⁷² NRC Staff’s Answer to Contentions on the [DSEIS] (Mar. 7, 2013) at 13 (citation omitted).

¹⁷³ The prospect of a post-FSEIS Programmatic Agreement was raised during a series of teleconferences held in August 2012 and correspondence in September 2012. DSEIS, NRC-009-B-2, App. A at A-86, Proposed Agenda, E-mail from Haimanot Yilma, NRC, to Tribal Historic Preservation Officers (Aug. 20, 2012).

¹⁷⁴ *Id.*

¹⁷⁵ The original twenty tribes were invited, as well as the Cheyenne and Arapaho, Pawnee, and Omaha Tribes.

¹⁷⁶ FSEIS, Ex. NRC-008-A-1, § 1.7.3.5. On May 23, 2013, the NRC Staff hosted a meeting in Rapid City, South Dakota, concerning licensing actions associated with three proposed uranium recovery projects under NRC licensing review. The NRC Staff invited over thirty tribes currently in consultation on uranium recovery projects to this meeting with NRC management. *Id.*

submitting survey reports to the NRC Staff for inclusion in the FSEIS.¹⁷⁷ The survey reports documented sites of religious and cultural significance identified during site surveys, and included National Register of Historic Places eligibility recommendations as well as mitigation measures recommended for each identified site.

The NRC Staff later officially separated its NHPA § 106 activities from its NEPA review, informing the tribes and the ACHP of this by letter dated November 6, 2013.¹⁷⁸ By separating the NHPA § 106 process from the NEPA review the NRC Staff determined that a phased process for compliance with section 106 was appropriate. From this point, the NRC Staff's evaluation and determinations of effects on historic properties and consultation concerning measures needed to avoid, minimize, or mitigate any adverse effects was carried out in phases, as set forth in the Programmatic Agreement.¹⁷⁹ In January 2014 the NRC Staff issued the FSEIS. The FSEIS contained the results of the field survey, which consisted of the three reports by Native American tribes with National Register of Historic Places eligibility recommendations.¹⁸⁰ The NRC Staff continued to consult with the Bureau of Land Management (BLM), the South Dakota State Historic Preservation Officer, and the tribes on issues arising under section 106 of the NHPA, and finalized the Programmatic Agreement on April 7, 2014.¹⁸¹ The ACHP noted that a consensus was not reached with the tribes relative to the Programmatic Agreement, but that the Programmatic Agreement was to incorporate "a path forward to continue working with consulting tribes to conclude the identification and evaluation process."¹⁸²

¹⁷⁷The Cheyenne and Arapaho, Northern Arapaho, and Northern Cheyenne tribes submitted survey reports to the NRC. The NRC Staff also received field notes from the Crow Tribe, although the Crow Tribe field notes did not contain NHPA eligibility recommendations.

¹⁷⁸Ex. NRC-015, Project Summary of Tribal Outreach Timeline at 15 (Apr. 8, 2014) [hereinafter Tribal Outreach Timeline, NRC-015]; *see also* FSEIS, NRC-008-B-2, App. A, at A-161-66.

¹⁷⁹Ex. NRC-018-A, Programmatic Agreement Among U.S. Nuclear Regulatory Commission, U.S. Bureau of Land Management, South Dakota State Historic Preservation Office, Powertech (USA), Inc., and Advisory Council on Historic Preservation Regarding the Dewey-Burdock In Situ Recovery Project Located in Custer and Fall River Counties South Dakota at 2 (Mar. 19, 2014) [hereinafter Programmatic Agreement, Ex. NRC-018-A].

¹⁸⁰Ex. NRC-019, Summary Report Regarding the Tribal Cultural Surveys Completed for the Dewey-Burdock Uranium In-Situ Recovery Project at 1-2 (Dec. 16, 2013) [hereinafter Report on Tribal Cultural Surveys, NRC-019]. Seven tribes participated in the field survey and three tribes (Northern Arapaho Tribe, Northern Cheyenne Tribe, Cheyenne and Arapaho Tribes of Oklahoma) submitted written reports. The Crow Nation provided the NRC Staff with a copy of field notes identifying several sites of interest to that tribe.

¹⁸¹Ex. NRC-018-D, Letter from Reid Nelson, Director, Office of Federal Agency Programs, Advisory Council on Historic Preservation, to Kevin Hsueh, Chief, Environmental Review Branch, NRC, at 1 (Apr. 7, 2014) (finalizing section 106 review).

¹⁸²*Id.*

4. *Legal Standards*

Under NEPA regulations, defining the scope of effects of a project requires engagement with the governments of affected tribes through an “early and open process,” aimed at identifying concerns, potential impacts, relevant effects of past actions, and possible alternative actions.¹⁸³ The Commission’s regulations in 10 C.F.R. § 51.71(b) require the NRC Staff to include in the FSEIS “an analysis of significant problems and objections raised by . . . any affected Indian tribes, and by other interested persons.” The GEIS in this case determined the impacts for all ISL facilities in the region, but the FSEIS for each project must contain the site-specific information to determine potential impacts of a particular project.

5. *Parties’ Positions*

In Contention 1A, Intervenor assert that the NRC Staff failed to adequately analyze cultural and historic resources under NEPA before the license was issued, and that the FSEIS and other environmental documents¹⁸⁴ contain insufficient analysis of cultural impacts. Specifically, Intervenor allege that while 10 C.F.R. §§ 51.71(d), 51.45(b) and NEPA require the FSEIS to include an analysis of cultural impacts, “neither [the applicant nor the NRC Staff] has conducted an adequate and competent cultural resources survey, impacts analysis, or mitigation review.”¹⁸⁵

The Oglala Sioux Tribe contends that because the Augustana College Level III archaeological survey¹⁸⁶ performed at the behest of Powertech, and referenced in the FSEIS, left a significant number of archaeological, historical, and traditional cultural resources on the site unevaluated, the potential impacts to these resources have not been addressed.¹⁸⁷ As a result, the Oglala Sioux Tribe objects “that no

¹⁸³ 40 C.F.R. § 1501.7.

¹⁸⁴ An “environmental document” includes the documents specified in 40 C.F.R. § 1508.9 (environmental assessment), § 1508.11 (environmental impact statement), § 1508.13 (finding of no significant impact), and § 1508.22 (notice of intent). 40 C.F.R. § 1508.10.

¹⁸⁵ Oglala Sioux Tribe Post-Hearing Initial Brief at 13.

¹⁸⁶ Ex. APP-009, A Level III Cultural Resources Evaluation of Powertech (USA) Incorporated’s Proposed Dewey-Burdock Uranium Project Locality Within the Southern Black Hills, Custer and Fall River Counties, South Dakota, Archeology Laboratory, Augustana College (Mar. 2008) [hereinafter Level III Cultural Resources Evaluation, Ex. APP-009].

¹⁸⁷ Oglala Sioux Tribe Post-Hearing Initial Brief at 13. Citing CEQ’s NEPA regulations which state that “effects and impacts as used in these regulations are synonymous, the Oglala Sioux Tribe further notes that the regulations specifically require that the ‘effects’ that must be reviewed in a NEPA document include ‘ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative.’” Oglala Sioux Tribe Post-Hearing Reply Brief at 5-6 (quoting 40 C.F.R. § 1508.8).

NEPA environmental document contains a scientifically-defensible protocol and methodology for analysis of cultural resources.”¹⁸⁸ The Oglala Sioux Tribe further contends that the FSEIS does not address cultural resources specific to the Sioux tribes, that the identification efforts were inadequate and that the NHPA measures in the Programmatic Agreement are insufficient to meet the NEPA requirements to review impacts on Native American historic, religious, and cultural resources.

The Oglala Sioux Tribe further argues that the NHPA requires federal agencies to “consult with any Indian tribe . . . that attaches religious and cultural significance” to potentially impacted historic properties.¹⁸⁹ They contend the NRC Staff failed to comply with NHPA regulations to conduct government-to-government consultation “in a manner sensitive to the concerns and needs of the Indian tribe.”¹⁹⁰ Consultation, they argue, encompasses providing the Oglala Sioux Tribe “a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking’s effects on such properties, and participate in the resolution of adverse effects.”¹⁹¹ The Oglala Sioux Tribe contends that conversations with the NRC Staff have been neither meaningful nor reasonable because the NRC Staff has refused to work through the problems identified by the Oglala Sioux Tribe and its representatives. The Oglala Sioux Tribe (as well as several other Sioux Tribes) objected to the NRC Staff’s approach to date, arguing that the tribal field surveys conducted did not address their cultural, historic, and religious concerns.¹⁹² Specifically, the Oglala Sioux Tribe argues that of the twenty-three consulting tribes, only four participated in the field survey process and none were Sioux.¹⁹³

The NRC Staff, on the other hand, represents to the Board that it complied with both NEPA and the NHPA and that it made “a reasonable and good faith effort — an effort that lasted almost 4 years — to obtain information on religious and cultural resources that are significant to the tribes.”¹⁹⁴ The NRC Staff states that it “followed the joint guidance of the CEQ and the ACHP, the agencies charged with implementing NEPA and the NHPA, and the ACHP specifically

¹⁸⁸ Oglala Sioux Tribe Post-Hearing Initial Brief at 14.

¹⁸⁹ 16 U.S.C. § 470(a)(d)(6)(B).

¹⁹⁰ 36 C.F.R. § 800.2(c)(2)(ii)(C).

¹⁹¹ 36 C.F.R. § 800.2(c)(2)(ii)(A).

¹⁹² Oglala Sioux Tribe Statement of Position at 17.

¹⁹³ The four tribes were the Northern Arapaho (Wyoming), Northern Cheyenne (Montana), and Cheyenne and Arapaho of Oklahoma. Ex. NRC-018-B, Final Programmatic Agreement for Powertech (USA) Inc. Dewey-Burdock Project, Appendix A at 14 [hereinafter Programmatic Agreement Appendix, Ex. NRC-018-B].

¹⁹⁴ NRC Staff’s Post-Hearing Reply Brief at 5.

approved of the Staff's NHPA review."¹⁹⁵ As part of its "reasonable and good faith effort" the NRC Staff explains that it initially invited twenty tribes, including the Oglala Sioux Tribe, to participate in identification efforts and provided all interested tribes a reasonable opportunity to identify historic properties, advise on the identification and evaluation of such properties, comment on the undertaking, and participate in resolving potential adverse effects.¹⁹⁶ The NRC Staff contends that it conducted a comprehensive review of cultural, archeological, and tribal resources at the Dewey-Burdock site and that the Oglala Sioux Tribe had the same opportunity to participate in each phase of the NRC Staff's review as all consulting tribes.

The NRC Staff defends its FSEIS analysis by stating that it first took appropriate steps to identify cultural resources that may be affected by the project, and then responded to input from consulting tribes by facilitating field surveys of the Dewey-Burdock site so that tribes could identify any traditional cultural properties.¹⁹⁷ The NRC Staff also states that since initiating consultation in March 2010, it has held three face-to-face meetings, conducted three teleconferences, and exchanged many e-mails, letters, and telephone calls with tribal representatives. In addition, in April and May 2013, representatives from seven of the invited tribes conducted field surveys of the Dewey-Burdock site.¹⁹⁸ The NRC Staff concludes that it complied with NEPA by making repeated attempts to obtain information on cultural resources and by including mitigation measures in the Programmatic Agreement that will limit impacts to any unidentified resources.¹⁹⁹

Powertech, which paid the costs of the various cultural surveys, argues that the Augustana College Level III archeological survey satisfied all applicable regulatory guidelines and that the tribal field surveys, held in April and May 2013, allowed each tribe to evaluate the entire project area in a manner culturally appropriate for each tribe. Powertech also argues that the NRC Staff appropriately evaluated archeological and tribal survey results as required by NEPA and the NHPA,²⁰⁰ and that a phased approach to comply with the NHPA is allowed under federal regulations. Powertech asserts that the NRC Staff has met the applicable statutes' requirements, and that all tribes, including the Oglala Sioux Tribe, were

¹⁹⁵ *Id.*

¹⁹⁶ *Id.* at 7.

¹⁹⁷ Programmatic Agreement Appendix, Ex. NRC-018-B, at 16-21.

¹⁹⁸ Report on Tribal Cultural Surveys, Ex. NRC-019.

¹⁹⁹ Programmatic Agreement Appendix, Ex. NRC-018-B, at 13-24; *see also* Tribal Outreach Timeline, Ex. NRC-015 (listing Staff's efforts to obtain information for use in the Programmatic Agreement).

²⁰⁰ Powertech Initial Findings of Fact and Conclusions of Law at 45-47.

afforded an opportunity to participate in a field survey, but the Oglala Sioux Tribe chose not to participate.²⁰¹

6. Board Ruling

a. Contention 1A

To fulfill the agency's NEPA and NHPA responsibilities to protect and preserve cultural, religious, and historical sites important to the Native American tribal cultures in the Powertech project area, the NRC Staff must conduct a study or survey of tribal cultural resources before granting a license. Haimanot Yilma, NRC Staff witness and project manager for the Staff's environmental review of the Dewey-Burdock application, testified that "under NEPA, we're supposed to be looking at cultural resources. Historical property is a subset of cultural resources and so therefore any information that [is] provided under the NHPA historical properties [is] a subset of NEPA review. So we have to consider them under the NEPA review."²⁰²

As part of its application, Powertech submitted a Class III archeological survey of the Dewey-Burdock site.²⁰³ A Class III archeological survey involves a professionally conducted, pedestrian survey of an entire target area to identify properties that may be eligible for inclusion on the National Register of Historic Places.²⁰⁴ This on-the-ground survey describes the distribution of properties in an area; determines the number, location, and condition of properties; determines the types of properties actually present within the area; permits classification of individual properties; and records the physical extent of specific properties.²⁰⁵ A Class III survey, however, is not the same as a cultural resources survey or a traditional cultural properties survey. A Class III survey can satisfy the requirements of the NHPA and identify a property's eligibility to be added to the National Register of Historic Places.²⁰⁶ However, as the NRC Staff testified, a Class III survey "wouldn't necessarily identify all of the [Native American cultural and religious] resources primarily because some of the knowledge is not available to those conducting a Level 3 survey. That would be provided by the Native American groups themselves."²⁰⁷ The category of "cultural resources"

²⁰¹ *Id.* at 41-44.

²⁰² Tr. at 785.

²⁰³ Level III Cultural Resources Evaluation, Ex. APP-009.

²⁰⁴ *Montana Wilderness Association v. U.S. Department of Interior*, 725 F.3d 988, 1005-06 (2013) (citing BLM Manual 8110 (Release 8-73, Dec. 3, 2004)).

²⁰⁵ *Id.*

²⁰⁶ Tr. at 762.

²⁰⁷ Tr. at 762-63.

“covers a wider range of resources than ‘historic properties,’ such as sacred sites, archaeological sites not eligible for the National Register of Historic Places, and archaeological collections.”²⁰⁸

With respect to identifying historic properties, the NRC Staff has complied with the NHPA requirement to make a good faith and reasonable effort to identify properties that are eligible for inclusion in the National Register of Historic Places within the Dewey-Burdock ISL project area. The ACHP’s guidance states that a reasonable and good faith effort may consist of “one or more methodologies” of identifying historic properties,²⁰⁹ and the Staff used, to varying extents, four of the five methodologies specified in ACHP regulations: background research, consultation, field investigations, and field surveys.²¹⁰ The only methodology that the Staff did not use was oral history interviews.²¹¹ We find that these efforts satisfy the NHPA with respect to historic properties.

The more difficult question is whether the methodologies the NRC Staff employed to identify tribal cultural, religious, and historic resources satisfied the NHPA and the NEPA hard look.²¹² Although the NRC Staff points to the concurrence of the ACHP and the South Dakota State Historic Preservation Officer in the context of the NHPA § 106 investigation as evidence that NEPA’s hard look has been satisfied,²¹³ it does not follow that a review that satisfies the NHPA necessarily satisfies NEPA requirements to take a hard look at cultural resources affected by a project.²¹⁴ Although the NHPA and NEPA resemble each other in certain respects, compliance with the NHPA “does not relieve a federal

²⁰⁸ NEPA and NHPA Handbook, Ex. NRC-048, at 4.

²⁰⁹ Ex. NRC-047, Advisory Council on Historic Preservation, Meeting the “Reasonable and Good Faith” Identification Standard in Section 106 Review at 2 (Nov. 2011).

²¹⁰ Ex. NRC-001, NRC Staff’s Initial Testimony (June 20, 2014) at 5-9 [hereinafter NRC Staff’s Initial Testimony, Ex. NRC-001]; Ex. NRC-151, NRC Staff’s Rebuttal Testimony (July 15, 2014) at 7-8 [hereinafter NRC Staff’s Rebuttal Testimony, Ex. NRC-151].

²¹¹ NRC Staff’s Initial Testimony, Ex. NRC-001, at 8-9.

²¹² 42 U.S.C. § 4321 *et seq.*

²¹³ Ex. NRC-018-E, Programmatic Agreement, Advisory Council on Historic Preservation Signature Page (Apr. 7, 2014); Ex. NRC-031, Letter from Advisory Council on Historic Preservation to Standing Rock Sioux Tribe on Dewey-Burdock Project at 3; Ex. NRC-018-G, Programmatic Agreement, South Dakota State Historic Preservation Officer Signature Page.

²¹⁴ *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), LBP-05-26, 62 NRC 442, 472 (2005) (“Although an agency may coordinate and, where practicable, integrate its NEPA and NHPA review efforts, the two statutes impose separate and distinct obligations.”) (citation omitted); *see also Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Department of Interior*, 608 F.3d 592, 606, 610 (9th Cir. 2010) (concluding that an agency failed to take a hard look at cumulative impacts on cultural resources under NEPA even though the agency had satisfied its obligations under NHPA to consult with the tribe).

agency of the duty of complying with the [environmental] impact statement requirement ‘to the fullest extent possible.’”²¹⁵

The Commission’s regulations in 10 C.F.R. § 51.71(b) require the NRC Staff to include in an EIS “an analysis of significant problems and objections raised by . . . any affected Indian tribes and by other interested persons.”²¹⁶ For a variety of reasons,²¹⁷ the FSEIS in this proceeding does not contain an analysis of the impacts of the project on the cultural, historical, and religious sites of the Oglala Sioux Tribe and the majority of the other consulting Native American tribes.²¹⁸ The field surveys conducted in 2013 by members of seven tribes and the three sets of findings submitted do not satisfy this requirement.²¹⁹ Because the cultural, historical, and religious sites of the Oglala Sioux Tribe have not been adequately catalogued, the FSEIS does not include mitigation measures sufficient to protect this Native American tribe’s cultural, historical, and religious sites that may be affected by the Powertech project.

Accordingly, as to Contention 1A, the Board finds and concludes that the FSEIS has not adequately addressed the environmental effects of the Dewey-Burdock project on Native American cultural, religious, and historic resources. Without additional analysis as to how the Powertech project may affect the Sioux Tribes’ cultural, historical, and religious connections with the area, NEPA’s hard look requirement has not been satisfied, and potentially necessary mitigation measures have not been established. The NRC Staff did not give this issue its required hard look in the FSEIS, and therefore the Record of Decision is incomplete.

b. Contention 1B

With respect to Contention 1B, the NRC Staff/tribal consultation process broke down,²²⁰ and the vast majority of the consulting tribal parties, including the Oglala Sioux Tribe, did not participate in the field survey opportunity provided by the NRC Staff and Powertech. The consulting parties and the NRC Staff could agree

²¹⁵ *Preservation Coalition, Inc. v. Pierce*, 667 F.2d 851, 859 (9th Cir. 1982) (quoting 42 U.S.C. § 4332).

²¹⁶ The Oglala Sioux Tribe raised its cultural, historical, and religious problems and objections in a timely manner, and pursued these concerns throughout the NEPA process.

²¹⁷ Some of these reasons relate to difficulties encountered in the consultation efforts between the NRC Staff and the Native American Tribes, including the Oglala Sioux Tribe.

²¹⁸ NEPA compels agencies to take a hard look at “preserv[ing] important historic [and] cultural . . . aspects of our national heritage.” 42 U.S.C. § 4331(b)(4).

²¹⁹ While more comprehensive than the Powertech Class III survey because it included some tribal participation, the additional April 2013 survey done at the behest of the NRC Staff as part of the Staff’s efforts to comply with NHPA and NEPA did not contain any tribal ethnographic studies, oral histories, or a survey of sites of significance to the intervenor, the Oglala Sioux Tribe.

²²⁰ See *above*, Parts IV.A.3 and IV.A.5 of this Partial Initial Decision.

on neither the scope, techniques, or timing of the field surveys, nor alternatives to a field survey to address Native American cultural, religious, and historic concerns.

Even after a thorough review of the record in this case, the Board is not able to decide definitively which party or specific actions led to the impasse preventing an adequate tribal cultural survey. But the Board does take note that witnesses for the Intervenor,²²¹ the NRC Staff,²²² and Powertech²²³ all agreed that tribal representatives must prepare the cultural survey along with any archeological survey team.

The NRC Staff is at least partly at fault for the failed consultation process. For the past 5 years the Oglala Sioux Tribe has raised its concerns with the consultation process, and yet the NRC Staff has not held a single consultation session, on a government-to-government basis, solely with members of the Oglala Sioux Tribe. Instead, the NRC Staff has held three face-to-face sessions with multiple tribes concerning multiple ISL projects in both South Dakota and Nebraska.²²⁴ The three meetings cited by the NRC Staff as government-to-government consultations were large group meetings, with members of many diverse tribes, all with varying degrees of attachment to the Black Hills area of South Dakota.²²⁵ Though numerous letters were sent to the Oglala Sioux Tribe, as detailed above, quantity does not necessarily equate with meaningful or reasonable consultation, and “doesn’t in itself show the NHPA-required consultation occurred.”²²⁶ The Oglala Sioux Tribe has shown it has the most direct historical, cultural, and religious ties to the area.²²⁷ The Oglala Sioux Tribe’s Pine Ridge reservation is located approximately 50 miles from the project site.²²⁸ The Oglala Sioux Tribe is both a consulting party and an Intervenor in this proceeding. It is entitled to a meaningful, face-to-face, government-to-government consultation session with the NRC Staff regarding this specific project. To be sure, the Oglala Sioux Tribe does share some responsibility for the inadequacy of the FSEIS and the lack of meaningful consultation. While the Oglala Sioux Tribe argues that its input to the FSEIS

²²¹ Tr. at 764.

²²² Tr. at 757.

²²³ Tr. at 758.

²²⁴ Tr. at 825-30.

²²⁵ A large group meeting, run more as an information gathering session and less as a government-to-government consultation, is inconsistent with NRC Staff guidance “to encourage Tribes to participate in the NRC regulatory process.” Tribal Protocol Manual at 10; *see also* Tr. at 827-30.

²²⁶ *Quechan Tribe of Fort Yuma Indian Reservation v. U.S. Department of Interior*, 755 F. Supp. 2d 1104, 1118 (S.D. Cal. 2010).

²²⁷ Ex. OST-014, Declaration of Michael CatchesEnemy (Apr. 14, 2014); Ex. OST-015, Declaration of Wilmer Mesteth (Apr. 1, 2010); Ex. OST-017, Letter from Bryan Brewer, Sr., President of the Oglala Sioux Tribe, to Kevin Hsueh, NRC Environmental Review Branch Chief (Mar. 22, 2013).

²²⁸ FSEIS, NRC-008-A-1, Executive Summary at xlv.

is essential, some of its demands to engage with the NRC Staff were patently unreasonable.²²⁹

As to Contention 1B, the Board finds and concludes that the consultation process between the NRC Staff and the Oglala Sioux Tribe was inadequate.

c. Board Order on Contentions 1A and 1B

The FSEIS has not adequately addressed the environmental effects of the Dewey-Burdock project on Native American cultural, religious, and historic resources, and the required meaningful government-to-government consultation between the Oglala Sioux Tribe and the NRC Staff has not taken place. Because of these facts, procedures must be put in place to assure that the required NEPA hard look is taken, the NRC's Part 51 environmental regulations are satisfied, and an opportunity for meaningful consultation is provided.²³⁰

Though the license has already been issued, the land disturbance in the project area will proceed in stages,²³¹ and NEPA requires that agencies take a hard look at the environmental effects of actions even after a proposal has received initial approval.²³² Meaningful consultation between the NRC Staff and the Oglala Sioux Tribe may still be undertaken to identify and mitigate any potential harm to Sioux cultural, historical, or religious sites, even though the Programmatic Agreement has been finalized.²³³ We therefore conclude that additional consultation between the NRC Staff and the Oglala Sioux Tribe is necessary.²³⁴ This additional consultation is required in order (1) to satisfy the hard look at impacts required by NEPA and to supplement the FSEIS, if necessary; and (2) to satisfy the consultation requirements of the NHPA.

The NRC Staff can remedy this deficiency in the Record of Decision in this proceeding by promptly initiating a government-to-government consultation with

²²⁹ These demands, outlined at the evidentiary hearing, include the definition of elected governmental representation, Tr. at 781-82, 850-51, and the funds requested to collect tribal cultural information, Tr. at 807, 810.

²³⁰ NRC Staff guidance "supports meaningful consultation and collaboration with Tribal officials in the development of Federal policies that have Tribal implications [and] acknowledges the status of Tribes as domestic dependent sovereign nations." Tribal Protocol Manual at 9.

²³¹ Programmatic Agreement, Ex. NRC-018-A. "The NRC determined a phased process for compliance with Section 106 of the NHPA is appropriate for this undertaking, as specifically permitted under 36 CFR § 800.4(b)(2), such that completion of the evaluation of and determinations of effects on historic properties, and consultation concerning measures to avoid, minimize, or mitigate any adverse effects will be carried out in phases, as set forth in this Programmatic Agreement." *See id.* at 2.

²³² *Marsh*, 490 U.S. at 374.

²³³ The Programmatic Agreement is, by its terms, "a condition on the NRC License." Programmatic Agreement, Ex. NRC-018-A, at 4.

²³⁴ The Oglala Sioux Tribe is both an intervenor in this case as well as a consulting party.

the Oglala Sioux Tribe to identify any adverse effects to cultural, historic, or religious sites of significance to the Oglala Sioux Tribe that may be impacted by the Powertech Dewey-Burdock project. This would then allow the adoption of mitigation measures, as necessary. The FSEIS and Record of Decision in this case must be supplemented, if necessary, to include any cultural, historic, or religious sites identified and to discuss any mitigation measures necessary to avoid any adverse effects.

Finally, given our conclusion that the inadequate discussion of potential impacts to Sioux cultural, historical, or religious sites in the FSEIS or Record of Decision is a significant deficiency in the NRC Staff's NEPA review, this Board could require the immediate suspension of the issued materials license.²³⁵ However, the Board declines to do so because the Oglala Sioux Tribe bears some responsibility for lack of information on this issue, and did not participate in the April 2013 field survey effort.²³⁶ Instead, the Board will retain jurisdiction of this case pending the NRC Staff's curing of the deficiencies in Contentions 1A and 1B. The NRC Staff will submit a monthly status report to the Board on the first business day of every month beginning June 2015 describing the consultations with the Oglala Sioux Tribe and the process being made in identifying Sioux tribal cultural, historic, or religious sites impacted by the Powertech project.²³⁷ In the interim, if the Oglala Sioux Tribe can identify specific cultural, historic, or religious sites that are subject to immediate and irreparable harm by the Powertech project, they may, within 10 days of this Order, petition this Board for a stay of the license's effectiveness, as may be necessary to halt ground disturbing activities, with party responses to such a stay request due 10 days thereafter.²³⁸

²³⁵ *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 238 (2008) ("If the Board determines after full adjudication that the license amendment should not have been granted, it may be revoked (or conditioned).").

²³⁶ An opportunity is being provided for the Oglala Sioux Tribe and the NRC Staff to consult in a meaningful manner as the project moves forward. If the Oglala Sioux Tribe refuses to engage in a meaningful consultation or makes unreasonable demands as a precondition for its cooperation in identifying cultural, historic, or religious sites, such actions would be fundamentally unfair to the NRC Staff, Powertech, and incompatible with an orderly administrative process. All parties have an obligation to cooperate to resolve these contentions.

²³⁷ These status reports should take the same form as the status reports the NRC Staff submitted to this Board, per a Board Order, starting in 2010. Licensing Board Order (Prehearing Conference Call Summary and Initial Scheduling Order) (Oct. 4, 2010) at 6 (unpublished) ("So as to keep the Board, the parties, and the public abreast of any changes in this schedule, we hereby direct the NRC Staff to submit a monthly status report on November 1, 2010, to be updated on the first business day of each month thereafter.").

²³⁸ Licensing Board Order (Removing Temporary Stay and Denying Motions for Stay of Materials License Number SUA-1600) (May 20, 2014) at 2-4, 7-8 (unpublished).

B. Contention 2: The FSEIS Fails to Include Necessary Information for Adequate Determination of Baseline Groundwater Quality

1. Legal Standards

The NRC has issued numerous regulations and Staff guidance documents on groundwater quality standards at ISL facilities. Criterion 7 of 10 C.F.R. Part 40, Appendix A requires an applicant to establish “a preoperational monitoring program [that] must be conducted to provide complete baseline data on a milling site and its environs.” These criteria were developed for conventional uranium milling facilities, but have been applied, in at least limited fashion, to ISL facilities.²³⁹ In addition, background water quality data are used to establish existing hazardous constituent concentrations in an aquifer, which can then be used to set 10 C.F.R. Part 40, Appendix A, Criterion 5B(5) post-operational concentration limits. Both NUREG-1569²⁴⁰ and Regulatory Guide 4.14²⁴¹ also discuss environmental monitoring. Although this Board is not bound to follow Staff guidance documents, which do not have the binding force of statutes or regulations, a Board must provide sufficient justification if it chooses not to accept Staff guidance.²⁴² Notably, for the purposes of resolving this contention, neither “baseline” nor “background” is explicitly defined in 10 C.F.R. Part 40, Appendix A, Section 2.7.3 of NUREG-1569, or Regulatory Guide 4.14.

2. Parties’ Positions

In Contention 2,²⁴³ the Oglala Sioux Tribe alleges that:

the FSEIS violates 10 C.F.R. Part 40, Appendix A, Criterion 7, 10 C.F.R. §§ 51.10, 51.70 and 51.71, and the National Environmental Policy Act, and implementing regulations . . . in that it fails to provide an adequate baseline groundwater character-

²³⁹ *Hydro Res.*, CLI-99-22, 50 NRC at 8 (“While, as a general matter, Part 40 applies to ISL mining, some of the specific requirements in Part 40, such as many of those found in Appendix A, address hazards posed only by conventional uranium milling operations, and do not carry over to ISL mining.”).

²⁴⁰ Ex. NRC-013, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards, Standard Review Plan for In Situ Leach Uranium Extraction License Applications, NUREG-1569 (June 2003) [hereinafter NUREG-1569, Ex. NRC-013].

²⁴¹ Ex. NRC-074, Radiological Effluent and Environmental Monitoring at Uranium Mills, Regulatory Guide 4.14 (Rev. 1 Apr. 1980) [hereinafter Regulatory Guide 4.14, Ex. NRC-074]. From a regulatory standpoint, ISL facilities are considered uranium mills.

²⁴² *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-15-6, 81 NRC 340, 359 (2015) (finding Boards should accord “special weight” to Staff guidance).

²⁴³ LBP-14-5, 79 NRC at 401.

ization or demonstrate that ground water samples were collected in a scientifically defensible manner, using proper sample methodologies.²⁴⁴

Further, the Oglala Sioux Tribe contends that “while the FSEIS contains data from 2007-2009, the background water quality for use in the actual regulatory process [*e.g.*, Appendix A, Criterion 5B(5)] for the facility will be established [at] a future date, outside of the NEPA process, and outside of the public’s review.”²⁴⁵ The Oglala Sioux Tribe contends that this approach is a *prima facie* violation of the NEPA process.²⁴⁶

As support, the Oglala Sioux Tribe cites 10 C.F.R. Part 40, Appendix A, Criterion 7 which states that “regulations require the applicant to provide ‘*complete*’ baseline data on a milling site and its environs.”²⁴⁷ Further, the Oglala Sioux Tribe claims that NRC Regulatory Guide 4.14 is outdated and was not designed for ISL mining, and the NRC Staff’s reliance on this guidance “to designate the boundary for which groundwater monitoring will be required” is improper.²⁴⁸ The Oglala Sioux Tribe also notes the lack of analysis of past mining impacts in the project area.²⁴⁹

The NRC Staff and Powertech both acknowledge that Powertech will collect the additional background groundwater quality information necessary to satisfy Appendix A, Criterion 5B(5) post-license issuance but pre-operation. In fact, Powertech asserts that installing the wells needed to establish Criterion 5 background concentrations prior to license issuance would be a violation of the “Construction Rule” and therefore automatic grounds for denial of the license.²⁵⁰

The NRC Staff defends the baseline groundwater quality analysis performed in the FSEIS as adequate under NEPA.²⁵¹ The NRC Staff first offers the explanation that there is a distinction between the groundwater quality terms “baseline” and “background” as used in the FSEIS.²⁵² “Baseline” data are submitted to

²⁴⁴ Oglala Sioux Tribe Post-Hearing Initial Brief at 38.

²⁴⁵ *Id.*

²⁴⁶ Oglala Sioux Tribe Post-Hearing Initial Brief at 39.

²⁴⁷ Oglala Sioux Tribe Statement of Position at 21.

²⁴⁸ *Id.*

²⁴⁹ Oglala Sioux Tribe Post-Hearing Initial Brief at 39.

²⁵⁰ Powertech (USA), Inc. Initial Statement of Position (June 20, 2014) at 39 [hereinafter Powertech Statement of Position]. The “Construction Rule” in 10 C.F.R. § 40.32(e) prohibits commencement of construction prior to a NEPA determination.

²⁵¹ NRC Staff’s Initial Statement of Position (June 20, 2014) at 25 [hereinafter NRC Staff Statement of Position].

²⁵² NRC Staff’s Initial Testimony, Ex. NRC-001, at 30-31. We note, however, that neither “baseline” nor “background” is explicitly defined in the FSEIS. This contention might have been rendered moot, or at the very least more easily resolved, had the NRC Staff documents explicitly and clearly defined these important words.

the NRC under 10 C.F.R. § 51.45(b), and describe “the results of Powertech’s preoperational or baseline groundwater quality sampling program provid[ing] data on project-wide groundwater conditions.”²⁵³ “Background” data carry a separate meaning, and describe the groundwater quality in certain designated wells to “establish standards for aquifer restoration after uranium recovery is complete” but not to characterize the groundwater quality in the ISL environment generally.²⁵⁴ Background values must be established before beginning ISL uranium production “in accordance with Criterion 5B(5) in Appendix A.”²⁵⁵ Although baseline data must be submitted to the NRC in an application, the NRC Staff argues that background data need not be submitted as part of the initial application.²⁵⁶ The NRC Staff views obtaining background data as a monitoring requirement, and thus argues that “the EIS is sufficient as long as it adequately describes the process by which the monitoring data will be obtained.”²⁵⁷

The NRC Staff also rejects any claims that necessary information related to past activities was excluded from the NEPA review process. For example, the NRC Staff argues that it was unnecessary to account for past mining activity in its baseline groundwater quality data.²⁵⁸ The NRC Staff asserts that the purpose of baseline data is to describe the existing environmental conditions, including any impacts past mining had on the Dewey-Burdock site.²⁵⁹ The NRC Staff further asserts that the impact of past mining on the site (i.e., relative to “pre-baseline” conditions) is considered in the “cumulative impacts” section of the FSEIS, and is outside the scope of Contention 2.²⁶⁰ The NRC Staff also defends some groundwater chemical constituents lacking a reference in the FSEIS.²⁶¹ The NRC Staff states that all relevant environmental information was considered, as required by NEPA, but that NEPA does not also “require the Staff to repeat all this information in the FSEIS.”²⁶² The NRC Staff maintains that references to Powertech documents, which do analyze the chemical constituents not mentioned in the FSEIS, satisfies the “obligation to disclose relevant information.”²⁶³ Finally, the NRC

²⁵³ *Id.* at 30. Baseline data are later “used to evaluate future impacts on facility operations or accidental or unplanned releases.” *Id.* See also NRC Staff Statement of Position at 25.

²⁵⁴ NRC Staff’s Initial Testimony, Ex. NRC-001, at 31; see also NRC Staff Statement of Position at 26.

²⁵⁵ NRC Staff’s Initial Testimony, Ex. NRC-001, at 31.

²⁵⁶ NRC Staff Statement of Position at 26.

²⁵⁷ *Id.* at 26. The NRC Staff further asserts that it “describes this process in Condition 11.3 of Powertech’s license, thereby complying with NEPA.” *Id.*

²⁵⁸ *Id.* at 27.

²⁵⁹ *Id.*

²⁶⁰ *Id.* at 27-28.

²⁶¹ *Id.* at 29.

²⁶² *Id.*

²⁶³ *Id.*

Staff defends the methods used by Powertech to collect data as “consistent with Staff guidance” in Section 2.7.3 of NUREG-1569 and Regulatory Guide 4.14.²⁶⁴ The NRC Staff believes the guidance describes data collection methods which will sufficiently describe the environment and evaluate groundwater quality.²⁶⁵

Powertech concurs with the NRC Staff’s interpretation of the required “baseline” and “background” data and cites the process outlined in NUREG-1569:

Reviewers should keep in mind that the development and initial licensing of an in situ leach facility is not based on comprehensive information. This is because in situ leach facilities obtain enough information to *generally locate the ore body and understand the natural systems involved*. More detailed information is developed as each area is brought into production. . . . [R]eviewers should ensure that sufficient information is presented to reach only the conclusion necessary for initial licensing.²⁶⁶

Powertech also defends the use of NRC guidance documents in setting the specific groundwater sampling program.²⁶⁷

3. Summary of Key Evidence

In addition to the legal arguments in support of Contention 2, the Oglala Sioux Tribe also relies on the testimony of Robert Moran.²⁶⁸ Dr. Moran raised technical concerns relative to this contention due to (1) the lack of analysis of impacts of past mining activities on baseline groundwater quality; (2) the lack of detailed existing water quality information necessary to develop reliable and scientifically defensible baseline analysis; and (3) analytical results that rely solely on data provided by the project proponent to the exclusion of data available from external

²⁶⁴ *Id.* at 31.

²⁶⁵ *Id.* at 32.

²⁶⁶ Powertech Statement of Position at 39, quoting NUREG-1569, Ex. NRC-013, at 40 (emphasis added by Powertech).

²⁶⁷ *Id.* at 42-43.

²⁶⁸ Ex. OST-001, Opening Written Testimony of Dr. Robert E. Moran, Curriculum Vitae (June 20, 2014) at 29 [hereinafter Moran Testimony, Ex. OST-001].

Despite the Oglala Sioux Tribe and Consolidated Intervenor’s mention of Dr. Richard Abitz in their post-hearing briefs, we were unable to locate anything in the record from Dr. Abitz addressing the proposed Dewey-Burdock ISL facility. A letter from Dr. Abitz appears to address a site characterization plan for a proposed Powertech facility in Weld County, CO. Ex. INT-002, Geochemical Consulting Services LLC Comments on Powertech’s Proposed Baseline Plan (Oct. 31, 2009).

agencies.²⁶⁹ Much of Dr. Moran's written testimony was relatively general, and Dr. Moran acknowledged that his experience with ISL facility licensing was limited.²⁷⁰ Questioned at the evidentiary hearing on what specific detailed water quality information he alleged was missing, Dr. Moran mentioned data for the elements strontium and lithium.²⁷¹

Regarding the lack of analysis of the impacts of past mining activities, NRC Staff witnesses James Prikryl²⁷² and Thomas Lancaster²⁷³ testified regarding the NRC Staff's interpretation of preoperational baseline groundwater quality, which is assessed "so that corrective actions can be taken if adverse water quality conditions resulting from the proposed action are detected."²⁷⁴ Witnesses Mr. Prikryl and Mr. Lancaster further testified that "[u]nder regulations issued by the Council on Environmental Quality . . . the environmental impacts that result from past actions are assessed as 'cumulative effects'" [and that] the NRC Staff "appropriately discussed this information in the context of cumulative impacts, rather than in the context of preoperational water quality."²⁷⁵

Further, Powertech witness Errol Lawrence²⁷⁶ testified that a "comparison between historical and recent data sets provided in Sec. 2.7.3.2.2 of the revised [Technical Report] (Exhibit APP-015-B at 2-217 through 2-230b) shows very little variation in groundwater quality between the data sets" and that "table 2.7-40 (Exhibit APP-015-B at 2-223) provides a statistical comparison between the historical and recent data sets and shows that the concentrations of alkalinity, specific conductance, pH and total dissolved solids (TDS) are very similar" and "do not provide any indication of widespread groundwater quality degradation within or near the project area as a result of historical mining and exploration activities."²⁷⁷

In regards to a lack of detailed existing water quality information necessary to develop a reliable and scientifically defensible baseline analysis, NRC Staff witnesses Mr. Prikryl and Mr. Lancaster further testified that Powertech followed NUREG-1569, used sampling methods that were consistent with standard industry

²⁶⁹ Several items, like the "chemical compositions and volumes of all solid and liquid wastes" listed in support of Contention 2 of Dr. Moran's opening testimony are outside the scope of the admitted contention. Moran Testimony, Ex. OST-001, at 17.

²⁷⁰ Tr. at 1000-01.

²⁷¹ Tr. at 1007-08.

²⁷² Ex. NRC-006, James Prikryl Statement of Professional Qualifications.

²⁷³ Ex. NRC-005-R, Thomas R. Lancaster Revised Statement of Professional Qualifications.

²⁷⁴ NRC Staff's Initial Testimony, Ex. NRC-001 at 19.

²⁷⁵ *Id.* at 20.

²⁷⁶ Ex. APP-038, Errol Lawrence Curriculum Vitae.

²⁷⁷ Ex. APP-066, Answering Testimony of Errol Lawrence at 3 (July 15, 2014) [hereinafter Lawrence Answering Testimony, Ex. APP-066].

practice, and analyzed chemical constituents and parameters using appropriate Environmental Protection Agency (EPA) and American Society for Testing and Materials (ASTM) standard methods.”²⁷⁸

NRC Staff witnesses Mr. Prikryl and Mr. Lancaster also testified that the FSEIS data on quarterly groundwater samples from wells located within 2 kilometers (1.2 miles) of the site show that the preoperational baseline water quality meets Criterion 7 in 10 C.F.R. Part 40 Appendix A, and is adequate to assess how the Dewey-Burdock Project may affect groundwater quality.²⁷⁹

The NRC Staff witnesses Mr. Prikryl and Mr. Lancaster also testified that the approach of sampling within 2 kilometers of the site is consistent with NRC Regulatory Guide 4.14,²⁸⁰ which the NRC Staff developed because conventional mill “tailings areas” have the potential to be a source of contamination to groundwater. Mr. Prikryl and Mr. Lancaster further testified that the use of the 2-kilometer guideline was validated in NUREG/CR-6705, “Historical Case Analysis of Uranium Plume Attenuation.”²⁸¹ This report concluded that the average radiological plume dispersion at Uranium Mill Tailings Remedial Action sites is less than 2 kilometers.²⁸² However, the NRC Staff apparently did not consider that NUREG/CR-6705 specifically excludes ISL facilities from this 2-kilometer rule of thumb (“uranium plumes . . . [e]xceed roughly 2 km in length only in special cases *e.g.* where *in situ* leaching has been carried out”).²⁸³

However, NRC Staff witnesses Mr. Prikryl and Mr. Lancaster also testified that

the radius of 2 km [1.2 mi] from an ISR wellfield has been shown to be sufficient based on historical and current monitoring data from NRC licensed sites. There are no reported instances of contamination of any monitored private wells within or beyond 2 km of an ISR wellfield at any sites historically or currently licensed by the NRC (Ex. NRC-075).”²⁸⁴

²⁷⁸ NRC Staff’s Rebuttal Testimony, Ex. NRC-151, at 14-15.

²⁷⁹ NRC Staff’s Initial Testimony, Ex. NRC-001, at 30-31.

²⁸⁰ Regulatory Guide 4.14, Ex. NRC-074.

²⁸¹ Ex. NRC-076, Division of Regulatory Applications and Analysis, Office of Nuclear Regulatory Research, Historical Case Analysis of Uranium Plume Attenuation, NUREG/CR-6705 (July 20, 2014) [hereinafter NUREG/CR-6705, Ex. NRC-076].

²⁸² NRC Staff’s Initial Testimony, Ex. NRC-001 at 29.

²⁸³ NUREG/CR-6705, Ex. NRC-076, at 4.

²⁸⁴ NRC Staff’s Initial Testimony, Ex. NRC-001, at 29-30. We were unable to find a specific mention of a 2-kilometer radius in Exhibit NRC-075, Data on Groundwater Impacts at the Existing ISR Facilities.

4. Board Ruling

While we agree that the language of Appendix A regarding the relationship between Criterion 5 and 7 is ambiguous and that the terms “baseline” and “background” are not explicitly defined, we are bound by precedent. In *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 6 (2006) (citation omitted), the Commission affirmed that:

Waiting until after licensing (although before mining operations begin) to establish definitively the groundwater quality baselines and upper control limits is, as the Presiding Officer stated, “consistent with industry practice and NRC methodology,” given the sequential development of *in situ* leach well fields. The site-specific data to confirm proper baseline quality values, and confirm whether existing rock units provide adequate confinement cannot be collected until an *in situ* leach well field has been installed

Further, the Commission noted that “in this proceeding the Intervenors also have had the opportunity to litigate — and did litigate — whether the performance-based licensing complies with the Atomic Energy Act and National Environmental Policy Act (NEPA), and whether it accords undue discretion to the Licensee.”²⁸⁵

More recently, the Licensing Board in *Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-15-3, 81 NRC 65, 91-92 (2015) rejected a very similar contention by noting:

in light of the Commission’s *Hydro Resources* decision and the language of Appendix A, Criterion 7A, we are unable to discern a legal basis for concluding that the Appendix A, Criterion 7 prelicensing monitoring program for the purpose of establishing existing characterization values for certain site groundwater constituents must be coextensive with the Criterion 7A preoperational monitoring, license condition-based program intended to provide the information needed for setting Appendix A, Criterion 5B groundwater protection standards and UCLs.

In this case, the Intervenors did not challenge any specific license conditions, only that the use of license conditions to establish background concentrations after licensing violated NEPA. However, based on the previous review in *Hydro Resources*, and recognizing the similar interpretation in *Strata*, we conclude that collection of groundwater quality data in a staggered manner is not in and of itself a violation of NEPA.²⁸⁶

²⁸⁵ *Hydro Res.*, CLI-06-1, 63 NRC at 5.

²⁸⁶ Like our colleagues in *Strata*, we are also less convinced that anything in the “Construction Rule” would prohibit collection of any needed prelicense data.

Regarding the specific technical concerns of Dr. Moran, we find the testimony offered by NRC Staff witnesses Mr. Prikryl and Mr. Lancaster and Powertech witness Mr. Lawrence to be more detailed and more persuasive.

Finally, we turn to the Oglala Sioux Tribe's exhibits regarding an EPA Preliminary Assessment which are potentially relevant to Contention 2.²⁸⁷

On first inspection, the Preliminary Assessment's conclusion that the "lack of groundwater sampling data from near and upgradient of the Site limited availability of reliable background concentrations" appears dispositive of whether the FSEIS included the necessary information for adequate determination of baseline groundwater quality.²⁸⁸ However, in considering the different objectives of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) versus NRC and NEPA regulations, we conclude that background/baseline is being used in two fundamentally different contexts. Under CERCLA, determining the unimpacted natural (i.e., upgradient) background is important in assessing the impact of past mining activities on the current state of the environment at the site. Under NRC and NEPA regulations, the site's current baseline is important in assessing the potential future impacts (both cumulative and incremental) of the proposed ISL facility on the current state of the environment at the site. Accordingly, we find that the identification and documentation of the historic mining operations as documented in the FSEIS is adequate to assess the incremental and cumulative impacts of the proposed project.

As a result, we find for Powertech and the NRC Staff on Contention 2.

²⁸⁷ Ex. OST-025, Darrow/Freezeout/Triangle Uranium Mine, EPA, Preliminary Assessment Announcement (Sept. 2014) is an announcement that EPA Region 8 has completed a Preliminary Assessment of the abandoned uranium mines located within and adjacent to the proposed Dewey-Burdock ISL Project in response to a citizen's petition under the Comprehensive Environmental Response, Compensation, and Liability Act. According to the announcement, a Preliminary Assessment is "designed to distinguish, based on limited data, between sites that pose little or no threat to human health and the environment and sites that may pose a threat and require further investigation." *Id.* at 1. Ex. OST-026, Seagull Environmental Technologies, Inc., Preliminary Assessment Report Regarding the Darrow/Freezeout/Triangle Uranium Mine Site Near Edgemont, South Dakota at 35 (Sept. 24, 2014) [hereinafter Preliminary Assessment, Ex. OST-026] is the Preliminary Assessment report itself [hereinafter Preliminary Assessment]. Although the Oglala Sioux Tribe argued that Ex. OST-025, Darrow/Freezeout/Triangle Uranium Mine, EPA, Preliminary Assessment Announcement (Sept. 2014) and the Preliminary Assessment, Ex. OST-026, had relevance to Contentions 2, 3, 4, and 6, we saw little if anything in those exhibits relating to the ability of the site to contain ISL fluids (Contention 3), groundwater quantity (Contention 4), or mitigation measures (Contention 6).

²⁸⁸ Preliminary Assessment, Ex. OST-026, at 35.

C. Contention 3: The FSEIS Fails to Include Adequate Hydrogeological Information to Demonstrate the Ability to Contain Fluid Migration and Assess Potential Impacts to Groundwater

1. Legal Standards

In this Partial Initial Decision the Board reviews the NRC Staff's FSEIS under the NEPA hard look standard.²⁸⁹

2. Parties' Positions

In Contention 3²⁹⁰ the Oglala Sioux Tribe argues that the Dewey-Burdock site contains numerous geological and man-made features such as interfingering sediments, unplugged boreholes, breccia pipes/collapse structures, and faults and fractures that will permit unwanted groundwater migration.²⁹¹ Given these features, the Oglala Sioux Tribe and Consolidated Intervenors also argue that deferring collection of necessary data to confirm the ability of the site to contain production fluids violates NEPA.²⁹²

The NRC Staff argues that the evidence does not indicate the presence of faults, fractures, breccia pipes, and related features at the Dewey-Burdock site.²⁹³ While the NRC Staff acknowledges that there are a number of improperly plugged or abandoned boreholes at the Dewey-Burdock site, they also argue that as a condition of its license Powertech must address these boreholes before beginning operations. Finally, the NRC Staff argues that although Powertech's license includes conditions requiring that it submit additional data on hydrogeological confinement before beginning operations in any wellfield, these conditions are consistent with NEPA, NRC regulations, and NRC guidance.²⁹⁴

Similarly, Powertech presented testimony and exhibits in support of its position that the ore-bearing formations at the Dewey-Burdock site are sufficiently hydrogeologically isolated to allow ISL operations to be conducted safely.

3. Summary of Key Evidence

The technical issue at the heart of Contention 3 is Intervenors' assertion that Powertech's conceptual model, which was adopted by the NRC Staff in the

²⁸⁹ This standard is fully explained above in Part II.B of this Partial Initial Decision.

²⁹⁰ LBP-14-5, 79 NRC at 401.

²⁹¹ Oglala Sioux Tribe Post-Hearing Initial Brief at 45-46.

²⁹² *Id.*

²⁹³ NRC Staff's Post-Hearing Reply Brief at 26.

²⁹⁴ *Id.*

FSEIS, fails to account for natural and man-made hydraulic conductivity that makes it unlikely process waters can be contained within the mined formations.²⁹⁵ Potential groundwater flow pathways enumerated by the Oglala Sioux Tribe's witness Robert Moran include (a) interfingering fluvial sediments, (b) fractures and faults, (c) breccia pipes and collapse structures, and (d) historical boreholes.²⁹⁶ Consolidated Intervenor's rely upon the testimony of Hannan LaGarry.²⁹⁷ Powertech witnesses Hal Demuth,²⁹⁸ Errol Lawrence, and Frank Lichnovsky²⁹⁹ and NRC Staff witnesses James Prikryl, Thomas Lancaster, Paul Bertetti,³⁰⁰ and Ronald McGinnis³⁰¹ provided testimony in support of hydrological confinement.

Because of the multiple potential fluid migration pathways raised by the Intervenor's, we divide our analysis into general issues relating to fluid confinement (including interfingering sediments) and specific technical issues associated with faults, fractures and joints, breccia pipes, and boreholes. We address in turn each potential hydrological pathway, the evidence in the record as to each potential pathway, and conclude with our decision as to the sufficiency of the analysis of the potential for fluid migration.

a. General Issues

Intervenor's assert that the physical nature of fluvial sandstones that host roll-front uranium deposits like those at the Dewey-Burdock site makes confinement nearly impossible because these formations typically interfinger with finer-grained silts and shales, allowing groundwater to flow between the different stratigraphic horizons.³⁰² Intervenor's further maintain that a series of pumping tests conducted in 1979 and 2008 demonstrate that groundwater is not confined in the ore zone and that there is leakage between the various formations bounding the ore bodies. Dr. Moran, citing an analysis of the 1979 tests in the Dewey-Burdock area,³⁰³ notes that the authors of that study concluded the Fuson Shale is inherently leaky owing to "the primary pore space and naturally occurring joints and fractures" as well as

²⁹⁵ Oglala Sioux Tribe Petition, Ex. OST-010, at 22.

²⁹⁶ Moran Testimony, Ex. OST-001, at 20.

²⁹⁷ Ex. INT-004, Hannan E. LaGarry Curriculum Vitae.

²⁹⁸ Ex. APP-014, Hal P. Demuth Curriculum Vitae.

²⁹⁹ Ex. APP-073, Frank Lichnovsky Curriculum Vitae.

³⁰⁰ Ex. NRC-159, F. Paul Bertetti Curriculum Vitae.

³⁰¹ Ex. NRC-160, Ronald N. McGinnis, Jr. Curriculum Vitae.

³⁰² Oglala Sioux Tribe Petition, Ex. OST-010, at 23.

³⁰³ Ex. OST-006, Tennessee Valley Authority Analysis of Aquifer Tests Conducted at the Proposed Burdock Uranium Mine Site Burdock, South Dakota (Sept. 2012) [hereinafter TVA Aquifer Analysis, Ex. OST-006].

unplugged boreholes.³⁰⁴ Dr. Moran rejects Powertech's assertion both that natural geologic features such as faults and breccia pipes play no role in transmitting water through the Fuson Shale and that the drawdown observed in the Fall River Formation during recent pumping tests was entirely attributable to improperly abandoned boreholes.³⁰⁵ Dr. Moran also testified that the 2012 numerical models prepared by Petrotek (a consultant for Powertech) for the Dewey-Burdock site are unreliable because they are based on several improper simplifications and assumptions, the most significant of which is that the Fuson Shale is an effective aquitard.³⁰⁶

Dr. LaGarry contends (a) that groundwater in the Fall River and Chilson aquifers exists under artesian conditions, which he asserts will increase the likelihood that production waters could migrate vertically into adjacent aquifers or flow onto the surface, and (b) horizontal groundwater velocities of up to 35.5 meters per day for groundwater within the uranium-bearing strata could result in the rapid migration of contaminants outside the controlled area.³⁰⁷

Powertech and the NRC Staff witnesses maintain that the ore-bearing formations at the Dewey-Burdock site are sufficiently hydrogeologically isolated to allow ISL operations to be conducted safely. Powertech witness Mr. Demuth testified that the ore-bearing formations are confined above by the Graneros Group and below by thick shale horizons in the Morrison Formation. Mr. Demuth maintains that the 20- to 80-foot-thick Fuson Shale separating the two ore-bearing units in the Inyan Kara Group is an effective barrier to fluid migration.³⁰⁸ Powertech witness Mr. Lawrence testified that the lower-permeability siltstones and mudstones that typically interfinger with sandstones in these deposits actually help control water flow and contribute to the hydrologic isolation of the ore-bearing sands.³⁰⁹ Powertech witness Mr. Lichnovsky testified that analysis of geophysical logs for more than 3000 boreholes indicates the Fuson Shale is continuous and no less than 20 feet thick throughout the project area.³¹⁰

Powertech witness Mr. Lawrence reviewed the 1979 aquifer tests cited by Dr. Moran and concluded that the leaks it found were most likely caused by

³⁰⁴ Moran Testimony, Ex. OST-001, at 19 (emphasis omitted).

³⁰⁵ *Id.* at 24-25.

³⁰⁶ *Id.* at 23-26.

³⁰⁷ Ex. INT-020A, Expert Opinion Regarding the Proposed Dewey-Burdock Project ISL Mine near Edgemont, South Dakota at 3-4 (Aug. 19, 2014).

³⁰⁸ Ex. APP-013, Written Testimony of Hal Demuth at 14 (June 20, 2014) [hereinafter Demuth Testimony, Ex. APP-013].

³⁰⁹ Ex. APP-037, Written Testimony of Errol Lawrence at 20 (June 20, 2014) [hereinafter Lawrence Testimony, Ex. APP-037].

³¹⁰ Ex. APP-072, Answering Testimony Regarding NRC Staff's Analysis of TVA Well Log Data (Oct. 24, 2014) at 3.

open boreholes completed in both the Chilson and Fall River aquifers.³¹¹ Mr. Lawrence testified that the 2008 pumping test focused in the Chilson sandstones caused a 91-foot drawdown in that aquifer but produced only a 1-foot drawdown response in the overlying Fall River aquifer, which he maintains is consistent with leakage through unplugged boreholes.³¹² Powertech witness Mr. Demuth testified that the Fuson Shale is an effective hydraulic barrier in the absence of open boreholes. As support for this conclusion, he testified that the potentiometric surfaces (water level elevations) in paired wells completed in the Fall River and Chilson aquifers differ by as much as 40 feet whereas if the two aquifers were hydraulically connected these surfaces would be at approximately the same elevation.³¹³ Mr. Demuth also cited a U.S. Geological Survey study of the quality of groundwater in different aquifers in and around the Dewey-Burdock site³¹⁴ that he maintained further supports the conclusion that no significant transfer of water has occurred across the confining units between aquifers.³¹⁵ While admitting that uncertainties remain whether the Fuson Shale can function as a confining horizon throughout the entire Dewey-Burdock project area, Mr. Demuth emphasized that in the Burdock area, where production is located in the Chilson member, license conditions will require Powertech to place monitoring wells in the overlying Fall River aquifer to identify any lack of confinement.³¹⁶

Regarding the question of artesian flow in the ore-bearing aquifers, both Powertech and the NRC Staff acknowledge that the Fall River and Chilson members host artesian aquifers in the project area. However, Powertech contends that this condition does not signify that either aquifer is in communication with overlying or underlying aquifers, but instead indicates they are hydraulically confined.³¹⁷ The NRC Staff testified that artesian flow concerns were addressed by including a license condition whereby Powertech must monitor twice monthly for excursions at the surface and thereby “limit the environmental impact of any excursion associated with artesian flow.”³¹⁸ Dr. LaGarry asserted that horizontal groundwater velocity in the ore-zone aquifer could be as much as 35.5 meters

³¹¹ Lawrence Testimony, Ex. APP-037, at 35.

³¹² *Id.*

³¹³ Demuth Testimony, Ex. APP-013, at 15.

³¹⁴ Ex. APP-026, Raymond H. Johnson, Presentation to EPA, USGS Research at the Proposed Dewey-Burdock Uranium In-Situ Recovery Mine, Edgemont, South Dakota (Feb. 22, 2012).

³¹⁵ Demuth Testimony, Ex. APP-013, at 16.

³¹⁶ *Id.* at 29.

³¹⁷ Ex. APP-074, Answering Testimony Regarding Dr. LaGarry’s Analysis of Borehole Log Data (Dec. 4, 2014) at 7 [hereinafter Borehole Log Data Answering Testimony, Ex. APP-074].

³¹⁸ Ex. NRC-175, NRC Staff’s Answering Testimony at 6-7 (Dec. 9, 2014) [hereinafter NRC Staff’s Answering Testimony, Ex. NRC-175].

per day.³¹⁹ Powertech witness Mr. Lawrence stated this velocity was calculated incorrectly, and that based on his “experience working with over a dozen permitted ISR facilities, groundwater flow velocities on the order of 10 feet per year are typical for ISR facilities.”³²⁰ Further, he cited a U.S. Geological Survey estimate of the horizontal flow velocity in the Chilson aquifer to be 4.34 meters per year, which he testified is of similar magnitude to Powertech’s estimate and consistent with typical natural flow velocities at ISL facilities.³²¹

b. Faults, Fractures, and Joints

Intervenors assert it is unlikely that production fluids can be contained within the ore zone aquifers because faults and joints in the project area create vertical permeability pathways between aquifers.³²² In response to Powertech’s claims that there are no identified faults in the Dewey-Burdock project area,³²³ Consolidated Intervenors’ witness Dr. LaGarry explained that the Dewey Fault, which is only 1 mile northwest of the Dewey-Burdock property, is only the most prominent expression of a structural zone that contains numerous ancillary faults and joints that are likely to extend onto the site.³²⁴ Dr. LaGarry further noted³²⁵ that the Tennessee Valley Authority’s (TVA) 1979 Draft Environmental Statement for a property that overlaps part of the present Dewey-Burdock site specifically mentions faults and fractures associated with the Dewey Fault,³²⁶ and cites twelve examples in which faults are mentioned or otherwise indicated in the written notes on drillers’ logs prepared during TVA’s evaluation of the Dewey-Burdock deposits in the late 1970s.³²⁷ Dr. Moran asserted that satellite imagery of the Dewey-Burdock area shows that the site is intersected by numerous faults and fractures.³²⁸ In response to Board questions about whether geophysical well logs

³¹⁹ Ex. INT-013, Opening Written Testimony of Dr. Hannon [sic] LaGarry at 6 (June 20, 2014).

³²⁰ Lawrence Answering Testimony, Ex. APP-066, at 11.

³²¹ Ex. APP-041, Raymond H. Johnson, Presentation to EPA, Using Groundwater and Solid-Phase Geochemistry for Reactive Transport Modeling at the Proposed Dewey-Burdock Uranium In-Situ Recovery Site, Edgemont, South Dakota at 36 (Apr. 11, 2012).

³²² Oglala Sioux Tribe Petition, Ex. OST-010, at 23.

³²³ Ex. APP-015-B, Powertech, Dewey-Burdock Project Application for NRC Uranium Recovery License, Technical Report § 2.6.2.1 (Rev. Dec. 2013).

³²⁴ Tr. at 1065.

³²⁵ Tr. at 1073.

³²⁶ Ex. OST-009, Tennessee Valley Authority Draft Environmental Statement, Edgemont Uranium Mine at 60 (Aug. 30, 1978) [hereinafter TVA Draft Environmental Statement, Ex. OST-009].

³²⁷ Ex. OST-029, Written Supplemental Testimony of Dr. Hannan LaGarry at 2 (Nov. 21, 2014) [hereinafter LaGarry Supplemental Testimony, Ex. OST-029].

³²⁸ Moran Testimony, Ex. OST-001, at 21; Ex. OST-005, Robert E. Moran, Powerpoint Presentation at 29 (Aug. 19, 2014) [hereinafter Moran Presentation, Ex. OST-005]; Tr. at 1078.

would reveal the presence of faults, Dr. LaGarry explained that small faults with only a few meters of offset are commonly overlooked but could be detected by careful examination of electrical resistivity logs if the spacing of the boreholes were close enough.³²⁹ Finally, Dr. LaGarry asserted that even if pumping tests show that faults and fractures do not presently act as conduits for groundwater, the use of oxidizing lixiviant during mining could dissolve minerals that had been deposited along fault surfaces and “uncork” these pathways between aquifers.³³⁰

Powertech and NRC Staff witnesses maintain that no faults have been identified within the Dewey-Burdock permit area³³¹ but that, if undetected faults or joints are present on the site, they would not significantly affect the hydrogeology.³³² Many of these witnesses relied heavily on the geologic cross sections or “fence diagrams” developed from electrical resistivity logs of boreholes (e-logs) to demonstrate that faults have not caused significant offsets in the distinctive stratigraphic horizons.³³³ In particular, the NRC Staff reviewed e-logs from closely spaced drill holes that transect the lineaments that Dr. Moran interpreted as faults.³³⁴ Based on fence diagrams constructed using these logs,³³⁵ the NRC Staff concluded that the subsurface strata do not show evidence of faulting.³³⁶ In response to Dr. LaGarry’s analysis of notes on drillers’ logs purporting to contain twelve references to faults present on the project site, witnesses for both Powertech and NRC Staff asserted that whereas geophysical well logs provide objective data that can be examined and interpreted by experts, drillers’ comments recorded at the time the boreholes were constructed are subjective observations by persons whose qualifications are unknown.³³⁷ Powertech further asserted that references to “offsets” in drillers’ remarks on two of Intervenor’s exhibits³³⁸ were incorrectly interpreted by Dr. LaGarry as referring to faults, whereas the term used in these drillers’ notes refers to the location of the drill hole.³³⁹ In addition, Powertech investigated the site

³²⁹ Tr. at 1075.

³³⁰ Tr. at 1084.

³³¹ FSEIS, Ex. NRC-008-A-1, § 3.4.3.

³³² Lawrence Answering Testimony, Ex. APP-066, at 6.

³³³ Lawrence Testimony, Ex. APP-037, at 20; NRC Staff’s Rebuttal Testimony, Ex. NRC-151, at 20; Tr. at 1107.

³³⁴ Moran Presentation, Ex. OST-005, at 29.

³³⁵ Ex. NRC-168, Transect 1 — Fence Diagram of Drill Hole Resistivity Logs (Oct. 14, 2014) [hereinafter Transect 1, Ex. NRC-168]; Ex. NRC-169, Transect 2 — Fence Diagram of Drill Hole Resistivity Logs (Oct. 14, 2014) [hereinafter Transect 2, Ex. NRC-169].

³³⁶ Ex. NRC-158, Supplemental Testimony Regarding NRC Staff’s Analysis of TVA Well Log Data (Oct. 14, 2014) at 12 [hereinafter NRC Staff Well Log Data Supplemental Testimony, Ex. NRC-158].

³³⁷ Borehole Log Data Answering Testimony, Ex. APP-074, at 3; NRC Staff’s Answering Testimony, Ex. NRC-175, at 14.

³³⁸ Ex. OST-034, DS392 Driller Remarks; Ex. OST-036, IHM32 Driller Remarks.

³³⁹ Borehole Log Data Answering Testimony, Ex. APP-074, at 13-14.

of historical drill hole IHK2, where drillers' remarks indicated the presence of an east-west trending fault zone, by conducting a field check of the site and by constructing two cross sections based on e-logs of closely spaced drill holes. In Powertech's estimation, neither indicated the presence of a fault.³⁴⁰

c. Breccia Pipes

Intervenors contend that the presence of natural breccia pipe formations in the Dewey-Burdock area create additional vertical permeability pathways between aquifers.³⁴¹ Dr. Moran specifically cited the 1974 geological report by Gott et al.³⁴² as support for his assertion that breccia pipes and collapse structures occur near the Dewey-Burdock project area.³⁴³ Dr. Moran further stated that circular features visible on satellite imagery of the project site "likely represent solution/collapse structures," and he indicated the outline of one of these features on a satellite image.³⁴⁴ Additional testimony by Dr. LaGarry³⁴⁵ maintained that drillers' notes from the 1970s TVA project document a sinkhole on the Dewey-Burdock site associated with two closely spaced faults.³⁴⁶

Powertech witness Mr. Lawrence responded by noting that concerns about collapse structures on the Dewey-Burdock site were specifically addressed by a numerical model that simulated the potentiometric groundwater surface that would result from discharge of groundwater into the Chilson Member via a hypothetical breccia pipe.³⁴⁷ Referring to the results of the numerical model,³⁴⁸ he stated that the effect on the aquifer surface would be readily discernible with the current monitor well network but that no such recharge mound has been detected. Regarding the purported collapse feature identified by Dr. Moran on satellite images, Powertech geologist Mr. Lichnovsky testified that he field-checked the specific site and determined that the feature was an open depression caused by erosion and was not a sinkhole.³⁴⁹ In addition, the NRC Staff conducted an analysis

³⁴⁰ *Id.* at 14.

³⁴¹ Moran Testimony, Ex. OST-001, at 21-22.

³⁴² Ex. NRC-081, Garland B. Gott, Don E. Wolcott & C. Golbert Bowles, *Stratigraphy of the Inyan Kara Group and Localization of Uranium Deposits, Southern Black Hills, South Dakota and Wyoming*, Geological Survey Professional Paper 763 (1974).

³⁴³ Moran Testimony, Ex. OST-001, at 22.

³⁴⁴ *Id.* at 22; Moran Presentation, Ex. OST-005, at 13.

³⁴⁵ LaGarry Supplemental Testimony, Ex. OST-029, at 3.

³⁴⁶ Ex. OST-033, DS178 Driller Remarks.

³⁴⁷ Lawrence Answering Testimony, Ex. APP-066, at 6.

³⁴⁸ Ex. APP-025, Petrotek, *Numerical Modeling of Hydrogeologic Conditions, Dewey-Burdock Project South Dakota* at 26 (Feb. 2012).

³⁴⁹ Tr. at 1126.

of e-logs for five drill holes in the vicinity of the circular feature identified by Dr. Moran and reported that neither the land surface profile nor the stratigraphic horizons showed evidence of a sinkhole-like structure or any discontinuity that might result from brecciation.³⁵⁰ Finally, in response to Dr. LaGarry's assertion that a sketch drawn on the back of a driller's lithologic log depicts a sinkhole and two parallel faults, Powertech witness Mr. Lichnovsky noted that the sketch is unlabeled and that the hash marks on the circular feature point outward, indicating a dome, rather than inward, which would be the usual way to indicate a circular depression.³⁵¹

d. Historical Boreholes

Intervenors first note that the NRC Staff and Powertech acknowledge that unplugged or improperly abandoned historical boreholes occur on the Dewey-Burdock project site. Intervenors then contend that leaky boreholes can provide pathways for waters to mix between the mineralized zones and the surrounding aquifers.³⁵² Based on a review of drillers' comments on logs of historical TVA boreholes, Dr. LaGarry cited specific examples of old boreholes that were uncased, displayed artesian water, or had been plugged with wood fence posts or broken steel, asserting that these examples indicate open drill holes that could potentially serve as fluid pathways.³⁵³ Dr. Moran disputed the NRC Staff's and Powertech's assertion that leaking boreholes would necessarily produce wet areas detectable by satellite color infrared imagery (CIR). Dr. Moran also noted that old boreholes can connect water-bearing units without producing flowing water.³⁵⁴ In addition, Intervenors objected to the NRC Staff's acceptance of Powertech's plan to locate and plug historical boreholes at some later date. Instead, Intervenors maintained that the FSEIS must discuss how old boreholes will be identified and must explain the methodology that will be used to assess the effectiveness of plugging and abandonment.³⁵⁵

Powertech witness Mr. Lawrence responded that historical drill holes that penetrate to uranium-bearing horizons in the Inyan Kara Group would have to pass through at least 500 feet of bentonitic shale in the overlying Graneros Group and that collapse and swelling of these shales would self-seal the holes.³⁵⁶ Mr. Lawrence asserted that this self-sealing process occurs so rapidly in uncased

³⁵⁰ NRC Staff Well Log Data Supplemental Testimony, Ex. NRC-158, at 17.

³⁵¹ Borehole Log Data Answering Testimony, Ex. APP-074, at 12.

³⁵² Moran Testimony, Ex. OST-001, at 19.

³⁵³ LaGarry Supplemental Testimony, Ex. OST-029, at 3.

³⁵⁴ Moran Testimony, Ex. OST-001, at 20.

³⁵⁵ Oglala Sioux Tribe Statement of Position at 33.

³⁵⁶ Lawrence Testimony, Ex. APP-037, at 26.

holes that it is often difficult to perform geophysical logging immediately after drilling.³⁵⁷ As to whether large numbers of historical boreholes remain unplugged or were improperly abandoned, Mr. Lawrence responded that TVA and Powertech exploration holes were plugged with bentonite or cement grout in accordance with South Dakota state requirements that were in effect at the time these holes were drilled.³⁵⁸ In response to Dr. LaGarry's interpretation of comments on driller's logs, Powertech witnesses maintained that (a) exploration boreholes are almost never cased and a notation to that effect is not relevant to whether or not the hole in question was adequately abandoned; (b) the Fall River and Chilson aquifers are indeed artesian at some locations on the site, but instead of indicating open communication with other aquifers, artesian conditions demonstrate these aquifers are confined; and (c) wooden fence posts are commonly inserted in previously plugged boreholes to mark their locations, and references to "broken steel" likely refer to drill pipe lost during construction of the borehole, and neither is relevant to whether or not the hole was properly plugged.³⁵⁹

With regard to the use of infrared imagery to detect leaking boreholes, Powertech and NRC Staff witnesses referred to a 2010 Powertech Technical Report RAI Response³⁶⁰ that explains that CIR imagery detects anomalous areas of vegetation which, in the semi-arid Dewey-Burdock region, may indicate groundwater discharge at or near the surface. Powertech attributed the anomalous CIR signature in the southwest corner of the Burdock portion of the project area, known as "alkali flats," to improperly plugged boreholes, and asserted that if old boreholes caused similar discharges elsewhere on the site, they would have been readily detectable.³⁶¹ Powertech witnesses responded to Intervenor's assertion that the FSEIS lacks a discussion of how old boreholes will be located and abandoned by stating that existing historical records show the survey coordinates of old boreholes and that South Dakota regulations require that boreholes be plugged with bentonite or cement grout.³⁶² Specifically, Powertech witness Mr. Lichnovsky states that "the FSEIS describes Powertech's commitment to follow South Dakota regulations for plugging exploration holes and wells."³⁶³

³⁵⁷ *Id.*

³⁵⁸ *Id.* at 25.

³⁵⁹ Borehole Log Data Answering Testimony, Ex. APP-074, at 4-11.

³⁶⁰ Ex. APP-016-C, Powertech, Revised Responses to [Technical Report] RAIs Dated May 28, 2010 at 201-10 (June 2011).

³⁶¹ *Id.*

³⁶² Borehole Log Data Answering Testimony, Ex. APP-074, at 5.

³⁶³ *Id.* at 10 (citing FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.5.2).

4. Board Ruling

Because of the number of issues involved in this Contention, we set forth our conclusions separately on each specific technical issue related to fluid confinement.

a. General Confinement of the Overall Ore Zone

According to the FSEIS, the geologic confinement required for an ISL license is provided in the Dewey-Burdock area by the Morrison Formation below the ore-bearing units and the three formations of the Graneros Group above those units.³⁶⁴ Aside from a statement questioning whether testing has been adequate to demonstrate the confining ability of the Morrison Formation, Intervenor offered little evidence relating specifically to these stratigraphic units.³⁶⁵ Powertech witness Mr. Lawrence testified that pumping tests in the Chilson showed no response in the Unkpapa aquifer (below the Morrison Formation), which he maintained supported “a no-flow boundary for the Morrison Formation for modeling purposes.”³⁶⁶ Powertech witness Mr. Demuth, citing the FSEIS and license application, noted that the overlying Graneros Group is up to 550 feet thick and is present across the project area, except where eroded in the eastern edge of the site. In contrast, the Intervenor offered very little evidence to support their claim that the Graneros Group and Morrison Formation were not effective aquitards. Accordingly, we conclude the NRC Staff has given the confinement of the overall ore zone a hard look and agree with the conclusion in the FSEIS that the general confinement requirement for the Dewey-Burdock project has been met.

b. Continuity and Thickness of Fuson Shale

The FSEIS concludes that the continuous thickness of the Fuson Shale is based on the well logs of thousands of drill holes; representative examples of which indicate that the Fuson Shale can be clearly identified by its e-log signature. Intervenor’s witnesses had access to these logs, but did not use them to challenge the continuity and thickness of the Fuson Shale. Accordingly, we conclude that Powertech has adequately shown that the Fuson Shale is continuous and has a minimum thickness of 20 feet, as indicated in the cross sections.

³⁶⁴ FSEIS, Ex. NRC-008-A-1, § 3.4.1.

³⁶⁵ Moran Testimony, Ex. OST-001, at 27.

³⁶⁶ Lawrence Answering Testimony, Ex. APP-066, at 10.

c. Leakage Shown by Pumping Tests

The question whether the NRC Staff's and Powertech's witnesses were justified in the conclusion that boreholes were the only cause for leakage through the Fuson Shale (indicated by pumping tests) is not fully answerable without discussing faulting and collapse structures. These are discussed below. Powertech and the NRC Staff witness testimony about differences in the potentiometric surfaces in paired wells in the Chilson and Fall River aquifers is compelling evidence that these aquifers are not freely connected by natural pathways. Further, that boreholes are known to exist in the vicinity of the test wells and reports of the earlier TVA pump tests both point to unplugged boreholes as the most likely cause of leakage. This indicates that, in the absence of compelling evidence for natural connectivity, we find the assumption that boreholes caused the leakage to be reasonable.

d. Rapid Groundwater Flow

Regarding the question of rapid horizontal flow, Powertech witness Mr. Lawrence testified that the average groundwater velocity in the Fall River and Chilson aquifers is approximately 6 to 7 feet per year (1.8 to 2.1 meters per year), which was consistent with the U.S. Geological Survey's independent estimate.³⁶⁷ Intervenor witness Dr. LaGarry in contrast alleged the groundwater velocity in the ore zone was 35.5 meters per day. The Board was unable to find any support for Dr. LaGarry's claim. Accordingly, we concur with Mr. Demuth's analysis that Dr. LaGarry's groundwater velocity estimates are not supported by the record.

e. Faults, Fractures, and Joints

The Intervenor asserts that faults and joints provide significant pathways for groundwater to migrate between aquifers. This is not simply a question of whether faults and joints are present, but rather whether they are large and open enough to produce a substantial breach in the confining layers, particularly in the Fuson Shale. The reports focusing on the TVA project in the Dewey-Burdock area are unequivocal in stating that faults and joints are present on the site.³⁶⁸ Moreover, as correctly pointed out by Powertech and NRC Staff witnesses, although most of the drillers' notes presented as evidence by Intervenor are subject to interpretation, the driller's remark for drill hole TRR17 giving a specific description of a

³⁶⁷ Lawrence Answering Testimony, Ex. APP-066, at 11.

³⁶⁸ TVA Aquifer Analysis, Ex. OST-006, at 31; TVA Draft Environmental Statement, Ex. OST-009, at 50.

fault exposed in the wall of a mine pit seems credible.³⁶⁹ On the other hand, none of the analyses of borehole logs performed by witnesses for Powertech, the NRC Staff, or the Intervenors have demonstrated that faults produced any significant displacements within the geophysically distinctive Fuson Shale. The fence diagrams based on logs from closely spaced drill holes that transect the purported faults identified by Dr. Moran provide particularly convincing evidence for a lack of significant faulting in that part of the project area.³⁷⁰ Further, although Powertech and Staff witnesses are loath to acknowledge the existence of any faults or fractures in the area, Mr. Demuth noted in oral testimony that ISL operations have operated successfully in areas where faults cut the ore body, and that the presence of “small scale features in the orebody is not a deal killer.”³⁷¹

We therefore find that the evidence indicates that even though small faults and joints may be present in the project area, their presence does not support Intervenors’ assertions that such faults produced significant offsets, much less that such faults and joints provide pathways for groundwater to migrate between aquifers.

f. Breccia Pipes

Intervenors’ assertion that breccia pipes on the Dewey-Burdock property could provide connections between aquifers is less credible than the concerns about faulting. The satellite imagery offered in evidence by Dr. Moran was effectively refuted by both Mr. Lichnovsky’s testimony that a field examination showed it was not a sinkhole,³⁷² and by the NRC Staff’s analysis of e-logs from wells in the vicinity of the purported feature that demonstrated no disruption of the bedding.³⁷³ Mr. Lichnovsky’s analysis of the sketch on the drillers’ log convincingly refuted Dr. LaGarry’s interpretation that it depicted a sinkhole. In addition, Petrotek’s conclusion, based on one of their numerical models, that groundwater flow through a breccia pipe would produce a mound in the potentiometric surface that would be easily detected if it were present, along with the totality of testimony and exhibits presented on the issue of breccia pipes, further convinces us that the FSEIS analysis on this issue is adequate.

³⁶⁹ Ex. OST-038, TRR17 Driller Remarks.

³⁷⁰ Ex. NRC-167, Location of Drill Hole Transects; Transect 1, Ex. NRC-168; Transect 2, Ex. NRC-169s.

³⁷¹ Tr. at 1079.

³⁷² Tr. at 1126.

³⁷³ Ex. NRC-172, Fence Diagram of Resistivity Profiles for Selected Drill Holes (Oct. 14, 2014).

g. Boreholes

While all parties acknowledge that thousands of historical boreholes penetrate the Dewey-Burdock site, Intervenor assert that a large number remain open and could act as pathways for waters moving from the ore zones to adjacent aquifers. It is apparent that some boreholes on the site have not been adequately plugged, because leakage between formations was attributed to open boreholes in the TVA studies of the late 1970s, was again cited as the cause of leakage by Powertech and NRC Staff witnesses who analyzed the more recent pumping tests, and is cited as the cause for surface water in the “alkali flats” area. In light of these occurrences, it seems unlikely that all historic boreholes have been properly abandoned or have “self sealed.”

Both Powertech and NRC Staff witnesses further assert that open boreholes do not pose a concern because Powertech will be required to locate any historical boreholes that were not properly abandoned and plug them with bentonite or cement grout. After considerable searching, we were able to locate the place in the record where “Powertech commits to properly plugging and abandoning or mitigating any . . . historical wells and exploration holes.”³⁷⁴ And, despite the NRC Staff’s claim that because “there are a number of improperly plugged or abandoned boreholes at the Dewey-Burdock site, as a condition of its license Powertech must address these boreholes before beginning operations,”³⁷⁵ we did not find any such explicit condition in the license.³⁷⁶

Therefore, the Board will amend license SUA-1600 with a similar condition that was included in the *Strata* license. License SUA-1600 shall be amended to include an additional license condition stating:

Prior to conducting tests for a wellfield data package, the licensee will attempt to locate and properly abandon all historic drill holes located within the perimeter well ring for the wellfield. The licensee will document, and provide to the NRC, such efforts to identify and properly abandon all drill holes in the wellfield data package.

h. Artesian Flow

As noted by Consolidated Intervenor witness Dr. LaGarry, the record is replete with acknowledgments that artesian conditions exist at the proposed site.³⁷⁷ The

³⁷⁴ Ex. APP-016-B, Powertech Application for NRC Uranium Recovery License, Technical Report RAI Responses at 31 (June 2011).

³⁷⁵ NRC Staff’s Post-Hearing Reply Brief at 26.

³⁷⁶ Powertech Materials License, Ex. NRC-012.

³⁷⁷ See Ex. APP-040-A, Application for NRC Uranium Recovery License Proposed Action Fall and Custer Counties South Dakota Environmental Report § 3.4.1.2 (Feb. 2009); SER (Revised) (Apr. 2014), Ex. NRC-134, §§ 2.3.3.3.1, 2.4.3.3.2; FSEIS, Ex. NRC-008-A-1, §§ 3.12.1.1, 3.12.2.

FSEIS notes that “anomalous (*i.e.*, high) gamma-ray readings identified in the southern part of the Dewey area in the area of an artesian well are likely due to discharging groundwater from the Inyan Kara aquifer.”³⁷⁸ Powertech witness Mr. Lawrence testified that flowing artesian conditions in the Fall River and Chilson aquifers throughout much of the license area are advantageous in identifying potential unplugged boreholes or wells, since surface discharge would be readily identifiable at these locations.³⁷⁹

Thus, there is no factual dispute as to whether there are artesian conditions at the site nor whether such conditions have the potential to spread fluids from the Inyan Kara aquifer to the surface. The NRC Staff addressed concerns about artesian flow at the surface by stating that Powertech is bound by license conditions to “limit the environmental impacts of any excursion associated with artesian flow” by monitoring for excursions twice monthly.³⁸⁰ The NRC Staff also stated, “we took [artesian flow] into account when developing mitigation measures (*e.g.*, license conditions) and assessing the environmental impacts of the Dewey-Burdock Project.”³⁸¹ NRC Staff witnesses Mr. Prikryl and Mr. Lancaster testified that the presence of artesian wells in and around the license area is documented in FSEIS § 4.5.2.1.1.2.2.³⁸² NRC Staff witnesses Mr. Prikryl and Mr. Lancaster also testified that the FSEIS documents Powertech’s procedures to mitigate potential impacts regarding flowing artesian wells, including removing all domestic wells within the project area from private use prior to beginning operations, removing all stock wells within 0.25 mile of any wellfield from private use prior to operation of that wellfield, and monitoring all domestic, livestock, and crop irrigation wells within 2 kilometers of the boundary of any wellfield during operations.³⁸³ Mr. Prikryl and Mr. Lancaster also testified that Powertech’s routine excursion monitoring program, required by LC 11.5, and Powertech’s requirement to maintain a net inward hydraulic gradient, required by LC 10.7, will further minimize potential impacts from flowing artesian conditions.³⁸⁴

Powertech and the NRC Staff convincingly note that the very existence of artesian conditions in the ore zone aquifers means that they are largely confined, and that in the absence of significant natural pathways, such as faults and breccia pipes, the only way the artesian conditions can result in a transfer of water out of the ore zone aquifers is via unplugged boreholes. Therefore, requiring boreholes

³⁷⁸ FSEIS, Ex. NRC-008-A-1, § 3.12.1.1.

³⁷⁹ Lawrence Testimony, Ex. APP-037, at 28.

³⁸⁰ NRC Staff’s Answering Testimony, Ex. NRC-175, at 6-7.

³⁸¹ *Id.* at 7.

³⁸² NRC Staff’s Rebuttal Testimony, Ex. NRC-151, at 39; *see also* NRC Staff’s Answering Testimony, Ex. NRC-175, at 6.

³⁸³ *See* NRC Staff’s Answering Testimony, Ex. NRC-175, at 6.

³⁸⁴ *See* NRC Staff’s Rebuttal Testimony, Ex. NRC-151, at 39-40.

to be located and properly abandoned should largely resolve any threats posed to either surface water or the shallow aquifers by the existing artesian conditions.

With the condition that unplugged boreholes be located and properly abandoned, the FSEIS and the record in this proceeding include adequate hydrogeological information to demonstrate the ability to contain fluid migration and assess potential impacts to groundwater. We therefore find for Powertech and the NRC Staff on Contention 3.

D. Contention 4: The FSEIS Fails to Adequately Analyze Groundwater Quantity Impacts

1. Legal Standards

In this Partial Initial Decision the Board reviews the NRC Staff's FSEIS under the NEPA hard look standard.³⁸⁵

2. Parties' Positions

In Contention 4³⁸⁶ the Oglala Sioux Tribe alleges that the FSEIS fails to comply with NEPA's hard look requirement because it inadequately analyzes groundwater quantity impacts of the ISL project. Specifically, the Oglala Sioux Tribe argues that "the FSEIS presents conflicting information on groundwater consumption such that the water consumption impacts of the project cannot be accurately evaluated."³⁸⁷ The Oglala Sioux Tribe maintains that these consumption impacts and "the underlying basis for the quantity of water lost due to contamination, reverse osmosis, evaporation, and deep disposal were never established" in the FSEIS, or in the evidentiary record of this hearing.³⁸⁸

The Oglala Sioux Tribe also characterizes the FSEIS as improperly relying on South Dakota Department of Environment and Natural Resources (SDDENR) findings that "annual water consumption will not exceed the recharge rates of either the Madison or Inyan Kara aquifers."³⁸⁹ The Oglala Sioux Tribe contends that non-NEPA documents cannot satisfy NEPA, except when tiered with other documents that must have both been prepared within a NEPA process and address

³⁸⁵ This standard is fully explained above in Part II.B of this Partial Initial Decision.

³⁸⁶ LBP-14-5, 79 NRC at 401.

³⁸⁷ Oglala Sioux Tribe Post-Hearing Initial Brief at 56.

³⁸⁸ *Id.* at 57.

³⁸⁹ Tr. at 1303.

the specific proposed action.³⁹⁰ The Oglala Sioux Tribe does not believe that the SDDENR permits in this proceeding are eligible for NEPA tiering.

Powertech argues that project water usage is properly quantified in the FSEIS, that the water quantity impacts to local wells have been adequately analyzed, and that the project water balance is adequate and appropriate for its intended purpose.³⁹¹ The NRC Staff argues that both CEQ guidance and NRC practice allow the NRC Staff to incorporate other analyses and information relevant to NEPA decisionmaking, including those prepared by other state and federal agencies.³⁹² Specifically, although the NRC Staff acknowledges consideration of the SDDENR water permit applications and EPA groundwater injection regulations, the NRC Staff asserts it conducted independent analyses.³⁹³

3. *Summary of Key Evidence*

The Oglala Sioux Tribe relies on Dr. Moran's testimony that Powertech will use and contaminate 4.5 billion gallons of water per year from the Inyan Kara aquifer and up to 290 million gallons of water per year from the Madison aquifer.³⁹⁴ Although Dr. Moran does acknowledge that the "consumptive use" figure of 2% listed in the FSEIS will be relatively small, he opined that this estimate ignored the water that will be contaminated and lost by evapotranspiration, rendering it "no longer available for present or future uses within the exempted aquifer zone."³⁹⁵ Dr. Moran also testified that based on the limited testing and modeling done by the NRC Staff, the "long-term water level drawdown in either the Madison or Inyan Kara are semi-quantitative, at best."³⁹⁶ Dr. Moran criticized the purported water balance shown in FSEIS Figure 2.1-14³⁹⁷ because it is based only on flow rates rather than total volumes. In Dr. Moran's estimation, the FSEIS failed to consider the basic components of a water balance by excluding "detailed, measured data for volumes of water entering the system and losses (*e.g.* volumes of ground water available in the various aquifers, evaporation from land

³⁹⁰ Oglala Sioux Tribe Post-Hearing Initial Brief at 58-59. In support of its position that an FSEIS cannot rely on non-NEPA documents, the Oglala Sioux Tribe cites *South Fork Band Council v. U.S. Department of the Interior*, 588 F.3d 718, 726 (9th Cir. 2009).

³⁹¹ Powertech Initial Findings of Fact and Conclusions of Law at 113-20.

³⁹² NRC Staff's Response to Post-Hearing Order (Jan. 9, 2015) at 18-19.

³⁹³ *Id.* at 19-22.

³⁹⁴ Moran Testimony, Ex. OST-001, at 26.

³⁹⁵ *Id.* at 27.

³⁹⁶ *Id.*

³⁹⁷ FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.4, Figure 2.1-14.

application facilities, volumes under-going Underground Injection Control, etc.), and fail[ing] to calculate an actual balance.”³⁹⁸

Powertech’s witness Doyl Fritz³⁹⁹ provided detailed written testimony that the FSEIS did provide a water balance for the project that included “the typical water consumption estimates for the Inyan Kara and Madison aquifers during each project phase (production, production/restoration, restoration) and for each wastewater disposal option.”⁴⁰⁰ Mr. Fritz testified that Powertech has submitted applications to the SDDENR for water appropriation permits from the Inyan Kara and Madison aquifers, that information from the applications and the SDDENR’s review and recommended approval of those applications is provided in the FSEIS, and that the “SDDENR has recommended approval on the basis that sufficient water is available, the proposed withdrawals will not exceed average annual recharge, and there is not anticipated to be harm to nearby water users.”⁴⁰¹ Further, Mr. Fritz testified that “Powertech will be required by South Dakota water right permits to not adversely affect existing water rights or domestic wells.”⁴⁰²

With detailed reference and specific citations to the FSEIS and other items in the record, Powertech witness Mr. Demuth testified (1) to the location (in the record) of the water balance and its relationship to groundwater use;⁴⁰³ (2) how the water balance was developed based on NUREG 1569 guidance;⁴⁰⁴ (3) the

³⁹⁸ Moran Testimony, Ex. OST-001, at 26-27 (emphasis omitted).

³⁹⁹ Ex. APP-047, Doyl M. Fritz Curriculum Vitae.

⁴⁰⁰ Ex. APP-046, Written Testimony of Doyl Fritz (June 20, 2014) at 8 [hereinafter Fritz Testimony, Ex. APP-046]. In discussing the water balance, Mr. Fritz cited RAI Responses, Ex. APP-016-B at 68-73, which appears to be identical to FSEIS Figure 2.1-14. FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.4, Figure 2.1-14. Dr. Moran’s response characterizes this as an “attempt to identify materials in the hearing record that could be construed as part of a water balance. [However], [t]he comments of Mr. Fritz do not change my opinions or the basis of my opinion that the FSEIS does not contain a water balance.” Ex. OST-018, Written Rebuttal Testimony of Dr. Robert E. Moran (July 15, 2014) at 7-8 [hereinafter Moran Rebuttal Testimony, Ex. OST-018].

⁴⁰¹ Fritz Testimony, Ex. APP-046, at 5; *see also* FSEIS, Ex. NRC-008-A-2, § 4.5.2.1. At the hearing, Dr. Moran did not dispute the FSEIS’s summary of the SDDENR’s conclusions, although he did add that he did not “see any of the backup for defending those conclusions.” Tr. at 1150-52.

⁴⁰² Fritz Testimony, Ex. APP-046, at 10; *see also* Ex. APP-028, SDDENR, Report to Chief Engineer on Powertech Water Permit Application at 16 (Nov. 2, 2012) [hereinafter SDDENR Report on Water Permit Application, Ex. APP-028].

⁴⁰³ Demuth Testimony, Ex. APP-013, at 18.

⁴⁰⁴ *Id.* at 19. Mr. Demuth’s rebuttal testimony further commented that the water balance in the FSEIS is appropriate and “in accordance with NRC regulatory guidance in NUREG-1569 Section 3.1.3 and federal regulations in 10 CFR 40.32(c) and 40.41(c),” and “the NRC Staff found that the modeling effort was sufficient to ‘enhance understanding of the Fall River and Chilson aquifer systems with respect to: regional and local flow patterns; recharge and discharge boundaries; and overall water budget.’” Ex. APP-065, Answering Testimony of Hal Demuth at 4-5 (July 15, 2014).

workings of the water balance;⁴⁰⁵ (4) how “measured data” cannot be included in a water balance prior to the commencement of facility operations;⁴⁰⁶ (5) how any water loss due to evaporation will occur from water temporarily stored in ponds prior to disposal, which is effectively accounted for in the water balance diagram in streams I and N;⁴⁰⁷ (6) the relatively small projected impact of facility operations on local wells;⁴⁰⁸ (7) water level and flow rate data for existing wells;⁴⁰⁹ and (8) measures to protect existing wells during operation.⁴¹⁰ Powertech witness Mr. Lawrence also added that ISL:

actually does not require much water relative to many other types of uses (including irrigation), and there are many incentives for Powertech to minimize water withdrawal, not the least of which is to minimize the amount of water that must be disposed by land application or deep well injection, both of which are relatively expensive.⁴¹¹

NRC Staff witnesses Mr. Lancaster and Mr. Prikryl jointly filed initial written testimony on Contention 4.⁴¹² Mr. Lancaster and Mr. Prikryl (1) identified specific locations in the record where water consumption was discussed;⁴¹³ (2) defined a “water balance” and its significance and identified its location in the record for the Dewey-Burdock site as well as local and regional balances for the Inyan Kara and Madison aquifers;⁴¹⁴ (3) identified the results of numerical modeling used to predict drawdown in the Inyan Kara;⁴¹⁵ (4) identified the section of the FSEIS where consumptive groundwater use is discussed;⁴¹⁶ (5) identified the sections of

⁴⁰⁵ Demuth Testimony, Ex. APP-013, at 19-20.

⁴⁰⁶ *Id.* at 20.

⁴⁰⁷ *Id.* at 19-20; *see also* Tr. at 1146-47. Dr. Moran responds that “Mr. Demuth wrongly asserts that water lost via evaporation from the waste ponds has no effect on the volumes of water used by the D-B project. Mr. Demuth wrongly asserts that my expert opinion was ‘based on a false premise — that water loss through evaporation would somehow increase the overall water consumption rate.’ My testimony is not based on the increase in consumption rate. My testimony is based on the conclusion that such evaporation and any other categories of water loss not accounted for in the FSEIS estimate will increase the total volumes of water used by the D-B project.” Moran Rebuttal Testimony, Ex. OST-018, at 7.

⁴⁰⁸ Demuth Testimony, Ex. APP-013, at 20-22.

⁴⁰⁹ *Id.* at 22-23.

⁴¹⁰ *Id.* at 23.

⁴¹¹ Lawrence Testimony, Ex. APP-037, at 45.

⁴¹² NRC Staff’s Initial Testimony, Ex. NRC-001.

⁴¹³ *Id.* at 65.

⁴¹⁴ *Id.* at 65-68. At the hearing, Mr. Prikryl confirmed that “water taken from the Inyan Kara and injected in deep wells would be counted for [in streams] I and N.” Tr. at 1147-48.

⁴¹⁵ NRC Staff’s Initial Testimony, Ex. NRC-001, at 68-69.

⁴¹⁶ *Id.* at 69-71.

the FSEIS describing wastewater treatment, disposition, and the applicable water quality standards;⁴¹⁷ (6) identified the location in the record of the discussion and analysis of the facility impacts on local (<2 kilometers) and surrounding domestic and livestock groundwater wells;⁴¹⁸ (7) explained that Powertech cannot provide facility-specific “measured data” in the water balance until the facility becomes operational;⁴¹⁹ (8) discussed the SDDENR’s analysis and approval of the groundwater appropriation for the facility;⁴²⁰ and (9) discussed the use of flow volumes versus flow rates (volume per time) in the water balance.⁴²¹

4. Board Ruling

We find that based upon a reasonably comprehensive analysis, the SDDENR has recommended approval of water rights permits limiting Powertech to net withdrawals of 274.2 acre-feet per year (89.3 million gallons per year) from the Inyan Kara aquifer and 888.8 acre-feet per year (290 million gallons per year) from the Madison aquifer. SDDENR’s recommended approval is based on the conclusion that withdrawals at the approved rates will not result in annual withdrawals that exceed the annual average recharge to the aquifers, that there is a reasonable probability that unappropriated water is available in the aquifers to supply the proposed appropriation, and there is a reasonable probability that the withdrawals proposed in the application can be made without unlawful impairment of existing water rights or domestic wells. Although there was significant information pertaining to the SDDENR water rights applications and permits and their bases in the record (and therefore subject to challenge under NEPA), this information was not challenged by the Intervenor.

In addition, we find that although the NRC Staff relied on the SDDENR water rights applications and permits for the Inyan Kara and Madison aquifers to a significant extent in determining that the environmental impacts of the proposed project to groundwater were small,⁴²² the NRC Staff did not place complete or undue reliance on the SDDENR analysis in making that determination.⁴²³ In addition to numerous references to the NRC Staff’s generic assessments of the impacts to groundwater, including consumptive use, of ISL projects in

⁴¹⁷ *Id.* at 71-73.

⁴¹⁸ *Id.* at 73-76.

⁴¹⁹ *Id.* at 77-78.

⁴²⁰ *Id.* at 78.

⁴²¹ *Id.* at 79.

⁴²² FSEIS, Ex. NRC-008-A-2, § 4.6, Table 4.5-2.

⁴²³ Based on the Board’s analysis, Intervenor’s allegations regarding *South Fork Band Council* and NEPA tiering do not accurately portray how water quantity conclusions in the FSEIS were reached.

general,⁴²⁴ there are also many examples in the FSEIS of the NRC Staff's analysis of consumptive use and groundwater quantity impacts above and beyond the SDDENR's water rights permit application.⁴²⁵

At the hearing, Dr. Moran acknowledged that he could not identify another NRC-led EIS that included the kind of detailed water balances to which he had alluded in his initial testimony.⁴²⁶ Further, in response to questions on FSEIS Figure 2.1-14,⁴²⁷ while maintaining that there were some missing items such as water loss from evaporation and water pumped from the Inyan Kara and injected into other aquifers,⁴²⁸ Dr. Moran acknowledged that he had not gone through the flows to see if they balanced. In contrast, both Powertech and NRC Staff witnesses testified with detailed reference and specific citations to the FSEIS and other items in the record on the workings and adequacy of the water balance. As a result, the Board finds that FSEIS Figure 2.1-14⁴²⁹ and the accompanying text is a reasonable and appropriate water balance, which accounts for all significant project water uses, including (in effect) water lost to evaporation.

Accordingly, we conclude the NRC Staff took the required hard look at the relevant groundwater quantity impacts and find for Powertech and the NRC Staff on Contention 4.

⁴²⁴ FSEIS, Ex. NRC-008-A-2, § 4.5.2.

⁴²⁵ For example, the NRC Staff considered the "results of numerical groundwater simulations . . . [in assessing] the potential impact to shallow local aquifers and domestic and livestock wells from consumptive water use during the construction phase of the proposed project." FSEIS, Ex. NRC-008-A-2, § 4.5.2.1.1.1. The NRC Staff also "analyzed the hydrogeologic characteristics of the Fall River and Chilson aquifers (*i.e.*, formation thicknesses and potentiometric surfaces)" in determining that water consumptive use during operations "will have a SMALL impact on nearby wells located in the Fall River and Chilson aquifers." FSEIS, Ex. NRC-008-A-2, § 4.5.2.1.1.2.2. The NRC Staff also relied on Powertech's commitment to appropriately handling wells in and near the project boundaries in concluding that "the overall environmental impacts on local aquifers, production aquifers, and domestic and livestock wells from consumptive use during operations for the Class V injection well disposal option at the proposed project will be SMALL." FSEIS, Ex. NRC-008-A-2, § 4.5.2.1.1.2.2. The NRC Staff "reviewed the applicant's numerical groundwater model and calibration, and it determined that the model was appropriately developed and sufficiently calibrated." *Id.* Finally, we note that in the Safety Evaluation Report the NRC Staff indicated it "constructed a simple 3-layer model to study the effects of a large withdrawal from the Madison Formation" and concluded that "the proposed maximum Madison withdrawals at the Dewey-Burdock project do not appear to affect water supplies in the City of Edgemont, South Dakota." SER (Revised) (Apr. 2014), Ex. NRC-134, § 3.1.3.5. We did not find reference to that study in the FSEIS.

⁴²⁶ Tr. at 1143.

⁴²⁷ FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.4, Figure 2.1-14.

⁴²⁸ Tr. at 1143-44.

⁴²⁹ FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.4, Figure 2.1-14.

E. Contention 6: The FSEIS Fails to Adequately Describe or Analyze Proposed Mitigation Measures

In Contention 6⁴³⁰ Intervenor assert that “the FSEIS violates 10 C.F.R. §§ 51.10, 51.70 and 51.71, and [NEPA] and implementing regulations by failing to include the required discussion of mitigation measures.”⁴³¹ Specifically, Intervenor contend that the NRC Staff violated NEPA by (1) not adequately discussing or evaluating mitigation measures that are incorporated in the FSEIS, and (2) wrongly deferring the development of further mitigation measures until after the FSEIS and Record of Decision were issued. We consider both of these concerns in turn.

1. Legal Standards

Mitigation under NEPA is defined as (a) avoiding an impact by not taking an action, (b) minimizing an impact by limiting the degree or magnitude of an action, (c) rectifying the impact of an action by repairing, rehabilitating, or restoring the impacted area, (d) reducing or eliminating the impact over time by preservation and maintenance operations, or (e) compensating for the impact or replacing or substituting resources or environments.⁴³² For a project requiring a NEPA analysis, the statute itself,⁴³³ CEQ regulations,⁴³⁴ NRC implementing regulations,⁴³⁵ and Supreme Court precedent⁴³⁶ require agencies to discuss and consider how possible environmental effects can be mitigated. Merely listing possible mitigation options does not satisfy NEPA.⁴³⁷ Though mitigation measures must be discussed in an EIS, the statute “does not guarantee that federally approved projects will have no

⁴³⁰ LBP-14-5, 79 NRC at 401.

⁴³¹ Oglala Sioux Tribe Statement of Position at 27. Consolidated Intervenor adopt the Contention 6 arguments forwarded by the Oglala Sioux Tribe. Consolidated Intervenor’s Opening Statement at 9 (July 7, 2014) [hereinafter Consolidated Intervenor Statement of Position].

⁴³² 40 C.F.R. § 1508.20.

⁴³³ NEPA documents must include “a detailed statement by the responsible official on . . . any adverse environmental effects which cannot be avoided should the proposal be implemented.” 42 U.S.C. § 4332(2)(C)(ii).

⁴³⁴ “The environmental impacts of the proposal and the alternatives . . . shall . . . include appropriate mitigation measures.” 40 C.F.R. § 1502.14. The scientific and analytical section backing up the proposal and alternatives section must also discuss any “means to mitigate adverse environmental impacts” not previously covered. 40 C.F.R. § 1502.16(h). An agency’s Record of Decision also must include a concise discussion of mitigation measures. 40 C.F.R. § 1505.2(c).

⁴³⁵ 10 C.F.R. Part 51.

⁴³⁶ “A reasonably complete discussion of possible mitigation measures” must be included in a NEPA document, to allow the agency and the public a chance to “properly evaluate the severity of the adverse effects.” *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989).

⁴³⁷ *Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 476 (9th Cir. 2000).

adverse impacts.”⁴³⁸ NEPA does not “demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act.”⁴³⁹

Judicial precedent indicates that when the adequacy of an EIS mitigation strategy is challenged, the determining issue is whether the agency took a sufficiently hard look at environmental consequences, and ensured that its decision was supported by a completely informed record.⁴⁴⁰ A court may not substitute its own judgment for that of an agency, and agencies are not constrained by NEPA to select only “the most environmentally benign option.”⁴⁴¹ Courts decide whether a mitigation plan was adequately or inadequately discussed, but the line between these two options “is not well defined.”⁴⁴² Here, in judging whether the NRC Staff took the NEPA-mandated hard look in licensing Powertech’s ISL facility, the Board reviewed the proposed mitigation programs to ensure that “sufficient detail” was provided on mitigation measures to show a fair agency evaluation of mitigation and environmental consequences, and that the NRC Staff has not “ignored or minimized pertinent environmental effects.”⁴⁴³

At the evidentiary hearing in this proceeding, the Oglala Sioux Tribe did not offer witnesses in support of Contention 6. Consolidated Intervenors did not adopt Contention 6, which was advanced by the Oglala Sioux Tribe, and so could not present their own evidence or witnesses.⁴⁴⁴ But, as an admitted party to the proceeding, Consolidated Intervenors were allowed to make arguments and otherwise participate as a party in the proceeding.⁴⁴⁵ Powertech offered witnesses Hal Demuth, Errol Lawrence, and Doyl Fritz. The NRC Staff offered witnesses Haimanot Yilma, Kellee Jamerson, and James Prikryl.

2. Parties’ Positions on Lack of Adequate Discussion of Mitigation Measures

The Oglala Sioux Tribe argues that each proposed mitigation measure “must

⁴³⁸ *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, NM 87313), CLI-06-29, 64 NRC 417, 429 (2006).

⁴³⁹ *Robertson*, 490 U.S. at 353; *see also Hydro Resources*, CLI-06-29, 64 NRC at 427.

⁴⁴⁰ *See Theodore Roosevelt Conservation Partnership v. Salazar*, 616 F.3d 497, 517 (D.C. Cir. 2010); *see also Claiborne*, CLI-98-3, 47 NRC at 88.

⁴⁴¹ *Claiborne*, CLI-98-3, 47 NRC at 88.

⁴⁴² *Okanogan Highlands Alliance*, 236 F.3d at 476.

⁴⁴³ *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431-32 (2003).

⁴⁴⁴ Licensing Board Order (Ruling on Motions in Limine: Motions to Strike and for Cross-Examination) (Aug. 1, 2014) at 7.

⁴⁴⁵ *Id.* at 5. Consolidated Intervenors adopted the evidence, authority, and argument of the Oglala Sioux Tribe. Consolidated Intervenor Statement of Position at 9.

be detailed with specific description, supporting data, and analysis of process and effectiveness;”⁴⁴⁶ and that NEPA requires an agency to fully review whether the mitigation strategy will be effective.⁴⁴⁷ Intervenor allege that mitigation measures regarding Powertech’s application have not been discussed with sufficient detail to ensure that environmental consequences have been fairly evaluated.⁴⁴⁸ While the Oglala Sioux Tribe recognizes that impacts need not actually be mitigated to grant Powertech an NRC license, the Oglala Sioux Tribe contends that the FSEIS discussion of mitigation measures simply listed the measures and asserted they might be successful, “with no scientific evidence or analysis to support those claims,” and that the FSEIS did not adequately assess the measures’ effectiveness in the context of the proposed action and proposed alternatives.⁴⁴⁹

In a general sense, the Oglala Sioux Tribe alleges that the NRC Staff’s “reliance on license conditions to mitigate impacts” without discussion of their effectiveness violated NEPA requirements.⁴⁵⁰ Specifically, the Oglala Sioux Tribe claims “no discussion or analysis is provided” on the effectiveness of identifying and plugging abandoned holes in the permit area.⁴⁵¹ The Oglala Sioux Tribe also asserts that the FSEIS does not assess the plan to review groundwater restoration for only 12 months without support for this time period or analyzing any alternative time periods.⁴⁵² The Oglala Sioux Tribe also faults a proposed, but allegedly unevaluated, monitoring well network “because leakage may occur through the Fuson Shale and draw-down induced migration of radiological contaminants from abandoned open pit mines in the Burdock area.”⁴⁵³ Various other specific examples of insufficient analysis alleged by the Oglala Sioux Tribe include references to BLM guidelines, sound abatement controls, evaporation pond impacts, and groundwater mitigation and restoration.⁴⁵⁴

In response, the NRC Staff and Powertech defended the adequacy of the FSEIS discussion of mitigation measures. The NRC Staff argues that while the

⁴⁴⁶ Oglala Sioux Tribe Statement of Position at 38.

⁴⁴⁷ *Id.* at 28.

⁴⁴⁸ Oglala Sioux Tribe Statement of Position at 30; Consolidated Intervenor Statement of Position at 9.

⁴⁴⁹ Oglala Sioux Tribe Statement of Position at 30-31.

⁴⁵⁰ Tr. at 1197-98. The Oglala Sioux Tribe alleged that the mitigation discussion consisted of a chart simply listing “a series of proposed mitigation measure[s], with no elaboration or other analysis.” Oglala Sioux Tribe Statement of Position at 37. This claim seems to have been abandoned in later briefing following explanations from the NRC Staff that the chart in FSEIS Chapter 6, titled “Mitigation,” was simply a compilation of mitigation measures, the specifics of which are detailed across other chapters of the FSEIS.

⁴⁵¹ Oglala Sioux Tribe Statement of Position at 33.

⁴⁵² *Id.*

⁴⁵³ *Id.* at 33-34.

⁴⁵⁴ *Id.* at 35-36.

effectiveness of mitigation measures must be discussed, this discussion need not be highly detailed.⁴⁵⁵ The NRC Staff gives several examples of the level of detail it provided in describing mitigation measures, which it asserts was sufficient. In one example, the NRC Staff quotes the FSEIS as saying, “impacts of surface land disturbance will be minimized by mitigation measures, including concurrently reclaiming and revegetating surface disturbed areas, limiting construction of new access roads, and restricting vehicular traffic in wellfields and land application areas.”⁴⁵⁶ While the NRC Staff admits that the Oglala Sioux Tribe provided an accurate recitation of NEPA mitigation requirements, the NRC Staff asserts that it met these requirements, and fully considered the effectiveness of mitigation measures.

Powertech also defends the NRC Staff’s work in analyzing mitigation measures in the FSEIS. Powertech contends that mitigation measures in the SER, along with those in the FSEIS, must be taken into account, as the Record of Decision incorporates the findings of both documents.⁴⁵⁷ Powertech further contends that all plans were reviewed and approved by the NRC Staff, and that they are consistent with past practices at ISL facilities.⁴⁵⁸ Regarding specific mitigation measures, Powertech represents that for those associated with historical mine pits and groundwater restoration, the FSEIS does outline a variety of mitigation measures that will be approved before operation.⁴⁵⁹ Powertech also defends the avian and wildlife mitigation plans as proposing specific mitigation strategies developed based on expert recommendations.⁴⁶⁰

3. Board Ruling on Lack of Adequate Discussion of Mitigation Measures

After a thorough review of the Record of Decision, FSEIS, and associated documents, the Board finds that the NRC Staff’s discussion and evaluation of mitigation measures is adequate. The Oglala Sioux Tribe correctly claims that mitigation measures must provide a specific description, supporting data, and an analysis of process and effectiveness, but the Board concludes that the NRC Staff has adequately satisfied this burden. The Oglala Sioux Tribe’s arguments overlook extensive mitigation analysis in the FSEIS. Specifically, Chapter 4 of the FSEIS contains sufficiently detailed information on mitigation measures of Powertech’s

⁴⁵⁵ NRC Staff Statement of Position at 43-44.

⁴⁵⁶ *Id.* at 45.

⁴⁵⁷ Powertech Statement of Position at 51.

⁴⁵⁸ *Id.* at 54.

⁴⁵⁹ *Id.* at 52.

⁴⁶⁰ *Id.* at 55-56 (referencing “limiting noise and vehicular traffic and wildlife access to wastewater ponds, adherence to timing and distance restrictions from appropriate agencies to protect active raptor nests during breeding seasons, and following appropriate land application requirements”).

permitted activities.⁴⁶¹ The NRC Staff has not ignored the mitigation of potential environmental effects associated with this ISL licensing action. Rather, the FSEIS provides extensive mitigation discussions in which risks to the environment have been thoroughly analyzed and license conditions imposed to mitigate those risks.

The NRC Staff's final NEPA document, the Record of Decision, provides the mandated references to mitigation measures detailed in the FSEIS.⁴⁶² The Record of Decision also states that license condition 9.2 binds Powertech to all the "commitments, representations, and statements includ[ing] the mitigation measures and monitoring programs described" throughout its license, the Record of Decision, and the FSEIS.⁴⁶³ From surface disturbance,⁴⁶⁴ facility construction,⁴⁶⁵ operation,⁴⁶⁶ to decommissioning,⁴⁶⁷ the NRC Staff discusses and analyzes substantial mitigation strategies. Regarding issues outside of the NRC's expertise, it is appropriate for the agency to incorporate the mitigative controls incorporated in permits granted by other expert agencies. The Board finds that the NRC Staff appropriately relied on restrictions present in other federal and state permits as mitigation measures.⁴⁶⁸ In *South Fork Band Council v. BLM*, 588 F.3d at 726, the Ninth Circuit rejected the Bureau of Land Management's argument that some "impacts need not be evaluated because the Goldstrike facility operates pursuant to a state permit under the Clean Air Act." Here, however, the NRC Staff did not

⁴⁶¹ For example, regarding the impact on geology and soils, mitigation strategies are discussed in the FSEIS in sections 4.4 and 4.4.1.2. Mitigation strategies are also discussed and analyzed regarding water resources, ecological resources, air quality, noise, historical and cultural resources, visual and scenic resources, socioeconomic, environmental justice, public and occupational health and safety, and waste management.

⁴⁶² Ex. NRC-011, Record of Decision for Dewey-Burdock Project at 3-4 (Apr. 8, 2014) [hereinafter Record of Decision, Ex. NRC-011]; see also 10 C.F.R. § 51.103(a)(4) (requiring the Record of Decision to summarize any license conditions and monitoring programs adopted in connection with mitigation measures).

⁴⁶³ Record of Decision, Ex. NRC-011, at 4.

⁴⁶⁴ Revegetation and restricting vehicular traffic are discussed in the FSEIS, Ex. NRC-008-A-2, § 4.2.1.2.

⁴⁶⁵ The plant will be constructed on concrete slabs with protective berms to mitigate and contain accidental spills. FSEIS, Ex. NRC-008-A-2, § 4.5.1.1.1.2.

⁴⁶⁶ Class V deep well injection permit requirements were, in part, considered by the NRC as mitigation measures during operation of the ISL facility. FSEIS, Ex. NRC-008-A-2, § 4.5.1.1.1.2.

⁴⁶⁷ Mitigation measures to control erosion, stormwater runoff, sedimentation, and National Pollutant Discharge Elimination System permit requirements were cited to "ensure that stormwater runoff will not contaminate surface water." FSEIS, Ex. NRC-008-A-2, § 4.5.1.1.1.3.

⁴⁶⁸ For instance, Powertech must comply with EPA injection well permits (FSEIS, Ex. NRC-008-A-2, § 4.5.1.1.1.2) and SDDENR SWMP (FSEIS, Ex. NRC-008-A-2, § 4.5.1.1.1.2) and National Pollutant Discharge Elimination System permit (FSEIS, Ex. NRC-008-A-2, § 4.5.1.1.2.1), and U.S. Army Corps of Engineers section 404 permitting requirements must be complied with before conducting work in project area wetlands (FSEIS, Ex. NRC-008-A-2, § 4.5.1.1.2.1).

disregard impacts considered under other agencies' permits. Instead, the FSEIS fully evaluated the impacts and mitigation strategies detailed under other permits. The NRC Staff also adequately considered the impacts to birds and wildlife in the FSEIS, not just in associated documents.⁴⁶⁹ The Board thus finds the NRC Staff adequately considered the effectiveness of mitigation measures.⁴⁷⁰

4. Parties' Positions on Developing Mitigation Measures After FSEIS Completion

The Oglala Sioux Tribe also alleges that the NRC Staff has violated NEPA by relying on "future, as yet-unsubmitted, mitigation to prevent/mitigate adverse impacts" from Powertech's ISL operation.⁴⁷¹ Regarding cultural resources, the Oglala Sioux Tribe alleges that mitigation for cultural resources impacts should have been included in the FSEIS, and not "deferred into a post-FSEIS programmatic agreement phase."⁴⁷² Other future mitigation plans the Oglala Sioux Tribe labels as nothing more than "plans to make plans at some point in the future" including the proposed monitoring well network, historical well hole plugging, and wildlife protections and monitoring.⁴⁷³ Consolidated Intervenor also claim that the draft avian monitoring and mitigation plan should be completed and incorporated into the FSEIS.⁴⁷⁴ In sum, the Intervenor allege that any mitigation measures developed outside the FSEIS do not fulfill the agency's responsibility under NEPA to consider mitigation measures.⁴⁷⁵

The NRC Staff defends its NEPA cultural resources analysis by stressing that although the FSEIS was issued before the Programmatic Agreement was finalized,

⁴⁶⁹ FSEIS, Ex. NRC-008-A-2, § 4.6.1.1.1.1.2. Associated Powertech documents expand on the plans and commitments referenced in the FSEIS. Ex. APP-071, 2013 Wildlife Monitoring Report (July 2, 2014); Ex. OST-023, Draft Avian Monitoring and Mitigation Plan (Sept. 2013); Ex. OST-022, BLM Correspondence (July 8, 2014); Ex. OST-024, January 10, 2014 USFWS Take Permit Application (Jan. 10, 2014).

⁴⁷⁰ For example, based explicitly on the implementation of mitigation measures, the NRC Staff found that the impact of the preferred Class V injection well disposal would be SMALL, and that the impact of consumptive use on local aquifers, production aquifers, and domestic and livestock wells would also be SMALL. FSEIS, Ex. NRC-008-A-2, §§ 4.5.2.1.1.2.1, 4.5.2.1.1.2.2. The NRC Staff also found that groundwater quality impacts to the production and surrounding aquifers as a result of ISL operations for the Class V injection well disposal option would be SMALL. FSEIS, Ex. NRC-008-A-1, § 4.5.2.1.1.2.2.

⁴⁷¹ Oglala Sioux Tribe Statement of Position at 28.

⁴⁷² Tr. at 1197; *see also* Oglala Sioux Tribe Statement of Position at 32.

⁴⁷³ Oglala Sioux Tribe Statement of Position at 33-34. The Oglala Sioux Tribe alleges that even though the avian monitoring and mitigation plan was submitted before the FSEIS was finalized, it was not discussed in the FSEIS. Tr. at 1198.

⁴⁷⁴ Consolidated Intervenor Statement of Position at 10.

⁴⁷⁵ Tr. at 1200-01.

the Record of Decision was not issued until after the Programmatic Agreement was finalized.⁴⁷⁶ According to the NRC Staff, it separated its NHPA and NEPA reviews in November 2013 to lessen delays in issuing the FSEIS.⁴⁷⁷ The NRC Staff indicated the FSEIS was nearly complete at that time, but the NHPA § 106 process was not. But the NRC Staff declared that it would not take any licensing action until the Programmatic Agreement was completed, so tribal comments on the Programmatic Agreement were considered before a Record of Decision was released.⁴⁷⁸ The NRC Staff also asserts that the continued development of mitigation measures after the completion of the NEPA process is fully supported by NRC NEPA precedent.⁴⁷⁹

Powertech also defends the timing of the NRC Staff's treatment of mitigation measures, claiming that an ongoing development of mitigation items is a necessary process.⁴⁸⁰ Powertech also states that the Record of Decision and license include mitigation measures reviewed in the SER, and not just the FSEIS.⁴⁸¹ Regarding monitoring and mitigation measures for groundwater, Powertech claims that NRC regulations establish a system in which post-license pump tests are necessary in order to develop the appropriate mitigation techniques depending on the presence or absence of abandoned boreholes.⁴⁸² Powertech witness Mr. Demuth offered testimony that monitor well networks will be established for every wellfield, as well as a general monitoring well network for the Fall River aquifer.⁴⁸³ Powertech also stressed that wildlife impacts will be mitigated by specific measures outlined in the FSEIS.⁴⁸⁴ While the FSEIS mentions the avian monitoring and mitigation plan that Powertech is developing, this plan is required by South Dakota rules, not NRC rules.⁴⁸⁵ Therefore Powertech contends that the avian monitoring and mitigation plan did not need to be finalized before issuance of the Record of Decision.

⁴⁷⁶ NRC Staff Statement of Position at 47.

⁴⁷⁷ Ex. NRC-070, Letter from Kevin Hsueh, Chief, Environmental Review Branch, NRC, to John M. Fowler, Executive Director, Advisory Council on Historic Preservation at 1.

⁴⁷⁸ *Id.* at 2.

⁴⁷⁹ NRC Staff Statement of Position at 49; *see also* NRC Staff's Initial Testimony, Ex. NRC-001, at 82-83.

⁴⁸⁰ Powertech Statement of Position at 50 (claiming that mitigation measures cannot be implemented pre-license issuance).

⁴⁸¹ *Id.* at 51.

⁴⁸² *Id.* at 53.

⁴⁸³ Demuth Testimony, Ex. APP-013, at 28-29.

⁴⁸⁴ Powertech Statement of Position at 55.

⁴⁸⁵ *Id.* at 56.

5. *Board Ruling on Developing Mitigation Measures After FSEIS Completion*

To justify and memorialize a permitting decision, agencies must release a Record of Decision at the conclusion of every EIS process.⁴⁸⁶ The release of an FSEIS does not mark the completion of the NEPA review process. Here, the Programmatic Agreement was not included in the FSEIS, but the FSEIS does explain that a separate Programmatic Agreement was yet to be released.⁴⁸⁷ The FSEIS further explains that mitigation measures adopted in the Programmatic Agreement “could reduce an adverse impact to a historic or cultural resource.”⁴⁸⁸ In *Hydro Resources*, CLI-99-22, 50 NRC at 14, the Commission approved the NRC Staff completion of some NHPA documents after the EIS process was complete, but before the license was issued.⁴⁸⁹ Therefore, the Board finds that the NRC Staff completing the Programmatic Agreement after the FSEIS was released, but before the issuance of the Record of Decision or the license, adequately satisfied NEPA. The NRC Staff’s decision to grant Powertech License SUA-1600 necessarily incorporated the results of, and comments on, the Programmatic Agreement into the decision.⁴⁹⁰

The Board also finds that the other mitigation measures designated in the FSEIS for post-licensing development, including monitoring well networks, historical well hole plugging, and wildlife protections and monitoring, have been adequately explained and satisfy NEPA requirements. The FSEIS “need not . . . contain ‘a complete mitigation plan,’”⁴⁹¹ and the “mitigation plan ‘need not be . . . in final form to comply with NEPA’s procedural requirements.’”⁴⁹² Although the mitigation and monitoring plans discussed in the FSEIS are not all in final form, they still contain the level of detail required to comply with NEPA.⁴⁹³

⁴⁸⁶ “At the time of its decision . . . each agency shall prepare a concise public record of decision.” 40 C.F.R. § 1505.2.

⁴⁸⁷ FSEIS, Ex. NRC-008-A-1, § 3.9.4.

⁴⁸⁸ FSEIS, Ex. NRC-008-A-2, § 4.9.

⁴⁸⁹ “Even if one assumes that the FEIS did not contain all the information considered by the Staff in its decision, the overall record for the licensing action includes a complete analysis of the cultural resources.” *Hydro Res.*, CLI-99-22, 50 NRC at 14.

⁴⁹⁰ The Board’s findings, and the adjudicatory record, are now also, in effect, part of the FSEIS. *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 53 (2001) (quoting *Claiborne*, CLI-98-3, 47 NRC at 89). Mitigation measures were discussed throughout the evidentiary hearing. *See* Tr. at 1197-1312.

⁴⁹¹ *Hydro Resources*, CLI-06-29, 64 NRC at 427 (quoting *Robertson*, 490 U.S. at 352).

⁴⁹² *Hydro Resources*, CLI-06-29, 64 NRC at 427 (quoting *Okanogan Highlands Alliance*, 236 F.3d at 473).

⁴⁹³ For instance, it is acceptable for initial wildlife mitigation strategies to be discussed in the FSEIS, (Continued)

We add that we have no reason to doubt that Powertech will fully and faithfully implement the mitigation and monitoring measures and commitments detailed in the FSEIS, License SUA-1600, and associated documents. Nor do we have any reason to doubt that the NRC Staff will fully and faithfully ensure that these mitigation measures are actually implemented. In setting license conditions, the NRC Staff may assume that a licensee will comply with all requirements imposed by the license.⁴⁹⁴ However, should any material reason arise suggesting that Powertech has shirked its mitigation or monitoring commitments, the Board trusts that either the agency, as an enforcement action, or public citizens, per the 10 C.F.R. § 2.206 process, will pursue the matter.⁴⁹⁵

A principal aid to the agency in that regard is the monitoring programs for all applicable mitigation measures.⁴⁹⁶ Monitoring serves to alert the licensee and/or the agency whether the prescribed mitigation efforts are effective and producing the expected outcomes. Monitoring programs were described or incorporated by reference in the FSEIS and the ROD, and to the degree Powertech has been authorized to perform self-monitoring, the NRC is responsible for establishing and implementing an effective monitoring oversight program. Confirmation should be provided to the NRC Staff, through monitoring results, that mitigation is proceeding as expected by the NEPA documents. If mitigation is unsuccessful, additional environmental analysis may be necessary. Moreover, monitoring information must also be available to the public, as appropriate.⁴⁹⁷ It seems reasonable to the Board that NEPA monitoring information, to the extent discoverable under the Freedom of Information Act (FOIA), can be made available to the public and that it would be preferable for such information to be made available proactively.⁴⁹⁸

but further fleshed out in detail in subsequent documents. Compare FSEIS, Ex. NRC-008-A-2, § 4.6.1.1.1.1.2, with Ex. APP-071, 2013 Wildlife Monitoring Report, Ex. OST-023, Draft Avian Monitoring and Mitigation Plan, Ex. OST-022, BLM Correspondence, and Ex. OST-024, January 10, 2014 U.S. Fish and Wildlife Service Take Permit Application.

⁴⁹⁴ See *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 29 (2003) (“We assume that our licensees will comply with this agency’s safety regulations.”); see also *U.S. Department of Energy* (High-Level Waste Repository), LBP-09-6, 69 NRC 367, 467 (2009) (“[T]he NRC generally presumes that licensees will comply with its regulations.”).

⁴⁹⁵ See Volume 8 — Licensee Oversight Programs, 8.8 Management of Allegations (2010), available at <http://www.nrc.gov/reading-rm/doc-collections/management-directives/volumes/vol-8.html>.

⁴⁹⁶ “A monitoring and enforcement program shall be adopted . . . where applicable for any mitigation.” 40 C.F.R. § 1505.2(c).

⁴⁹⁷ “Upon request, [the lead agency shall] make available to the public the results of relevant monitoring.” 40 C.F.R. § 1505.3(c). More broadly, the NRC must make a diligent effort to involve the public in implementation of NEPA procedures. 40 C.F.R. § 1506.6.

⁴⁹⁸ 5 U.S.C. § 552; see also Office of Management & Budget, Executive Office of the President, “Open Government Directive” (Dec. 8, 2009), available at www.whitehouse.gov/open/documents/open-government-directive.

Regarding monitoring, the NRC Staff's Response to Post-Hearing Order drastically misrepresents the agency's role in monitoring the Powertech project.⁴⁹⁹ The NRC Staff writes:

In its 2011 guidance, the CEQ also addresses when an agency must confirm that mitigation measures will be effective. The CEQ first notes that, under its regulations, agencies may "provide for monitoring to assure that their decisions are carried out and should do so in important cases." 76 Fed. Reg. at 3,849 (citing 40 C.F.R. § 1505.3). The CEQ next states:

Accordingly, an agency should also commit to mitigation monitoring in important cases *when relying upon an EA and mitigated FONSI*. Monitoring is essential in those important cases where the mitigation is necessary to support a FONSI and thus is part of the justification for the agency's determination not to prepare an EIS.

Id. (emphasis added). The requirement that the agency confirm whether mitigation measures are effective therefore applies only where the agency relies on a mitigated FONSI. This requirement does not apply where, as for the Dewey-Burdock Project, the agency prepares an EIS for its proposed action.⁵⁰⁰

However, the citation provided by the NRC Staff entirely ignores the preceding sentence in the CEQ's guidance, which states, "for agency decisions based on an EIS, the CEQ Regulations explicitly require that 'a monitoring and enforcement program shall be adopted and summarized where applicable for any mitigation.'"⁵⁰¹ Nothing could more clearly contradict the NRC Staff's assertion. The NRC Staff is required to confirm whether mitigation measures are effective through a monitoring program, which is recognized in Powertech license conditions.

Specifically, License Condition 9.10 states that Powertech's monitoring results must be documented and maintained, and that the results are "subject to NRC review and inspection."⁵⁰² Further, monitoring results must be submitted to the NRC on various time tables, quarterly, semiannually, or annually.⁵⁰³ The NRC already maintains a website containing public information regarding Powertech's Dewey-Burdock project site.⁵⁰⁴ The Board suggests that all raw monitoring information gathered from Powertech and reviewed by the NRC Staff could be

⁴⁹⁹ NRC Staff's Response to Post-Hearing Order (Jan. 9, 2015) at 33-34.

⁵⁰⁰ *Id.*

⁵⁰¹ 76 Fed. Reg. at 3849 (citing 40 C.F.R. § 1505.2(c)).

⁵⁰² Powertech Materials License, Ex. NRC-012, § 9.10.

⁵⁰³ *Id.* § 11.

⁵⁰⁴ U.S. NRC, Dewey Burdock Site, <http://www.nrc.gov/info-finder/materials/uranium/licensed-facilities/dewey-burdock.html> (last visited Apr. 27, 2015).

publicly posted, except to the extent it may be withheld by exemption from FOIA, on the Dewey-Burdock NRC website.

We conclude that the FSEIS adequately describes proposed mitigation measures and find for the NRC Staff and Powertech on Contention 6.

F. Contention 9: The FSEIS Fails to Consider Connected Actions

1. Legal Standards

When drafting an EIS, an agency's scope of review must include analysis of any connected or cumulative actions to the central proposed action.⁵⁰⁵ Actions are connected⁵⁰⁶ when they "(i) Automatically trigger other actions which may require environmental impact statements. (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously. (iii) Are interdependent parts of a larger action and depend on the larger action for their justification."⁵⁰⁷ To determine when an action is connected, courts use an "independent utility" test. An action lacks independent utility when it would be irrational or unwise to pursue the action without the presence of the EIS-generating central action.⁵⁰⁸ Once connected actions have been identified, the agency must evaluate any potential effects in the EIS.⁵⁰⁹

Even actions not directly encompassed by the scope of the proposed action may still be relevant in an EIS. "Cumulative impacts" are impacts resulting "from the incremental impact of the [proposed] action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."⁵¹⁰ All aspects of the FSEIS, including the connected and cumulative actions discussions, must have been subjected to a hard look by the NRC.⁵¹¹

⁵⁰⁵ 40 C.F.R. § 1508.25. This regulation has been officially adopted by the NRC. 10 C.F.R. § 51.14(b).

⁵⁰⁶ The scope of an EIS includes "connected actions, which means that they are closely related and therefore should be discussed in the same impact statement." 40 C.F.R. § 1508.25(a)(1).

⁵⁰⁷ 40 C.F.R. § 1508.25(a)(1)(i)-(iii).

⁵⁰⁸ *Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-14-9, 80 NRC 15, 41 (2014) (citing *Society Hill Towers Owners' Association v. Rendell*, 210 F.3d 168, 181 (3d Cir. 2000); *Northwest Resource Information Center, Inc v. National Marine Fisheries Service*, 56 F.3d 1060, 1067-69 (9th Cir. 1995)).

⁵⁰⁹ 10 C.F.R. §§ 51.71(d), 51.90; 40 C.F.R. § 1508.25(a)(1).

⁵¹⁰ 40 C.F.R. § 1508.7.

⁵¹¹ "The principal goals of an FEIS are twofold: to force agencies to take a 'hard look' at the environmental consequences of a proposed project, and, by making relevant analyses openly available, to permit the public a role in the agency's decision-making process." *Claiborne*, CLI-98-3, 47 NRC at 87 (citing *Robertson*, 490 U.S. at 349-50).

Before Powertech may commence ISL mining, it is obligated to obtain several permits from agencies other than the NRC. For instance, the underground injection control program, administered by the EPA, regulates injection wells.⁵¹² This program includes Class III wells, used to inject fluids to dissolve and extract minerals such as uranium, and Class V wells, used to dispose of nonhazardous fluids underground.⁵¹³ Powertech may need to acquire permits for both classes of wells to operate its ISL facility.⁵¹⁴ The Safe Drinking Water Act (SDWA), also administered by the EPA, provides the method by which all or a portion of an aquifer is exempted, and thus allowed to be used in uranium ore recovery.⁵¹⁵ A National Pollutant Discharge Elimination System (NPDES) permit, issued by the SDDENR, sets the amount of pollutants that can enter surface water.⁵¹⁶ A radon emission standard is part of the EPA's national emission regulations under 40 C.F.R. Part 61, Subpart W, and Powertech may need EPA approval under this subpart before beginning operations.⁵¹⁷

2. *Parties' Positions*

At the evidentiary hearing, neither the Oglala Sioux Tribe nor the Consolidated Intervenor offered witnesses for Contention 9.⁵¹⁸ Powertech offered witnesses Hal Demuth, Gwyn McKee,⁵¹⁹ and Doyl Fritz. The NRC Staff offered witnesses Haimanot Yilma, Kellee Jamerson, and James Prikryl.

The Oglala Sioux Tribe alleges in Contention 9⁵²⁰ that the NRC Staff's FSEIS inappropriately defers to the EPA and South Dakota in the determination that environmental impacts of the proposed project will be SMALL, and that this inadequacy "violates 10 C.F.R. §§ 51.10, 51.70 and 51.71, and [NEPA] and implementing regulations."⁵²¹ Specifically, the Oglala Sioux Tribe claims that "the FSEIS fails to conduct any NEPA analysis of" the impacts of EPA-permitted Class III and Class V injection wells, which are connected actions that must be

⁵¹² FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.2.3.1.

⁵¹³ *Id.*

⁵¹⁴ *Id.*

⁵¹⁵ An aquifer can be exempted "if it does not currently serve as a source of drinking water and it cannot now and will not in the future serve as a source of drinking water because it is mineral, hydrocarbon, or geothermal energy producing." *Id.* § 3.5.3.5.

⁵¹⁶ FSEIS, Ex. NRC-008-A-1, § 1.7.3.6.

⁵¹⁷ *Id.* § 2.1.1.2.

⁵¹⁸ Consolidated Intervenor adopted the Oglala Sioux Tribe's evidence, authority, and arguments regarding deferral of NEPA's required analysis of environmental and waste disposal impacts from Powertech's proposal. Consolidated Intervenor Statement of Position at 10.

⁵¹⁹ Ex. APP-054, Gwyn McKee Curriculum Vitae.

⁵²⁰ LBP-14-5, 79 NRC at 401.

⁵²¹ Oglala Sioux Tribe Statement of Position at 38.

analyzed in the NRC Staff's FSEIS.⁵²² In the alternative, the Oglala Sioux Tribe argues that, even if judged not to be connected actions, impacts from the wells still must be fully analyzed in the FSEIS either in the cumulative impacts analysis, or as part of the NRC Staff's comprehensive hard look.⁵²³ Additionally, the Oglala Sioux Tribe claims that other issues that have been insufficiently analyzed include EPA permits under the SDWA, Subpart W radon controls, and the South Dakota NPDES permit, none of which are subject to a NEPA analysis on their own.⁵²⁴

When the FSEIS does discuss non-NRC permits, the Oglala Sioux Tribe alleges that the NRC has not conducted its own analysis, and instead refers and defers to other agencies' future analysis.⁵²⁵ Asserting that such a deferral is a violation of NEPA, the Oglala Sioux Tribe relies on *South Fork Band Council v. BLM*, 588 F.3d at 726 for the principle that non-NEPA documents, especially when prepared by a state government, cannot satisfy a NEPA obligation.⁵²⁶ The Oglala Sioux Tribe also relies on 10 C.F.R. § 51.71, which states that environmental impacts will be considered "irrespective of whether a certification or license from the appropriate authority has been obtained."⁵²⁷ The Oglala Sioux Tribe contends that these legal authorities prohibit the NRC from unreviewed reliance on other agencies' work relative to baseline, potential impacts, and mitigation associated with the project.⁵²⁸

Finally, the Oglala Sioux Tribe claims that a Class V well covers only shallow injection of waste material, and Powertech has proposed deep injection, below the lower-most Underground Source of Drinking Water aquifer, which is a Class I well.⁵²⁹ The Oglala Sioux Tribe claims that South Dakota prohibits Class I wells.⁵³⁰ The Oglala Sioux Tribe also contends that the FSEIS lacks an adequate discussion of this concern by deferring to the EPA's analysis without review of impacts or the effectiveness of mitigation.⁵³¹

The NRC Staff claims the Oglala Sioux Tribe misread the FSEIS and has failed to show that NEPA was violated.⁵³² According to the NRC Staff, the very purpose of the FSEIS was to evaluate as a whole Powertech's proposal to inject lixiviant into underground aquifers, using a Class III injection permit, and disposal through

⁵²² *Id.*

⁵²³ *Id.*

⁵²⁴ *Id.* at 40; Oglala Sioux Tribe Post-Hearing Initial Brief at 77.

⁵²⁵ Oglala Sioux Tribe Statement of Position at 39.

⁵²⁶ *Id.* at 40.

⁵²⁷ See Oglala Sioux Tribe Statement of Position at 40 (quoting 10 C.F.R. § 51.71).

⁵²⁸ Oglala Sioux Tribe Post-Hearing Initial Brief at 78.

⁵²⁹ Oglala Sioux Tribe Statement of Position at 41.

⁵³⁰ *Id.*

⁵³¹ *Id.*

⁵³² NRC Staff Statement of Position at 52.

possible use of a Class V injection permit.⁵³³ Regarding deferral to EPA analysis, the NRC Staff argues that the FSEIS merely cites the permitting process of other agencies to aid its explanation of how the NRC Staff itself determined the likely impacts in a particular area, and not to substitute for its own analysis.⁵³⁴ The NRC Staff also states that the FSEIS analyzes both disposal through a Class V well and the possibility that Powertech will not be able to obtain a Class V permit.⁵³⁵

Powertech supports the NRC Staff's review of connected actions relative to Powertech's application.⁵³⁶ Powertech argues that, instead of deferring to the EPA, the NRC Staff consulted with the EPA, and both agencies worked together on multiple drafts throughout the EIS stages.⁵³⁷ Powertech describes the NRC Staff's process when using another agency's procedure as "evaluat[ing] the characteristics and protective nature of these procedures to determine if they are adequate to satisfy NRC's AEA mission of adequately protecting public health and safety."⁵³⁸

Regarding a specific challenge to the FSEIS, Powertech labels the charge that radioactive waste will be disposed of through a Class I well a "false presumption."⁵³⁹ Powertech comments that the company will treat wastewater, and that any liquid injected into a Class V well would not be hazardous material.⁵⁴⁰ Concerning all connected actions, Powertech concludes that the NRC Staff "conducted its own evaluation of the potential impacts" and adequately assessed potential impacts.⁵⁴¹

3. Board Ruling

All non-NRC permits discussed above are interdependent parts of Powertech's proposed action,⁵⁴² and there would be no utility to these permits without the NRC licensing at issue in this proceeding. These are connected actions, and the Board finds that the FSEIS adequately considered them as such. The FSEIS does refer to the analyses done in other permitting schemes and requirements, but this does not constitute an improper deferral to current or future EPA or SDDENR analysis. Instead, it is not only permissible, but necessary, for the NRC Staff to be able to review the interconnected analyses and standards used by other agencies.

⁵³³ *Id.*

⁵³⁴ *Id.*

⁵³⁵ *Id.* at 53.

⁵³⁶ Powertech Statement of Position at 57.

⁵³⁷ *Id.* at 58.

⁵³⁸ *Id.* at 59.

⁵³⁹ *Id.*

⁵⁴⁰ *Id.*

⁵⁴¹ *Id.* at 60.

⁵⁴² 40 C.F.R. § 1508.25.

Further, after a review of the FSEIS, the Board finds that though the NRC Staff references the EPA's analysis, the NRC Staff also undertook its own independent review. The NRC Staff does not merely state that Powertech must comply with EPA regulations. Instead, the NRC Staff considers the requirements and effects of other permitting schemes as one aspect of its overall analysis in the FSEIS.

Regarding injection well permits, in Chapter 4 of the FSEIS, when discussing groundwater impacts from construction, the FSEIS indicates that "as part of the applicant's Class III Underground Injection Control permit, all production, injection, and monitoring wells will be cased and cemented to prevent the migration of fluids into and between [Underground Sources of Drinking Water] USDWs."⁵⁴³ The FSEIS further lists the requirement that all wells "undergo mechanical integrity tests of the casing to ensure against well leakage."⁵⁴⁴ Class V wells are also thoroughly discussed both as they "must meet EPA requirements" but also through separate analysis of their design and use, and potential impact on aquifers.⁵⁴⁵ And the Board finds no support for the Oglala Sioux Tribe's premise that Class I wells will be used.⁵⁴⁶ The FSEIS also considers and evaluates the alternative that "land application for liquid waste disposal" is used instead of or in addition to Class V wells.⁵⁴⁷ Class V injection wells are intertwined with the relevant SDWA regulations, and Chapter 4 of the FSEIS relies on SDWA regulations to conclude that Class V injection well impacts to geology and soils will be SMALL.⁵⁴⁸ However, the FSEIS also separately analyzes these potential impacts, and states that the NRC also requires releases into any deep aquifers below the production aquifers "to be treated and monitored to verify they meet NRC release standards."⁵⁴⁹

The FSEIS also indicates that the NRC Staff coordinated with the SDDENR on the issues surrounding a NPDES permit.⁵⁵⁰ We find that coordinating with a state agency does not constitute deferring to a state agency, and note that the FSEIS separately analyzes the NPDES permit requirements.⁵⁵¹

⁵⁴³ FSEIS, Ex. NRC-008-A-2, § 4.5.2.1.1.1.

⁵⁴⁴ *Id.*

⁵⁴⁵ FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.2.4.1; *see also* FSEIS, Ex. NRC-008-A-2, § 4.5.2.1.1.2.1.

⁵⁴⁶ FSEIS, Ex. NRC-008-B-1, § 7.6 ("Class V deep injection wells are being used for disposal rather than Class I wells.").

⁵⁴⁷ FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.2.4.3; FSEIS, Ex. NRC-008-A-2, § 4.2.1.1.

⁵⁴⁸ FSEIS, Ex. NRC-008-A-2, § 4.4.1.1.2.

⁵⁴⁹ *Id.* § 4.5.2.1.1.2.3.

⁵⁵⁰ FSEIS, Ex. NRC-008-A-1, § 1.7.3.6.

⁵⁵¹ *Id.* § 2.1.1.2.2 (analyzing controls needed for surface water discharge if Powertech is or is not granted an NPDES permit); FSEIS, Ex. NRC-008-A-2, § 4.5.1.1.1.1 (analyzing construction impacts of surface waters in the context of the required NPDES permit, but also stipulating three additional mitigation strategies).

Radon emissions, regulated by the EPA under 40 C.F.R. Part 61, Subpart W, are also evaluated both in the context of and independent of Subpart W. The NRC Staff reviewed radon emission modeling, and “verified that appropriate exposure pathways were modeled and reasonable input parameters were used.”⁵⁵² The NRC Staff then reviewed the model results in detail, and determined “potential radiation doses to occupationally exposed workers and members of the public during operations will be SMALL.”⁵⁵³ Retention pond siting and design considerations in the FSEIS also included an analysis of Subpart W requirements.⁵⁵⁴ And the FSEIS indicates that, in addition to Subpart W requirements, Powertech may also be subject to additional necessary radon-related “license conditions” to ensure requirements are met.⁵⁵⁵

Analysis of this type continues throughout the FSEIS in sections too numerous to reference in full. The Board thus concludes that this comprehensive analysis of connected actions satisfies NEPA’s connected action and hard look requirements. Further, since the Board finds that these related permits are treated directly as connected actions to the proposed action, they need not also be reviewed as cumulative actions. Finally, because the NRC Staff did not defer to other agencies’ analyses to satisfy NEPA obligations, the *South Fork Band Council* case cited by the Oglala Sioux Tribe is inapposite to this contention. Based on the above, we conclude that the FSEIS adequately considers connected actions and find for Powertech and the NRC Staff on Contention 9.

G. Motion for Leave to File New or Amended Contentions

Having addressed all admitted contentions that were the subject of the Board’s August 2014 evidentiary hearing, we next turn to the Oglala Sioux Tribe’s pending November 7, 2014 motion for leave to file new or amended contentions.⁵⁵⁶ The Oglala Sioux Tribe states that the two new contentions pertain to: “1) the NRC Staff’s recent testimony related to its review of the new Powertech borehole data disclosed pursuant to the Board’s September 8, 2014 Post-Hearing Order; and, 2) the recently released documents from the [EPA] under its [CERCLA] authority.”⁵⁵⁷ The Oglala Sioux Tribe alleges the borehole data were reviewed outside of the NEPA process and that the NRC Staff did not submit this material

⁵⁵² FSEIS, Ex. NRC-008-A-2, § 4.13.1.2.2.1.

⁵⁵³ *Id.*

⁵⁵⁴ FSEIS, Ex. NRC-008-A-1, § 2.1.1.1.2.4.2.

⁵⁵⁵ FSEIS, Ex. NRC-008-A-2, § 4.14.1.4.1.

⁵⁵⁶ Motion for Leave to File New or Amended Contention on Behalf of the Oglala Sioux Tribe (Nov. 7, 2014) [hereinafter Oglala Sioux Tribe New Contention Motion].

⁵⁵⁷ *Id.* at 1-2.

to the required hard look.⁵⁵⁸ The Oglala Sioux Tribe further alleges that the EPA documents should have been but were not reviewed or analyzed in the FSEIS.⁵⁵⁹

On August 21, 2014, the evidentiary hearing concluded.⁵⁶⁰ The record, however, was held open to facilitate disclosure by Powertech of certain well log data on September 13, 2014, and to permit the filing by the parties of additional testimony and/or exhibits based on these well log data.⁵⁶¹ Additional testimony and exhibits were filed by the Oglala Sioux Tribe⁵⁶² and the NRC Staff,⁵⁶³ and on November 13, 2014, the Board admitted into evidence Exhibits OST-025 and OST-026, on which these new contentions are based.⁵⁶⁴

As the Oglala Sioux Tribe acknowledges, to gain the admission of a new or amended contention at this stage of the proceeding, a party must meet the requirements of both 10 C.F.R. § 2.309(c) and 2.309(f).⁵⁶⁵ Section 2.309(c) states that a request to admit new or amended contentions must satisfy three specific requirements: “(i) The information upon which the filing is based was not previously available; (ii) The information upon which the filing is based is materially different from information previously available; and (iii) The filing has been submitted in a timely fashion based on the availability of the subsequent information.”⁵⁶⁶ Each of these requirements must be satisfied for a new or amended contention to be admitted. Further, even if contentions are based on an NRC Staff’s FSEIS, an intervenor still bears the responsibility of demonstrating that a new contention merits admission and meets all six requirements of 10 C.F.R. § 2.309.⁵⁶⁷ A contention cannot be admitted in an NRC hearing unless it meets the criteria in 10 C.F.R. § 2.309(f)(1), which requires that each contention:

⁵⁵⁸ *Id.* at 2.

⁵⁵⁹ *Id.* at 3.

⁵⁶⁰ Tr. at 1328.

⁵⁶¹ Licensing Board Post Hearing Order (Sept. 8, 2014).

⁵⁶² Oglala Sioux Tribe Motion to Admit Additional Exhibits (Oct. 14, 2014); Oglala Sioux Tribe Motion to Admit Additional Exhibits (Nov. 7, 2014); Oglala Sioux Tribe Motion to Admit Additional Testimony and Exhibits (Nov. 21, 2014).

⁵⁶³ NRC Staff’s Motion to Admit Testimony and Exhibits Addressing Powertech’s September 14, 2014 Disclosures (Oct. 14, 2014).

⁵⁶⁴ Licensing Board Order (Admitting New Exhibits and Closing the Evidentiary Record on Contentions 1A, 1B, 2, 4, 6, and 9) (Nov. 13, 2014).

⁵⁶⁵ Oglala Sioux Tribe New Contention Motion at 1.

⁵⁶⁶ 10 C.F.R. § 2.309(c)(1)(i)-(iii).

⁵⁶⁷ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-28, 52 NRC 226 (2000). The intervenors carry the burden of showing that any late-filed contentions are admissible. See *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260-61 (2009).

- (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 . . . ;
- (vi) Provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact.

Additionally, with respect to the need to supplement an issued final EIS, the party offering the new contention has the burden of presenting information sufficient to show that there is a genuine issue regarding whether the NRC Staff should supplement its document.⁵⁶⁸ The party offering the contention thus must explain why the new information is sufficiently significant to present “a *seriously* different picture of the environmental landscape.”⁵⁶⁹ The new information must point to impacts that affect “the quality of the human environment in a significant manner or to a significant extent not already considered.”⁵⁷⁰

1. New Contention 1: The NRC Staff's Review of Newly Disclosed Borehole Data Was Inadequate Under, and Failed to Comply with, the National Environmental Policy Act and Implementing Regulations

In proposed New Contention 1 the Oglala Sioux Tribe argues that NEPA requires that the record be reopened and the NRC Staff give the newly disclosed borehole data a hard look. The Oglala Sioux Tribe further alleges that the NRC Staff cannot ignore these data and that the review they were given by the NRC Staff was “without a scientifically valid and sourced methodology.”⁵⁷¹

We conclude that New Contention 1 is inadmissible. It does not meet the standard in 10 C.F.R. § 2.309(c)(2) in that it relies on information that is not materially different from information previously available (and in this case already

⁵⁶⁸ See 10 C.F.R. § 51.92; see also *Hydro Resources, Inc.* (Crownpoint Uranium Project), CLI-04-33, 60 NRC 581, 659 (2004).

⁵⁶⁹ *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-11, 75 NRC 523, 533 n.53 (2012) (quoting *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 28 (2006)).

⁵⁷⁰ *Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), LBP-04-23, 60 NRC 441, 448 (2004) (quoting *Marsh*, 490 U.S. at 374).

⁵⁷¹ Oglala Sioux Tribe New Contention Motion at 8.

in the record). Further, it fails to raise a genuine dispute as required by 10 C.F.R. § 2.309 (f)(1)(vi), and does not meet the requirements in 10 C.F.R. § 51.92 for demonstrating the need to supplement a FSEIS.

In particular, the Oglala Sioux Tribe has not shown that the well log data or the NRC Staff's analysis of those well log data would lead to any new or materially different information or conclusions. The NRC Staff's "spot check" of Powertech's additional borehole log data led the NRC Staff to conclude that its initial analysis was accurate.⁵⁷² Similarly, the Oglala Sioux Tribe's review of these same data led them to conclude their original conclusions were correct.⁵⁷³

Initially, we note that the process of reviewing representative borehole logs is not new or a materially different approach relative to this proceeding. This review methodology has been practiced by the NRC Staff since the submission of Powertech's license application and throughout its review, culminating in the issuance of Powertech's NRC license. This methodology was reasonable to support issuance of the license application, and is reasonable for review of the additional borehole log data. As such, the use of this methodology does not rise to the level of new and significant or materially different information.

The results of the review by both the NRC Staff and the Oglala Sioux Tribe of Powertech's newly disclosed well log data did not "paint a seriously different picture of the environmental landscape."⁵⁷⁴ Consequently, it does not give rise to a genuine issue in dispute, and the proposed contention does not meet the admissibility requirements of 10 C.F.R. § 2.309(f)(1)(vi).

2. *New Contention 2: The NRC Staff NEPA Analysis Fails to Adequately Address or Review the Findings in the EPA's CERCLA Preliminary Assessment or the EPA's Reasonably Foreseeable CERCLA Removal Action*

The Oglala Sioux Tribe contends that certain "newly-released EPA documents include findings and conclusions that were not reviewed or analyzed in the FSEIS or any other public NEPA forum, in violation of NEPA and NRC implementing regulations."⁵⁷⁵ Specifically, the Oglala Sioux Tribe argues:

the EPA found that sources of radiological contamination associated with the unreclaimed uranium mines on the Dewey-Burdock property are not just impacting the soil and surface waters at the site, but are also leaking into and through the

⁵⁷² NRC Staff's Brief in Support of Answering Testimony (Dec. 9, 2014) at 5.

⁵⁷³ LaGarry Supplemental Testimony, Ex. OST-029, at 4.

⁵⁷⁴ *Vogtle*, CLI-12-11, 75 NRC at 534.

⁵⁷⁵ Oglala Sioux Tribe New Contention Motion at 11.

groundwater so as to contaminate ground water wells at the site, and have [the] potential to impact additional ground water wells at the site.⁵⁷⁶

According to the Oglala Sioux Tribe, “these are issues that should have been, but were not, analyzed in the NRC Staff’s NEPA review.”⁵⁷⁷

New Contention 2 refers to a Preliminary Assessment recently released by the EPA for the abandoned Darrow/Freezeout/Triangle mine area, which is partially within the Dewey-Burdock site.⁵⁷⁸ The Oglala Sioux Tribe alleges that this Preliminary Assessment is new information or contains new information which should be analyzed as part of the FSEIS.

New Contention 2 is inadmissible. It fails to present sufficient information to show a genuine dispute exists on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(vi), and ignores the fact that the environmental concerns related to the abandoned mines are discussed in the FSEIS. Both the FSEIS and the Preliminary Assessment report that: (1) surface soils near the abandoned uranium mines contain levels of radionuclides above health-based standards; (2) surface and water samples taken from the mine pits and nearby streams contain radionuclides; (3) air samples collected at the uranium mines have elevated levels of radionuclides; and (4) groundwater samples contain levels of radionuclides that exceed drinking water standards.⁵⁷⁹ The Preliminary Assessment acknowledges that the NRC Staff evaluated these issues in the FSEIS, and the EPA refers to the NRC Staff’s conclusions throughout its Preliminary Assessment.⁵⁸⁰

The Oglala Sioux Tribe fails to show that the Preliminary Assessment is or contains significant new information requiring that the NRC Staff supplement the FSEIS. The Oglala Sioux Tribe therefore fails to raise a genuine issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(vi).

H. Ruling on Motions to Strike Filed July 22, 2014

On July 22, 2014, all parties to this proceeding filed various procedural motions in advance of the scheduled August 19-21, 2014 evidentiary hearing. The Oglala Sioux Tribe moved to strike portions of NRC Staff and Powertech prefiled testimony by claiming that this testimony included analysis and information that purportedly supports the FSEIS, but was not included in the FSEIS itself.⁵⁸¹ The Oglala Sioux Tribe asked the Board to strike this material under the theory that

⁵⁷⁶ *Id.*

⁵⁷⁷ *Id.*

⁵⁷⁸ Preliminary Assessment, Ex. OST-026.

⁵⁷⁹ Ex. NRC-174, NRC Staff’s Responsive Testimony at 5 (Oct. 24, 2014).

⁵⁸⁰ *See* Preliminary Assessment, Ex. OST-026, at 11, 13, 29-30.

⁵⁸¹ Oglala Sioux Tribe’s Motion to Strike (July 22, 2014).

an FSEIS cannot be supplemented or rehabilitated by information not included in the FSEIS, and so this material goes beyond the scope of NEPA. The Oglala Sioux Tribe then pointed to a nonexclusive list of examples that it sought to strike from the record in Exhibits NRC-001, APP-003, APP-005, APP-010, APP-064, APP-053, and APP-070. On July 29, 2014, the NRC Staff and Powertech filed answers in opposition to this motion.⁵⁸² The NRC Staff claims that the Oglala Sioux Tribe misunderstands the administrative record rule and its conclusion only stands once the NRC has completed a final agency action, which will not be achieved until after the hearing is complete.⁵⁸³ Powertech responded that its testimony is not intended to supplement the FSEIS, but instead serves to explain why the FSEIS does not need supplementation.

The Consolidated Intervenors moved to limit and exclude Powertech's witness testimony where its technical witnesses offer legal opinions or conclusions.⁵⁸⁴ Specifically, Consolidated Intervenors moved to strike portions of two Powertech exhibits.⁵⁸⁵ The NRC Staff and Powertech opposed Consolidated Intervenors' motion. The NRC Staff submits that there is a connection between each witness's experience and testimony, and that the Board will ensure the testimony carry weight only to the extent it is supported by other evidence in the record. Powertech responds that its witnesses are not offering legal opinions, but rather their own interpretations of regulations and agency guidance in support of Powertech's counsel's legal opinions. In our August 1, 2014 order⁵⁸⁶ we deferred ruling on these two motions. We stated we would "be better able to resolve the disputes surrounding the Oglala Sioux Tribe and Consolidated Intervenor motions upon consideration of the full evidentiary record."⁵⁸⁷

The Board now denies both motions. The Oglala Sioux Tribe's motion is denied because the evidentiary hearing is a part of the review of the FSEIS. In an NRC adjudicatory proceeding, even if a Board finds an environmental impact statement prepared by the NRC Staff inadequate in certain respects, the Board's findings, as well as the adjudicatory record, "become, in effect, part of the [final EIS]."⁵⁸⁸ Thus, the Board's ultimate NEPA judgments can be made on

⁵⁸² Powertech (USA), Inc. Response to NRC Staff's, Consolidated Intervenors' and the Oglala Sioux Tribe's Motions in Limine, Motion for Cross-Examination, and Motion to Strike/Exclude (July 29, 2014); NRC Staff's Response to Prehearing Motions (July 29, 2014).

⁵⁸³ NRC Staff's Response to Prehearing Motions (July 29, 2014) at 2-3.

⁵⁸⁴ Consolidated Intervenors' Motion in Limine (July 22, 2014).

⁵⁸⁵ Consolidated Intervenors moved to strike portions of Lynn Sebastian's testimony in Ex. APP-001, Written Testimony of Lynne Sebastian, and portions of Mr. Lawrence's testimony in Lawrence Testimony, Ex. APP-037.

⁵⁸⁶ Licensing Board Order (Ruling on Motions in Limine: Motions to Strike and for Cross-Examination) (Aug. 1, 2014) (unpublished).

⁵⁸⁷ *Id.* at 12.

⁵⁸⁸ *Hydro Res.*, CLI-01-4, 53 NRC at 53 (quoting *Claiborne*, CLI-98-3, 47 NRC at 89).

the basis of the entire adjudicatory record in addition to the NRC Staff's FSEIS.⁵⁸⁹ The Consolidated Intervenor's motion is also denied. The witnesses' testimony challenged is admitted in its entirety and has been given the weight it is due based on the qualifications and background of the witnesses. Any legal conclusions in the testimony at issue are accepted as the technical witnesses' understanding of legal requirements.

V. CONCLUSION AND BOARD ORDER

Pursuant to 10 C.F.R. § 2.1210, the Atomic Safety and Licensing Board assigned to hear the contentions raised in this case resolves all issues pending before it and terminates this proceeding as follows:

A. Contention 1A is resolved in favor of the Oglala Sioux Tribe and the Consolidated Intervenor. The Board finds that the NRC Staff has not carried its burden of demonstrating that its FSEIS complies with NEPA and with 10 C.F.R. Part 40. The environmental documents do not satisfy the requirements of NEPA, as they do not adequately address Sioux tribal cultural, historic, and religious resources. The NRC Staff can remedy this deficiency in the Record of Decision in this proceeding by promptly initiating a government-to-government consultation with the Oglala Sioux Tribe to identify any adverse effects to cultural, historic, or religious sites of significance to the Oglala Sioux Tribe which may be impacted by the Powertech Dewey-Burdock project, and to adopt measures to mitigate such adverse effects, as necessary. The FSEIS and Record of Decision in this case must be supplemented, if necessary, to include any cultural, historic, or religious sites identified and to discuss any mitigation measures necessary to avoid any adverse effects.

B. Contention 1B is resolved in favor of the Oglala Sioux Tribe. Meaningful consultation as required by statute has not occurred. The NRC Staff can remedy this deficiency in the Record of Decision in this proceeding by promptly initiating a government-to-government consultation with the Oglala Sioux Tribe to identify any adverse effects to cultural, historic, or religious sites of significance to the Oglala Sioux Tribe which may be impacted by the Powertech Dewey-Burdock project, and to adopt measures to mitigate such adverse effects, as necessary.

C. Contention 2 is resolved in favor of the NRC Staff and Powertech. The NRC Staff has carried its burden of demonstrating that the FSEIS com-

⁵⁸⁹ See *National Enrichment Facility*, LBP-05-13, 61 NRC at 404, *aff'd*, CLI-06-22, 64 NRC 37 (2006).

plies with NEPA and with 10 C.F.R. Part 40 and that the collection of baseline/background groundwater data in a phased manner as outlined in NUREG-1569 is not a violation of NEPA.

D. Contention 3 is resolved in favor of the NRC Staff and Powertech with an additional license condition. With the addition of a license condition the NRC Staff has carried its burden of demonstrating that the FSEIS complies with NEPA and with 10 C.F.R. Part 40 and includes adequate hydrogeological information. NRC License No. SUA-1600 is *revised* to include a new requirement that:

Prior to conducting tests for a wellfield data package, the licensee will attempt to locate and properly abandon all historic drill holes located within the perimeter well ring for the wellfield. The licensee will document, and provide to the NRC, such efforts to identify and properly abandon all drill holes in the wellfield data package.

E. Contention 4 is resolved in favor of the NRC Staff and Powertech. The Board finds that the NRC Staff has carried its burden of demonstrating that the FSEIS complies with NEPA and with 10 C.F.R. Part 40 and has adequately analyzed groundwater quantity impacts.

F. Contention 6 is resolved in favor of the NRC Staff and Powertech. The Board finds that the NRC Staff has carried its burden of demonstrating that the FSEIS complies with NEPA and with 10 C.F.R. Part 40 and has adequately described and analyzed proposed mitigation measures.

G. Contention 9 is resolved in favor of the NRC Staff and Powertech. The Board finds that the NRC Staff has carried its burden of demonstrating that the FSEIS complies with NEPA and with 10 C.F.R. Part 40 and has adequately considered connected actions.

H. New Contention 1 is *not admitted* because it does not meet the standard in 10 C.F.R. § 2.309(c)(2) and fails to raise a genuine dispute as required by 10 C.F.R. § 2.309 (f)(1)(vi). It also does not meet the requirements in 10 C.F.R. § 51.92 for supplementing a FSEIS.

I. New Contention 2 is *not admitted* because it fails to present sufficient information to show a genuine dispute exists on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(vi).

J. The Oglala Sioux Tribe Motion to Strike filed July 22, 2014, is *denied*.

K. The Consolidated Intervenor's Motion in Limine filed July 22, 2014, is *denied*.

L. Pursuant to 10 C.F.R. § 2.1207(a)(3)(iii) the Board, by separate order,

is providing to the Commission's Secretary a copy of all questions submitted by the parties prior to and during the course of the evidentiary hearing.

M. The Licensing Board retains jurisdiction over the final resolution of Contentions 1A and 1B. The NRC Staff shall file a monthly report, beginning June 2015, with the Board on its progress in addressing the outstanding issues in Contentions 1A and 1B. The NRC Staff's final monthly report shall demonstrate that the FSEIS complies with NEPA and with 10 C.F.R. Part 40 and include an agreement reflecting the parties' settlement of their dispute regarding the contentions or a motion for summary disposition of Contentions 1A and 1B.

In accordance with 10 C.F.R. § 2.1210, as to Contentions 2, 3, 4, 6, and 9, this Partial Initial Decision will constitute a final decision of the Commission 120 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 August 28, 2015, 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 regarding the Board's rulings on Contentions 2, 3, 4, 6, and 9 on the grounds specified in 10 C.F.R. § 2.341(b)(4) must do so within twenty-five (25) 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 25 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).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD⁵⁹⁰

William J. Froehlich, Chairman
ADMINISTRATIVE JUDGE

Mark O. Barnett
ADMINISTRATIVE JUDGE

Rockville, Maryland
April 30, 2015

⁵⁹⁰ Dr. Richard F. Cole, who served with distinction as a full-time technical member of the Atomic Safety and Licensing Board Panel beginning in 1973, was a member of this Licensing Board from its inception. He participated in the September 19-20, 2013 site visit, the August 18, 2014 limited appearance sessions, and the August 19-21, 2014 evidentiary hearing. Judge Cole passed away on December 11, 2014, before this decision was finalized.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

William M. Dean, Director

In the Matter of

Docket No. 50-255
(License No. DPR-20)

ENTERGY NUCLEAR
OPERATIONS, INC.
(Palisades Nuclear Plant)

April 6, 2015

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

I. INTRODUCTION

By letter dated March 5, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14071A006), as supplemented on April 8, May 21, and September 3, 2014 (ADAMS Accession Nos. ML14143A212, ML14142A101, and ML14259A135, respectively), Mr. Michael Mulligan submitted a petition under section 2.206 of Title 10 of the *Code of Federal Regulations* (10 C.F.R.), "Requests for Action Under This Subpart," to Mr. Mark A. Satorius, Executive Director for Operations, of the U.S. Nuclear Regulatory Commission (NRC). The Petitioner requested the NRC and Entergy Nuclear Operations, Inc. (ENO, the Licensee) to take actions for equipment failures at Palisades Nuclear Plant (PNP). As the basis for the request, the Petitioner stated that PNP has had recent events and equipment failures, such as primary coolant pump (PCP) impeller pieces breaking off and lodging in the reactor vessel (RV), leakage from the safety injection refueling water tank, and flaws in the control rod drive mechanisms.

By e-mail dated March 19, 2014 (ADAMS Accession No. ML14083A680), the NRC informed the Petitioner it had denied his request for immediate action

to prevent a PNP restart because a piece of PCP impeller was lodged between the RV and the flow skirt.

The Petitioner addressed the Petition Review Board (PRB) by teleconference on April 8, 2014, and on September 3, 2014, to clarify the basis for the petition. The NRC treated the transcripts of these meetings as supplements to the petition; they are available in ADAMS as previously noted in this section.

On September 25, 2014, the NRC issued an acknowledgment letter (ADAMS Accession No. ML14237A726) to the Petitioner accepting, in part, the petition for review. The letter informed the Petitioner that five requests, listed in Section II, below, met the criteria for review in accordance with Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions" (see http://www.internal.nrc.gov/ADM/DAS/cag/Management_Directives/md8.11.pdf). The letter also stated that the Petitioner's remaining requests did not meet the criteria for review, either because they were not requests for enforcement-related action or because they concerned resolved issues that had already been the subject of NRC Staff review and evaluation. Enclosure 1 to the acknowledgment letter explains the Staff's basis for why the NRC did not accept those requests into the 2.206 process.

On January 23, 2015 (ADAMS Accession Nos. ML14338A435 and ML14338A431), the NRC issued the proposed director's decision for comment to the Petitioner and the Licensee. The Petitioner provided responses dated January 26, 29, and 30, 2015 (ADAMS Accession Nos. ML15035A217, ML15035A218, and ML15035A219, respectively). The NRC evaluation of these comments is provided as Attachment 1 to this final director's decision.

II. DISCUSSION

This section includes both the Petitioner's requests for enforcement-related actions and the NRC's decisions.

A. Request 1: Request for PNP to Open Every PCP for Inspection and Clear Up All Flaws

NRC Decision

As summarized in the PNP integrated inspection report dated May 7, 2014 (ADAMS Accession No. ML14127A543), the issue of broken impeller pieces has been the subject of continued regulatory oversight. The report details the chronology of significant PCP events at PNP dating back to 1983. In addition, the report indicates that PCP-B is the only pump in service with a refurbished impeller, which is more susceptible to fatigue-related failures than the remaining

three pumps where the impellers have been replaced with newly manufactured impellers. The NRC recognizes that PCP-B continues to remain in service with potential impeller cracks; however, as stated in the inspection report dated May 7, 2014, the NRC did not identify any immediate safety concerns that would pose a danger to public health and safety or the environment. The NRC Staff reached this conclusion by performing independent evaluations of the Licensee's operability determination during the October 2011 vibration incident and during the 2014 refueling outage during which a lodged piece of impeller was found between the reactor vessel and flow skirt. During these evaluations, the NRC Staff considered PNP's operating experience with broken impeller pieces and evaluated the impact the pieces have on the current transient and accident analyses as described in Chapter 14, "Safety Analysis" of the PNP final safety analysis report (FSAR) (ADAMS Accession No. ML14357A602). A summary of the NRC Staff's previous evaluations is described below.

As stated in the NRC's acknowledgment letter dated September 25, 2014, the NRC Staff reviewed in depth the Licensee's analysis of the interactions of PCP impeller pieces within the PCP. This review considered impeding flow, impacting other vanes, impeding pump coastdown, and causing pressure boundary damage. The PCPs have two design-basis safety functions: (1) the pumps provide reactor core cooling during coastdown in the event of a loss of electric power to all four PCPs, and (2) the pump casing is part of the primary coolant system (PCS) pressure boundary. To evaluate the impacts of the PCP pieces, NRC Staff independently reviewed the Licensee's operability evaluation during the October 2011 vibration incident and during the 2014 refueling outage. In the reviews, the NRC determined that the pump casing, impeller, and, therefore, any impeller fragments, are constructed of ductile materials. Should impact occur between an impeller fragment and either the pump casing or the impeller, the result would be ductile deformation and not brittle fracture. Ductile deformation is not expected to cause the generation of a significant number of additional fragments or leakage through the pressure boundary as might occur in the case of brittle fracture. Based on the observed size of impeller fragments, clearances between the impeller and the pump case, the ductile nature of the materials involved, and the inertia of the impeller, jamming of the impeller by a fragment is considered highly unlikely. Impeller fragments may deform the impeller and/or the casing slightly, but would ultimately move out of the PCP. Consequently, there would be little effect on pump coastdown even if a piece broke off after a loss of electric power. In addition, the NRC Staff examined a limiting scenario: a failed PCP impeller that reduces the effectiveness of coastdown flow provided by the flywheel. While this failure is believed to be highly unlikely, it is bounded by the analysis provided in section 14.7.2, "Reactor Coolant Pump Rotor Seizure," of the PNP FSAR.

During the operability reviews in 2011 and 2014, the NRC Staff also reviewed the impacts of PCP impeller pieces on the PCS pressure boundary. Loss of

the pressure boundary because of potential impact was determined not to be a significant concern because of the pressure boundary thickness in comparison to the ductile piece dimensions and the small likelihood that significant impacts would occur. NRC Staff also examined another limiting scenario: a failure of the impeller, which could cause a break in the pump and a leak of the reactor coolant system. This failure of the pressure boundary is believed to be highly unlikely and may not be credible; however, it is bounded by the analysis provided in section 14.17.1, "Large Break LOCA [Loss-of-Coolant Accident]," of the PNP FSAR. NRC Staff also examined the effects of PCP impeller pieces passing through the PCS cold leg, including potentially impacting a resistance temperature detector (RTD) and causing pressure boundary damage. NRC Staff concluded that damage to the RTD resulting from an impeller piece contacting the RTD is not a significant safety concern. Dynamic flow analyses predicted that broken pieces from the pump would not contact the RTD. However, in the unlikely event that contact should occur, any interactions with RTD thermocouples would also be bounded by the large-break LOCA analysis or section 14.17.2, "Small Break LOCA," of the PNP FSAR. Based on these evaluations, the NRC Staff concluded that any consequence of a PCP impeller failure on the safety functions of the PCP is bounded by the current design-basis safety analyses.

Besides evaluating impacts on the PCP, NRC Staff also considered the potential impacts of a failed impeller on fuel. Impeller pieces are likely to remain stuck at the flow skirt or at the bottom of the RV, as evidenced by the discovery of previous pieces. This is because flow conditions were insufficient to elevate the pieces that reached the bottom of the RV and, therefore, those pieces would be expected to sit at the flow skirt or on the bottom of the RV. Because all of the instrumentation and control blades enter through the top of the reactor vessel, no components are in the bottom of the RV for these larger impeller pieces to interact with and, therefore, they do not pose a safety risk. Although any piece that would become lodged at the flow skirt or the lower core support plate would cause a local flow disturbance, that disturbance would have long decayed away because of mixing and crossflow by the time the flow reaches the active fuel region of the core.

During evaluation of the Licensee's operability determination regarding the wedged piece of impeller, NRC Staff did recognize that very small pieces of the impeller could make it through the flow skirt and may interact with the fuel. However, interaction between small metal pieces and the fuel is possible in any reactor under any conditions. Although fuel failures do exist in the nuclear industry, these failures result from entirely different interactions with entirely different mechanisms. Fuel failures caused by small metal fragments, other than wires, have not been observed. Therefore, the likelihood of small impeller pieces causing fuel failure is very small. In addition, a clad failure caused by these small fragments would be similar to fretting-induced failures seen at operating reactors.

If such a failure were to occur, it would be detectable through increased activity levels in the PCS. Radiation monitoring would detect this increase in PCS activity levels, and provide the Licensee adequate time to take actions that minimize the impact of the fuel failure. If the failure progresses, the reactor would be shut down in accordance with the Licensee's Technical Specification 3.4.16, "PCS Specific Activity" (ADAMS Accession No. ML052720263).

In the Petitioner's supplement to the petition dated May 21, 2014, the Petitioner postulated that impeller failure could result in erosion of the PCS piping. In considering this potential degradation mechanism, it is important to recognize that erosion is a mechanical wear process that generally occurs in two-phase flows and results in loss of material from the pipe because of repeated impact of impinging particles. It is also important to recognize that a few impacts from relatively large pieces of debris that may result in damage to piping are not erosion and has been addressed above. In the present case, the PCS flow is designed to be a single liquid phase (i.e., second-phase particles such as those which could be generated by an impeller failure are not present). Past operating history indicates that flow through the PCS in the absence of contaminating particles, such as those which could be generated from an impeller, does not result in erosion. However, the velocity of the flow in the PCS is such that, in the presence of second-phase particles, the potential for erosion could exist. During evaluation of the 2011 vibration event, NRC Staff evaluated this potential and concluded that the probability that erosion will occur as a result of impeller failure is extremely low because: (1) the number of particles generated in the appropriate size range to cause erosion would be very small, (2) those particles generated would quickly settle out of the flow stream in low-velocity areas, and (3) the particles generated would have hardness values similar to the piping material in which the erosion is postulated resulting in minimal material removal per impact. In combination, these observations indicate that in the event of an impeller failure, few particles of the appropriate size would be generated, few impacts between the particles and the subject piping would occur, and minimal material removal would occur as a result of each impact. Based on the very limited potential for erosion that could exist because of an impeller failure, NRC Staff concludes that PCP impeller pieces causing erosion of the PCS piping walls is not a significant safety concern. Furthermore, in the unlikely event that erosion should result in a failure of the PCS, the event would be bounded by the LOCA analyses identified above.

In conclusion, NRC Staff recognizes that PCP-B remains in operation with a refurbished impeller that is more susceptible to fatigue-related failures. NRC Staff has conducted independent analyses of potential scenarios where impeller pieces have broken off and concluded that any consequence would be within the design basis of PNP. NRC Staff also concludes that based on the considerations above, there is reasonable assurance that the operation of PNP will not endanger the health and safety of the public. Based on the analysis and the safety significance

of potential impeller pieces, NRC concludes the Petitioner's request to order PNP to open every PCP for inspection and clear up all flaws is unwarranted. Therefore, the NRC denies the Petitioner's request.

**B. Request 2: Request for PNP to Replace the PCPs with Others
Designed for Their Intended Duty**

NRC Decision

On August 8, 2012, Region III documented a finding of very low safety significance and an associated noncited violation for the failure of the Licensee to operate the PCPs in accordance with their design operating criteria (ADAMS Accession No. ML12221A340). The Licensee concluded that the causes of the failures are fatigue-related effects from the operation of the pumps in conditions beyond the maximum flow rates and below the minimum net positive suction head (NPSH) recommendations as described in the PNP FSAR and other design documentation. Cyclic pressure pulses and stresses are created under these reduced pressure conditions that act on the leading edges of the impellers, which can lead ultimately to vane cracking and the release of impeller fragments. The Licensee noted, based on metallurgical examination of fragments, previous pump inspection findings, and the mechanism by which the cracks propagate, that weld-refurbished impellers were particularly susceptible to degrading to a point where a piece could be released. At normal operating temperature and pressure, there is adequate NPSH on all PCPs, such that these added stresses are not present. These conditions are present when operating only one or two PCPs during reduced temperatures and pressures (typically during startup and shutdown activities). As a result, the Licensee has instituted a monitoring plan, considered the preferred sequence for starting/stopping PCPs during startups and shutdowns, and has corrective actions to further explore procedure changes regarding operation of the PCPs and the resultant effect on other aspects of plant operation.

Currently, the Licensee replaced three of the four PCP impellers with newly manufactured impellers. The Licensee implemented compensatory actions to minimize operating the PCPs under low-head and high-flow conditions and established steps to consider sequencing the PCPs in a manner that prevents excessive fatigue. NRC Staff notes that impellers repaired by welding may be, but not necessarily are, more prone to failure. NRC Staff reviewed the Licensee's implemented corrective actions to date and concludes they are appropriate in the interim while the Licensee is working toward a long-term solution. NRC Staff will continue the review of the Licensee's corrective actions going forward to determine whether the Licensee plans to eliminate the known susceptibility of impeller pieces breaking off and to correct the noncited violation described in the August 8, 2012, inspection report. In addition, as detailed in its decision to

Request 1, above, the Staff concludes that there is no significant safety concern which would pose a danger to public health and safety, or the environment. Therefore, the NRC denies the Petitioner's request to order PNP to replace the PCPs with others designed for their intended duty.

**C. Request 3: Request an Office of the Inspector General (OIG)
Inspection on Why Different NRC Regions Have Different Analysis
Criteria for Similar PCP Events**

NRC Decision

The Petitioner's request has been forwarded on to the OIG.

NRC Staff monitors similar instances of PCP failures through the Operating Experience Program administered by the Office of Nuclear Reactor Regulation, Division of Inspection and Regional Support, which collects, evaluates, and communicates operating experience, and applies lessons learned. NRC Staff notes there have been plants in other NRC regions where broken parts originated from the PCPs. For example, Salem Nuclear Generating Station, Unit 2 (Salem), recently encountered bolt failures because of stress corrosion cracking that resulted in bolt heads traveling to the lower core support plate. The issues experienced at PNP involved the PCP impellers, which is different than the bolting issues experienced at Salem; therefore, NRC Staff analysis was specific to the phenomenon of PCP impeller pieces. Following the events of Salem, the NRC Staff considered bolting issues at PNP and determined that PNP does not have a similar bolt configuration which would necessitate the application of similar analysis criteria.

D. Request 4: Request a \$10 Million Fine over These Events

NRC Decision

Section 2.3.4, "Civil Penalty," of the NRC Enforcement Policy (ADAMS Accession No. ML13228A199) describes the NRC's policy of imposing graduated civil penalties taking into account the gravity of the violation as the primary consideration and the ability to pay as a secondary consideration. Civil penalties are considered for all Severity Level I, II, and III violations. The noncited violation for the failure of the Licensee to operate the PCPs in accordance with their design operating criteria documented in the PNP Integrated Inspection Report dated August 8, 2012, does not meet the threshold for civil penalties under the NRC's Enforcement Policy. In addition, the NRC Staff reviewed the petition and did not find any information that would warrant issuance of additional violations related

to PCPs. Therefore, the NRC denies the Petitioner's request to impose a \$10 million fine on the Licensee.

E. Request 5: Request for PNP to Return to Yellow or Red Status and for the NRC to Intensify Its Monitoring of PNP

NRC Decision

The Reactor Oversight Process (ROP) Action Matrix reflects performance issues at the plant. More information regarding the ROP Action Matrix can be found at http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/actionmatrix_summary.html. The ROP integrates the NRC's inspection, assessment, and enforcement programs. The fundamental building blocks that form the framework for the regulatory oversight process are seven cornerstones of safety: initiating events, mitigating systems, barrier integrity, emergency preparedness, occupational radiation safety, public radiation safety, and security. These cornerstones have been grouped into three strategic areas: reactor safety, radiation safety, and safeguards. This framework is based on the principle that the agency's mission of assuring public health and safety is met when the agency has reasonable assurance that licensees are meeting the objectives of the seven cornerstones of safety. The reactor inspection program is an integral part, along with performance indicators (PIs), assessment, and enforcement, of the ROP. Acceptable performance in the cornerstones, as measured by the PIs and the risk-informed baseline inspection program, is indicative of overall licensee performance that provides for adequate protection of public health and safety.

The NRC determined the performance at PNP during the most recent quarter was within the Regulatory Response Column of the NRC's ROP action matrix due to a White finding in the Occupational Radiation Protection cornerstone and because all remaining inspection findings had very low (i.e., Green) safety significance, and all PIs indicated that the Licensee's performance was within the nominal, expected range (i.e., Green). Added information regarding PNP's plant assessments and inspection findings can be found at http://www.nrc.gov/NRR/OVERSIGHT/ASSESS/PALI/pali_chart.html. NRC inspectors will continue to monitor the Licensee's corrective actions to date and going forward to determine whether the Licensee plans to eliminate the known susceptibility of impeller pieces breaking off. Any other findings will be documented in future inspection reports and will contribute to the plant assessment under the ROP.

The NRC Staff reviewed the inspection efforts to date, and does not find that more inspections beyond what has already been scheduled are necessary. As discussed in the NRC response to Request 1, NRC Staff concludes that there is reasonable assurance that operating PNP will not endanger the health and safety of the public. For these reasons, the Staff does not find that the PCP

impeller issues necessitate moving PNP into a higher ROP Action Matrix Column requiring additional regulatory oversight. Therefore, the NRC denies the request to intensify monitoring at PNP.

III. CONCLUSION

The NRC evaluated the Petitioner's concerns, including comments received on the proposed director's decision. The NRC forwarded the Petitioner's request for an OIG inspection on why different NRC regions have different analysis criteria for similar PCP events to the OIG. The NRC found no basis for taking the requested enforcement-related actions against PNP; thus, the NRC denies the petition. NRC Staff did not find that the continued operation of PNP would adversely affect public health and safety. The NRC determined that the Licensee's actions to date are adequate and there is reasonable assurance that the operation of the PNP will not endanger the health and safety of the public. For the performance deficiencies and inspection findings that the NRC has identified at PNP, the agency will continue to monitor the progress of the Licensee's completion of corrective actions through planned inspections consistent with the NRC's ongoing reactor oversight process. Therefore, no further action is required for this petition.

Consistent with 10 C.F.R. § 2.206(c), the NRC Staff will file a copy of this final Director's Decision with the Secretary of the Commission for the Commission to review. As provided for in 10 C.F.R. § 2.206(c)(1), the final Director's Decision will constitute the Commission's final action within 25 days of the date of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE U.S. NUCLEAR
REGULATORY COMMISSION

Jennifer Uhle, Deputy Director,
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 6th day of April 2015.

ATTACHMENT 1

COMMENTS RECEIVED FROM THE PETITIONER ON THE PROPOSED DIRECTOR'S DECISION DATED JANUARY 23, 2015

The U.S. Nuclear Regulatory Commission (NRC) sent a copy of the proposed director's decision to Mr. Michael Mulligan (the Petitioner), for comment on January 23, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14338A435). The Petitioner responded with comments on January 26, 29, and 30, 2015 (ADAMS Accession Nos. ML15035A217, ML15035A218, and ML15035A219, respectively). The NRC's response to the comments received is provided below:

Comment 1 (Summarized)

The NRC did not explain a scenario where impeller blades are flung off of the shaft creating a vibration event. The Petitioner postulates that the Licensee may continue to run the pump and the vibration event damages all the primary coolant pump (PCP) seals and creates a loss-of-coolant accident. The Petitioner cites a 1984 incident at Palisades Nuclear Plant (PNP) during which the bolts and guide pins that secure the impeller to the shaft had been severely damaged and three of the PCP seals had failed. Other details of this incident can be found in Information Notice No. 85-03 (Legacy ADAMS Accession No. 8501100655).

Response

The NRC reviewed the information the Petitioner supplied and requested more information from the Licensee regarding the 1984 incident detailed in Information Notice No. 85-03. The NRC Staff concludes the following:

- (1) Because of changes in the pump seal package design, a three-stage seal failure similar to the 1984 incident is not likely.
- (2) Because of changes in the instrumentation and plant procedures used to monitor PCP vibration, exceeding the design vibration limits established for the current pump seal package is not likely.

More information is provided below.

The NRC notes that the PCP seals at PNP have been changed to an improved seal design that can withstand the primary coolant system (PCS) operating pressure at each of the first three stages. Pump manufacturers developed more robust seals as operating experience was gained, harsh operating environments

were better understood, and analysis technology improved. The seals on PCP-A, -C, and -D were changed from the Byron-Jackson SU-type shaft seal cartridges to the N-9000 design in September 1999. The PCP-B seal was changed to the N-9000 seal design in February 2000. Therefore, a similar scenario where three stages of the PCP seals failed because of a similar vibration event as seen at PNP in 1984 is unlikely because of the upgraded, more robust seal packages.

During NRC Staff review of Information Notice No. 85-03, the Staff also compared the vibration levels during the 1984 incident with the vibration levels during the 2011 vibration event. The Staff noted that the 1985 information notice indicated vibration levels reached the “danger” level of 10 mils using the vibration monitoring system in place in 1984. NRC Staff also noted that during the 2011 vibration incident, the vibration levels on PCP P-50C increased slightly from 10.5 mils to 12 mils, remained steady for approximately 25 hours, and then increased to 22 mils for less than 3 seconds, before stabilizing at approximately 10 mils. The Staff requested further information from the Licensee to determine if the vibration seen during both events was comparable. During the same time as the seal package modifications, the instrumentation used to measure vibration was modified, which resulted in a change in the vibration reference levels. The vibration seen during the 1984 incident (approximately 10 mils) translates to a higher vibration seen by the instrumentation at PNP today, not because of greater vibration but because the vibration probes were relocated from the PCP motor frame to the pump seal area. With the current seal package and instrumentation location, the normal operating vibration seen at the plant ranges from 5 to 13 mils. The NRC Staff confirmed with Flowserve, the PCP vendor, the normal operating vibration seen at the plant and the increased levels seen during the 2011 vibration event (22 mils) are bounded by the design of the current seal package. Twenty-two mils is below the Flowserve recommended shutdown limit of “amplitude exceeds 25 mils.” NRC Staff also notes that the Licensee has abnormal operating procedures that are followed during PCP vibration events. These procedures dictate actions the Licensee must take, including shutdown of the reactor, in response to high vibration. Therefore, the vibration levels seen recently would not cause pump seal failure similar to the 1984 event detailed in Information Notice 85-03.

Lastly, as discussed in the final director’s decision, the NRC Staff reviewed the impacts of PCP impeller pieces on the PCS pressure boundary and the worst-case scenario where a failure of the impeller would cause a break in the pump and a leak of the PCS. As stated in the final director’s decision, this is believed to be highly unlikely and may not be credible; however, it is bounded by the analysis provided in section 14.17.1, “Large Break LOCA,” of the PNP final safety analysis report (FSAR).

Comment 2 (Summarized)

The Petitioner questions if there are PCP impeller quality requirements that would preclude cracks and broken impeller blades in the future.

Response

Quality requirements for a component such as a PCP impeller are verified upon receipt by the Licensee, when a receipt inspection is performed to ensure what the Licensee ordered is what was received, and that the component is in the proper condition. Once installed, a post-maintenance test is conducted to ensure the component is operating as it should. Once in operation, periodic surveillances, inspections, and preventive maintenance activities are conducted to monitor for component degradation as required by codes, standards, and regulations. There are several technical specification surveillances at PNP that can assist in monitoring PCP performance. These are surveillance requirement (SR) 3.3.1.1, which requires a channel check of the PCS instrumentation every 12 hours; SR 3.3.1.5, which requires a channel functional test every 92 days; SR 3.3.1.8, which requires a channel calibration every 18 months; and SR 3.4.4.1, which requires verification of the operation of each PCS loop every 12 hours. Surveillance requirements 3.3.1.1, 3.3.1.5, and 3.3.1.8 are associated with the low PCS flow reactor trip signal and SR 3.4.4.1 is intended to verify adequate PCS loop operation.

In addition, 10 C.F.R. § 50.65, “Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,” requires licensees to monitor structures, systems, and components (SSCs) in a manner sufficient to provide reasonable assurance that the SSCs are capable of supporting their intended function. The PCS, including the PCPs, is scoped into the Licensee’s Maintenance Rule program, through which the Licensee monitors the health and performance of the system and its components and implements preventive maintenance programs.

Despite receipt inspections, component testing, and monitoring, the NRC has considered the potential consequences of a PCP impeller degradation or failure. The NRC has previously documented the basis for the conclusion that impeller pieces did not represent a safety concern, particularly in PNP Integrated Inspection Reports dated August 8, 2012, and May 7, 2014 (ADAMS Accession Nos. ML12221A340 and ML14127A543, respectively). Decreased flow that would result from a sufficiently degraded PCP impeller is one of the reactor protection system trip inputs, which would automatically shut down the reactor if insufficient flow is provided for plant operation. The PCPs are designed with a flywheel to provide a certain amount of coastdown flow when the pump trips. As discussed in the final director’s decision, the NRC Staff examined a limiting scenario where a failed PCP impeller reduces the effectiveness of coastdown flow

provided by the flywheel. The final director's decision states that this failure is believed to be highly unlikely; however, it is bounded by the analysis provided in section 14.7.2, "Reactor Coolant Pump Rotor Seizure," of the PNP FSAR.

Comment 3 (Summarized)

The Petitioner had the following enforcement related concerns:

- The Petitioner states that he considers the operating of the PCPs below the net positive suction head recommendations contrary to plant licensing and the FSAR.
- As a result of this assessment, the Petitioner questions why there have not been other violations issued to the Licensee such as violations related to the Licensee's corrective action program or Title 10 of the *Code of Federal Regulations* (10 C.F.R.) section 50.59, "Changes, Tests and Experiments."

Response

The NRC agrees with the Petitioner that the Licensee operated the PCPs contrary to plant licensing and the FSAR. The NRC addressed this in the integrated inspection report dated August 8, 2012, and issued a noncited violation of 10 C.F.R. Part 50, Appendix B, Criterion III. The inspection report states the following:

A finding of very-low safety significance (Green) and associated NCV of 10 CFR 50 Appendix B, Criterion III, Design Control, was identified by the inspectors for the failure to operate the PCPs in accordance with their design operating criteria. Specifically the PCPs were operated under conditions that allowed degradation of the leading edges of the pump impellers to occur, which resulted in fragments being released into the PCS.

During evaluation of the 2011 vibration event, the NRC considered PNP specific design information and operating experience from other regional offices, and determined the noncited violation for the failure of the Licensee to operate the PCPs in accordance with their design operating criteria, as documented in the August 8, 2012, integrated inspection report to be most appropriate. As stated in the final director's decision, the Licensee implemented corrective actions to evaluate changes regarding operation of the PCPs and the resultant impact on other aspects of plant operation. If the Licensee determines under which operating conditions the PCPs are deviating from their design operating criteria, and if any design changes are necessary to the plant, the NRC expects the Licensee

to comply with the requirements of 10 C.F.R. § 50.59 in the determination of whether a license amendment request is needed. The NRC will continue to monitor the progress of the Licensee's completion of corrective actions through planned inspections consistent with the NRC's ongoing reactor oversight process.

Comment 4 (Summarized)

The Petitioner has issues with the transparency of the OIG and with the NRC Staff documenting correspondence with the OIG.

Response

The OIG operates with personnel, contracting, and budget authority independent from that of the NRC. Information, including ways to contact them can be found at <http://www.nrc.gov/insp-gen.html>. As stated in the final director's decision signed by Dr. Jennifer Uhle, Deputy Director of the Office of Nuclear Reactor Regulation, the Petitioner's request for OIG inspection on why different NRC regional offices have different analysis criteria for similar PCP events has been forwarded to the OIG, as has this final director's decision.

Comment 5 (Summarized)

The Petitioner requests additional action from NRC Staff, including the following:

- An independent regional materials inspector review of all safety reports associated with the PCP broken-off blades and debris in the core.
- More comprehensive Licensee event reports (LERs) and inspection reports when reporting on PCP problems.

Response

As stated in the final director's decision, the NRC independently evaluated the license's operability determination during the October 2011 vibration event and during the 2014 refueling outage where a piece of impeller was found lodged between the reactor vessel and flow skirt. NRC Staff supporting the independent evaluation and NRC Staff selected as members of the PRB for this petition included Staff with significant materials and materials inspection expertise from Region III and from the following technical groups with NRR: the Component Performance, Non-Destructive Examination, and Testing Branch within the Division of Engineering; and the Reactor Systems Branch and the

Nuclear Performance and Code Review Branch within the Division of Safety Systems.

NUREG-1022, Revision 3, "Event Report Guidelines 10 CFR 50.72 and 50.73" (ADAMS Accession No. ML13032A220) offers guidance on the preparation of an LER. Inspection Manual Chapter 0612, "Power Reactor Inspection Reports" (ADAMS Accession No. ML12244A483) offers guidance on the preparation of inspection reports. NRC Staff notes that the Petitioner desires a more comprehensive LER and/or inspection report; however, those requests are outside the scope of the 10 C.F.R. § 2.206 process. Also, those requests do not have any bearing on the conclusions stated in the final director's decision.

The NRC Staff has determined that the comments provided by the Petitioner did not provide any relevant additional information and support for the petition that had not already been considered. Thus, the comments did not change the conclusion of the proposed director's decision, and the final director's decision denies the Petitioner's request for enforcement action. The NRC appreciates the Petitioner's comments and thanks the Petitioner for raising the concerns in the interest of protection of the health and safety of the public.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

**Docket Nos. 50-275
50-323**

**PACIFIC GAS AND ELECTRIC
COMPANY
(Diablo Canyon Nuclear Power
Plant, Units 1 and 2)**

May 21, 2015

LICENSE AMENDMENTS: ENFORCEMENT

Claims regarding inadequacies in a licensee's technical evaluations or noncompliance with its license, standing alone, do not suffice to identify an activity that may constitute a license amendment. Such concerns are appropriately addressed by the NRC Staff in the enforcement context.

LICENSE AMENDMENTS

Licensee action without an NRC approval of an increase in authority or alteration of the terms of the license does not constitute a *de facto* amendment.

REFERRAL OF PROCEEDINGS

Ordinarily, threshold hearing issues are decided by our Boards in the first instance.

SUSPENSION OF PROCEEDINGS

Although the agency has on occasion suspended final licensing decisions, these and other cases establish that a decision to do so is highly dependent upon the facts and requires a judgment that the significance of the matter raised is so substantial as to warrant suspension.

MEMORANDUM AND ORDER

We rule today on Friends of the Earth's petition for intervention and request for hearing in what Friends of the Earth characterizes as a *de facto* license amendment proceeding involving the operating licenses held by Pacific Gas & Electric Company for Diablo Canyon Power Plant Units 1 and 2.¹ Friends of the Earth asserts, *inter alia*, that the NRC is allowing PG&E to operate Diablo Canyon outside of the plant's licensing basis with respect to the analysis of new seismic data following discovery of the Shoreline Fault in 2008. Friends of the Earth also contends that the NRC's assessment of this new information is insufficient to assure that the plant can safely shut down in the event of an earthquake caused by nearby faults.

We refer a limited portion of the hearing request to the Atomic Safety and Licensing Board Panel to determine whether Friends of the Earth has identified an NRC activity that requires an opportunity to request an adjudicatory hearing pursuant to section 189a of the Atomic Energy Act of 1954, as amended (AEA). In addition, we deny portions of the hearing request but refer Friends of the Earth's underlying concerns to the Executive Director for Operations (EDO) for consideration pursuant to 10 C.F.R. § 2.206. Finally, we deny, without prejudice, Friends of the Earth's alternative request that we exercise our inherent supervisory authority to order a discretionary hearing.

¹ Petition to Intervene and Request for Hearing by Friends of the Earth (Aug. 26, 2014) (Hearing Request). Friends of the Earth also filed a petition to intervene in the *Diablo Canyon* license renewal proceeding, which also raised contentions associated with new seismic data; the Board denied the petition to intervene. LBP-15-6, 81 NRC 314 (2015); Friends of the Earth's Request for a Hearing and Petition to Intervene (Oct. 10, 2014). In addition, Friends of the Earth has a petition for review before the United States Court of Appeals for the District of Columbia Circuit in which Friends of the Earth challenges an asserted NRC final order relating to seismic analysis in connection with the Final Safety Analysis Report as Updated, Revision 21, for Diablo Canyon. *Friends of the Earth v. NRC*, No. 14-1213 (D.C. Cir. filed Oct. 28, 2014).

I. BACKGROUND

The seismic design basis of Diablo Canyon is complex.² A new fault, the Hosgri Fault, was identified during plant construction and the review of the operating license application for Diablo Canyon. That discovery led to an evaluation of certain aspects of the plant's design and to plant modifications to address the potential effects of earthquakes associated with the Hosgri Fault.³ In addition, a condition was added to the Unit 1 operating license which required that PG&E develop and implement a program to reevaluate the seismic design bases used for the plant.⁴ The operating licenses for Units 1 and 2 were issued in 1984 and 1985, respectively, and in the early 1990s the NRC Staff concluded that PG&E had satisfied the license condition.⁵

As relevant here, a fault close to Diablo Canyon, called the Shoreline Fault, was identified in 2008. The NRC Staff documented a preliminary assessment of the new information in 2009 and a further assessment in 2012.⁶ In its letter to PG&E summarizing the results of the NRC's 2012 Assessment,⁷ the Staff explained that it had concluded that ground motions from the Shoreline Fault are at or below those for which Diablo Canyon was evaluated previously and that the Staff was placing its evaluation of the Shoreline Fault into the context of the reevaluation of seismic hazards that was under way for all operating nuclear power reactors in connection with post-Fukushima lessons learned.⁸

² See, e.g., LBP-79-26, 10 NRC 453 (1979); ALAB-644, 13 NRC 903 (1981); CLI-84-13, 20 NRC 267 (1984); CLI-85-14, 22 NRC 177 (1985).

³ See ALAB-644, 13 NRC at 909-14; LBP-79-26, 10 NRC at 490.

⁴ See CLI-85-14, 22 NRC at 179 (this condition provides assurance "that the seismic design of Diablo Canyon will be subject to continued scrutiny"). In this decision, we consider Friends of the Earth's assertions as relating to the plant as a whole — that is, as assertions relating to both operating licenses, even though the seismic license condition resides in the Unit 1 operating license.

⁵ Boger, Bruce A., NRC, Letter to J.D. Shiffer, PG&E (June 6, 1991) (ADAMS Accession No. ML14279A124 (package)); Rood, Harry, NRC, Letter to Gregory M. Rueger, PG&E (Apr. 17, 1992) (ADAMS Accession No. ML14279A132); see also NRC Staff Answer to Petition to Intervene and Request for Hearing by Friends of the Earth (Oct. 6, 2014) at 4-5 (Staff Answer).

⁶ Research Information Letter 09-001, Preliminary Deterministic Analysis of Seismic Hazard at Diablo Canyon Nuclear Power Plant from Newly Identified "Shoreline Fault" (Apr. 2009) (ADAMS Accession No. ML090330523); Research Information Letter 12-01, Confirmatory Analysis of Seismic Hazard at the Diablo Canyon Power Plant from the Shoreline Fault Zone (Sept. 2012) (ADAMS Accession No. ML121230035) (2012 Assessment).

⁷ Sebrosky, Joseph M., NRC, Letter to Edward D. Halpin, PG&E, "Diablo Canyon Power Plant, Unit Nos. 1 and 2 — NRC Review of Shoreline Fault" (Oct. 12, 2012), at 1 (ADAMS Accession No. ML120730106).

⁸ See generally 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

(Continued)

Friends of the Earth challenges NRC's activities related to the analysis of the Shoreline Fault. First, Friends of the Earth contends that it is entitled to a public hearing under AEA section 189a because the NRC is in effect granting a license amendment that has significant safety implications. As supporting evidence, Friends of the Earth states that the NRC is permitting PG&E to use methodologies and assumptions not prescribed in the operating licenses, thereby sidestepping an opportunity for hearing.⁹ It also asserts that PG&E and the NRC Staff have admitted that a license amendment is necessary in connection with the submission of PG&E's License Amendment Request 11-05, which was subsequently withdrawn.¹⁰ Second, Friends of the Earth contends that the Staff's "determination that the new seismic information, including the Shoreline Fault earthquake and its effect on the San Luis Bay and Los Osos Faults, is a lesser-included case within the Hosgri Earthquake[,] is insufficient to [e]nsure that Diablo Canyon is operating . . . with an adequate margin of safety."¹¹

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) (ADAMS Accession No. ML12053A340) (Section 50.54(f) Request). After receiving the NRC's letter, PG&E withdrew an earlier License Amendment Request (LAR), LAR-11-05, "Evaluation Process for New Seismic Information and Clarifying the Diablo Canyon Power Plant Safe Shutdown Earthquake" (Oct. 20, 2011) (ADAMS Accession No. ML11312A166), with the justification that it had been mooted by the 50.54(f) request and the guidance in the October 2012 NRC letter to PG&E. *See* Allen, Barry S., PG&E, Letter to U.S. NRC Document Control Desk, "Withdrawal of License Amendment Request 11-05, Evaluation Process for New Seismic Information and Clarifying the Diablo Canyon Power Plant Safe Shutdown Earthquake" (Oct. 25, 2012) at 2 (ADAMS Accession No. ML12300A105); *see also* Pacific Gas and Electric Company's Answer to Friends of the Earth Hearing Request (Oct. 6, 2014) at 16 (PG&E Answer); Declaration of Mr. William R. Horstman in Support of Pacific Gas & Electric Company's Answer Opposing Friends of the Earth's Request for Hearing (Oct. 6, 2014) at 13.

⁹ Hearing Request at 33.

¹⁰ *Id.* at 34-38, 41-43; *see supra* note 8.

¹¹ Hearing Request at 47. The Petition relies extensively on a 2013 Differing Professional Opinion (DPO) by Dr. Michael Peck who previously served as a Senior Resident Inspector at Diablo Canyon. *See, e.g.*, Hearing Request at 2-3, 23-25, 61-63. Dr. Peck, in his DPO, had recommended enforcement action and asserted, among other things, that a license amendment is required to revise the "double design earthquake" evaluation to higher ground motions associated with new seismic information. *See* DPO Case File for DPO-2013-002, Document 8, DPO Appeal Decision (Sept. 9, 2014) at 3-4 (ADAMS Accession No. ML14252A743) (DPO Case File). The DPO Case file is a single ADAMS file with eight separate documents. An Ad Hoc Review Panel, convened to review the DPO, concluded that PG&E used an acceptable method in its evaluation of the Shoreline Fault Zone, found no significant or immediate concerns relating to the NRC's understanding of the new seismic information, and identified no potential violation of 10 C.F.R. § 50.59. (Section 50.59 sets forth the types of changes, tests, or experiments that may be undertaken without prior NRC approval as well as those that would require a license amendment. *See* 10 C.F.R. § 50.59(c).) The Director of the Office of Nuclear Reactor Regulation agreed with these technical findings, and the Executive Director for

(Continued)

The Staff and PG&E oppose the request for hearing.¹² The Staff argues that Friends of the Earth has not identified a 10 C.F.R. § 50.90 license amendment application or a completed NRC action that effectively amends the Diablo Canyon operating licenses to allow PG&E to operate the plant in a greater capacity than prescribed in the licenses.¹³ The Staff also argues that the expressed concerns about safety, the licensee's compliance with regulatory requirements, and the adequacy of NRC oversight are appropriately addressed as requests for enforcement action pursuant to 10 C.F.R. § 2.206.¹⁴ In addition, the Staff asserts that Friends of the Earth has not demonstrated standing to intervene, has not demonstrated that its intervention petition is timely, and has not shown that a discretionary hearing is warranted.¹⁵

PG&E argues, among other things, that Friends of the Earth mischaracterizes the Diablo Canyon seismic licensing basis and that there is no pending licensing amendment proceeding, *de facto* or otherwise.¹⁶ PG&E also responds that it has established that Diablo Canyon can be shut down safely following an earthquake on the Shoreline, San Luis Bay, and Los Osos faults.¹⁷ In addition, PG&E asserts that the petition is inconsistent with the ongoing NRC process for reevaluation of seismic hazards and seismic licensing bases and that any plant or licensing basis changes found to be necessary, or any required license amendments (together with associated hearing opportunities), will be identified in due course in accordance with NRC processes and regulations.¹⁸

II. DISCUSSION

Friends of the Earth requests that we take three actions: (1) that we grant Friends of the Earth's intervention in the asserted *de facto* license amendment

Operations determined on appeal by Dr. Peck that he was unable to arrive at the same conclusion as Dr. Peck with regard to the exclusion of the Hosgri evaluation and associated methodologies from the licensing basis. DPO Case File, Document 8, DPO Appeal Decision at 4-5.

¹² Staff Answer at 2-3; PG&E Answer at 1, 31; *see also* Nuclear Energy Institute Motion for Leave to File *Amicus Curiae* Brief (Oct. 6, 2014) (NEI Motion). NEI represents that PG&E supports its motion, Friends of the Earth does not oppose it, and the NRC Staff did not object to the filing but reserved the right to respond. NEI Motion at 1 n.2. Our referral to the Atomic Safety and Licensing Board Panel includes NEI's request.

¹³ Staff Answer at 2-3.

¹⁴ *Id.* *See generally* 10 C.F.R. § 2.206(a) ("Any person may file a request to institute a proceeding pursuant to § 2.202 to modify, suspend, or revoke a license."). The Commission on its own motion may review that decision. *Id.* § 2.206(c).

¹⁵ Staff Answer at 2-3.

¹⁶ PG&E Answer at 1-2, 16-17.

¹⁷ *Id.* at 24-31.

¹⁸ *Id.* at 2.

proceeding; (2) that we empanel an Atomic Safety and Licensing Board to conduct a public adjudicatory hearing to determine whether Diablo Canyon can shut down safely in light of the effect of potential earthquakes that could affect the plant; and (3) that we order PG&E to suspend operations pending a determination, following a public hearing, that Diablo Canyon can be safely operated in accordance with any necessary amendments.¹⁹ We address these requests in turn.

A. Request for Hearing on the Asserted *De Facto* License Amendment

Friends of the Earth's hearing request points to several events and ongoing activities that it cites as evidence of an ongoing *de facto* license amendment proceeding. These include the activities associated with the following NRC correspondence: (1) the NRC Staff's March 2012 request for information to all power plant licensees pursuant to 10 C.F.R. § 50.54(f); (2) Research Information Letter 12-01 (Sept. 2012), which documented the Staff's assessment of the new Shoreline Fault information; and (3) the NRC Staff's October 2012 letter to PG&E that summarized the results of the 2012 assessment and placed the Staff's further review of new information in the context of the NRC's section 50.54(f) letter requesting seismic reevaluations by all power reactor licensees.²⁰

We refer a portion of the hearing request to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel. The scope of the referral is limited to whether the NRC granted PG&E greater authority than that provided by its existing licenses or otherwise altered the terms of PG&E's existing licenses, thereby entitling Friends of the Earth to an opportunity to request a hearing pursuant to AEA § 189a.²¹

PG&E and the Staff argue that Friends of the Earth is challenging only NRC oversight and enforcement of Diablo Canyon's licenses and related requirements rather than an actual *de facto* amendment of those licenses.²² We emphasize that claims regarding inadequacies in a licensee's technical evaluations or noncom-

¹⁹ Hearing Request at 7.

²⁰ *Id.* at 14-18, 21-22, 32-33, 42.

²¹ See *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 326-28 (1996) (comparing *Citizens Awareness Network, Inc. v. NRC*, 59 F.3d 284, 295 (1st Cir. 1995) (the agency had expressly altered the policy and application of 10 C.F.R. § 50.59 as it related to decommissioning activities, permitting the licensee to dismantle major structural components without prior NRC approval of a final decommissioning plan), with *Massachusetts v. NRC*, 878 F.2d 1516 (1st Cir. 1989), and *In re Three Mile Island Alert, Inc.*, 771 F.2d 720 (3d Cir. 1985) (NRC approvals of plant restart and lifting suspension did not trigger AEA § 189a hearing rights)). And we have recently issued two decisions providing additional direction in this area. *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), CLI-14-11, 80 NRC 167 (2014); *Omaha Public Power District* (Fort Calhoun Station, Unit 1), CLI-15-5, 81 NRC 329 (2015).

²² See, e.g., Staff Answer at 2-3; PG&E Answer at 18-20.

pliance with its license, standing alone, do not suffice to identify an activity that may constitute a license amendment.²³ Such concerns are appropriately addressed by the NRC Staff in the enforcement context. As we have recently held, licensee action without an NRC approval of an increase in authority or alteration of the terms of the license does not constitute a *de facto* amendment.²⁴

We note that, in its reply to the PG&E and Staff answers, Friends of the Earth asserts that the Staff has “approved” PG&E’s Final Safety Analysis Report Update, Revision 21, and this action, standing alone, grants PG&E greater operating authority and alters the terms of the operating licenses.²⁵ Elsewhere, Friends of the Earth refers to the asserted approval of Revision 21 as a “confirmation” of the *de facto* license amendment proceeding that is referenced in the hearing request.²⁶ The Board, as part of its consideration of this matter (including the timeliness of the arguments raised in the reply), should provide an opportunity for the Staff and PG&E to respond to these assertions.

In addition, this referral includes such threshold issues as standing, timeliness, and satisfaction of contention admissibility standards in accordance with 10 C.F.R. § 2.309.²⁷ Finally, we direct the Board to rule on whether Friends of the Earth’s hearing request should be granted within 140 days of the date of this decision.²⁸

²³ See *St. Lucie*, CLI-14-11, 80 NRC at 173 (“A licensee cannot amend the terms of its license unilaterally. Agency approval or authorization is a necessary component of Commission action that affords a hearing opportunity under section 189a, but not all agency approvals granted to licensees constitute *de facto* licensee amendments.”) (citations omitted).

²⁴ *Id.* (rejecting the petitioners’ premise that a series of Staff communications relating to plant oversight should be considered as an element of a single, overarching *de facto* license amendment since “only certain activities trigger the opportunity for a hearing”).

²⁵ Friends of the Earth’s Reply to NRC Staff’s and Pacific Gas & Electric Company’s Answers and Proposed Amicus Curiae Nuclear Energy Institute’s Brief in Response to Petition to Intervene and Request for Hearing (Oct. 14, 2014) at 11-19 (Friends of the Earth Reply).

²⁶ *Id.* at 4.

²⁷ The participants and the Board should assign no significance to the fact that we are not ruling on Friends of the Earth’s hearing request ourselves. We note that we have ruled recently on other hearing requests related to asserted *de facto* license amendments and in so doing have broadened our line of cases on what does — and does not — constitute a *de facto* license amendment. See *St. Lucie*, CLI-14-11, 80 NRC 167; *Fort Calhoun*, CLI-15-5, 81 NRC 329. But ordinarily, threshold hearing issues are decided by our Boards in the first instance. *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-13-9, 78 NRC 551, 560 & n.36 (2013) (“Licensing boards are the appropriate finders of fact in most circumstances; referral of a matter for a fact-specific dispute occurs in the ordinary course of business.”).

²⁸ This time line is informed by our model milestones. See 10 C.F.R. Part 2, App. B, II. “Model Milestones for Hearings Conducted Under 10 CFR Part 2, Subpart L” (providing for a decision by the presiding officer on intervention petitions and admission of contentions within 140 days of publication of the notice of opportunity for hearing in the *Federal Register*).

B. Adjudicatory Hearing on Ability to Shut Down Safely

Throughout its petition, Friends of the Earth raises questions about the operational safety of Diablo Canyon in connection with the potential effects of earthquakes that could occur along nearby faults. As noted above, Friends of the Earth specifically challenges the NRC's confirmatory assessment in 2012 that the Shoreline Fault scenario should be considered as a lesser included case under the Hosgri evaluation. In this vein, Friends of the Earth requests that we empanel a Licensing Board to conduct a public adjudicatory hearing on whether Diablo Canyon can shut down safely in the event of nearby earthquakes that would affect the plant.²⁹

We deny the request for a hearing on operational safety and safe shutdown but refer Friends of the Earth's concerns to the Executive Director for Operations to address as a request for enforcement action pursuant to 10 C.F.R. § 2.206.³⁰ Friends of the Earth objects in advance to any such referral,³¹ but a request for a hearing on safety concerns and for a safe operation determination falls squarely within the purposes of a request for enforcement action.³²

C. Suspension of Operations Pending Hearing and Safety Determination

We turn now to Friends of the Earth's request that the NRC order PG&E to suspend operations pending a determination, following a public hearing, that Diablo Canyon can be safely operated under its amended licenses.³³ Although the agency has on occasion suspended final licensing decisions,³⁴ these and other cases

²⁹ Hearing Request at 7.

³⁰ We recognize that the Executive Director for Operations has considered at length and rejected the Differing Professional Opinion (DPO) from which Friends of the Earth draws support. *See* DPO Case File, Document 8, DPO Appeal Decision (Sept. 9, 2014). But the hearing request and the DPO are not identical, and seismic reevaluation is ongoing.

³¹ *See, e.g.*, Friends of the Earth Reply at 24-26. Friends of the Earth acknowledges that the section 2.206 process is designed to initiate a proceeding to amend, revoke, or suspend a license but asserts that the process is not sufficient to respond to a challenge to a *de facto* license amendment proceeding that has already been initiated. *Id.* Yet, Friends of the Earth infuses its hearing request with assertions that challenge whether Diablo Canyon can be shut down safely in light of seismic issues and whether continued operation should be allowed. Moreover, we are referring the asserted *de facto* license amendment, as limited above, for consideration by a Licensing Board.

³² We have previously rejected an assertion by Friends of the Earth that the section 2.206 process does not provide a viable forum for relief. *See Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-12-20, 76 NRC 437, 439-40 (2012); *accord St. Lucie*, CLI-14-11, 80 NRC at 179.

³³ Hearing Request at 26-27.

³⁴ *See Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 67 & n.7 (2012).

establish that a decision to do so is highly dependent upon the facts and requires a judgment that the significance of the matter raised is so substantial as to warrant suspension.³⁵ In the instant case, Friends of the Earth has made no showing of an imminent health and safety threat.³⁶ Moreover, the seismic design issues at Diablo Canyon have been the subject of extensive licensee and Staff review, as illustrated by the evaluations already completed, the close consideration given to the DPO by NRC Staff, and the ongoing analysis and review pursuant to the section 50.54(f) Request, the purpose of which is “to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.”³⁷

For these reasons, we also deny the suspension request but refer Friends of the Earth’s underlying concerns to the Executive Director for Operations for consideration under section 2.206 as a request to institute a proceeding to “modify, suspend or revoke a license.”³⁸

D. Friends of the Earth’s Request for a Discretionary Hearing

Friends of the Earth argues that, should we determine that a hearing is not required in this matter, we should nonetheless grant a discretionary hearing to “insure that the seismic analysis of the Shoreline Fault complies with the Atomic Energy Act,” to “assure the public that the plant is safe to operate,” and to effectuate “the Commission’s policy of transparency.”³⁹ The Staff argues that Friends of the Earth has not shown that a discretionary hearing is warranted.⁴⁰

We find no reason to bypass our normal process by ordering a discretionary adjudicatory hearing when it has not been determined that one is required under section 189a of the Atomic Energy Act. If the Licensing Board determines that a hearing in this matter should be granted, then there will be no need to consider whether to grant a discretionary hearing. Alternatively, commencing an

³⁵ See, e.g., *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71 (2014); *Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 152-57, 161-65 (2011).

³⁶ Indeed, in the DPO upon which Friends of the Earth relies, Dr. Peck agreed that the “issues raised in the DPO did not result in a significant or immediate safety concern.” DPO Case File, Document 5, DPO Appeal Submission at 7.

³⁷ 10 C.F.R. § 50.54(f).

³⁸ *Id.* § 2.206. Although we refer to the Executive Director for Operations the safety-related and oversight-related assertions that most clearly fall within the scope of the Staff’s ongoing oversight and enforcement responsibilities, we do not prejudge whether the portions of the Hearing Request referred to the Panel warrant a licensing hearing apart from the Staff’s ongoing oversight and consideration of any need for related licensing or enforcement action. Our three-judge Licensing Boards have the necessary tools to more fully address these portions of the Hearing Request.

³⁹ Hearing Request at 70.

⁴⁰ NRC Staff Answer at 53-54.

adjudicatory hearing now when one is not otherwise required could disrupt the ongoing seismic analysis and review for Diablo Canyon and could undermine the established process for challenges to Staff oversight and requests for amendment or revocation of a license.

For these reasons, we deny the request for a discretionary hearing, but this denial is without prejudice to the renewal of such a request.⁴¹

III. CONCLUSION

For the reasons discussed above, we (1) *refer* the request for hearing on the asserted *de facto* amendment to the Panel for consideration under AEA § 189a (42 U.S.C. § 2239(a)) and 10 C.F.R. § 2.309; (2) *deny* the request for an adjudicatory hearing on operational safety and safe shutdown but *refer* the concerns underlying that request, including asserted violations of the plant's licensing basis and asserted lack of demonstrated capability for safe shutdown to the Executive Director for Operations for consideration under 10 C.F.R. § 2.206; and (3) *deny* the request to suspend plant operations but *refer* the concerns underlying that request to the Executive Director for Operations, also for consideration under 10 C.F.R. § 2.206. We *deny* without prejudice Friends of the Earth's request for a discretionary hearing.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 21st day of May 2015.

⁴¹ We note, however, that to the extent that Friends of the Earth seeks discretionary intervention under 10 C.F.R. § 2.309(e), intervention as a matter of discretion is permitted only where at least one petitioner has established standing and at least one admissible contention has been admitted, and a petitioner is required to address six factors in its initial petition. *See St. Lucie*, CLI-14-11, 80 NRC at 179 n.60.

Additional Views of Chairman Burns

With regard to the issues raised in Commissioner Svinicki's dissent, I have confidence in the Atomic Safety and Licensing Board's ability to effectively and efficiently adjudicate this case. While it is necessary and prudent for the Commission to provide clarity and direction to the Board where needed, the Commission has done just that in the recent *St. Lucie* and *Fort Calhoun* decisions. Judicial economy is served by referring this matter in the first instance to the Board for resolution.

Additional Views of Commissioner Ostendorff

While I share Commissioner Svinicki's concerns about the scope of the review undertaken by the Board in the *San Onofre* case, the Board's decision in *San Onofre* has not affected the Commission's standard for analyzing *de facto* license amendment hearing requests. Rather, the majority opinion and the recent *St. Lucie* and *Fort Calhoun* Commission decisions affirm that the Commission's standard has not been relaxed. I expect that these recent Commission decisions remove any uncertainty as to the standard that the Board should use when it reviews *de facto* license amendment hearing requests. With that in mind, the majority opinion places this hearing request where it can most efficiently be handled — with the Board.

Commissioner Svinicki, Concurring in Part and Dissenting in Part

I respectfully dissent with regard to the majority's decision to refer the Friends of the Earth's hearing request to a Licensing Board for a determination of whether Staff activities have effected a *de facto* license amendment with respect to Diablo Canyon's seismic licensing basis.¹ In my view, there is no need to do so because the Commission already has sufficient information to rule on the request as stated.² Moreover, similar referrals have led to Board rulings that created considerable regulatory uncertainty. Referring this question to the Board has the potential to yield a similar result. Last, I find that the scope of the referral needlessly invites further challenges in other proceedings.

A. Friends of the Earth Has Not Identified Any *De Facto* License Amendment

As the majority notes, in some cases, the Commission has observed that agency actions not formally labeled as license amendments nevertheless can constitute *de facto* license amendments and accordingly trigger hearing rights for the public under section 189a of the AEA.³ We have articulated two key factors to consider when determining whether agency action constitutes a *de facto* license amendment: whether the agency action (1) granted the licensee any greater authority or (2) otherwise altered the original terms of the license.⁴ "A licensee cannot amend the terms of its license unilaterally"; it must request and obtain agency approval.⁵ Thus licensee action, as opposed to agency action, is insufficient to trigger a *de facto* license amendment proceeding.⁶ Moreover, we have declined "to interpret the AEA to require hearings based on the possibility

¹ Although a majority of Commissioners has not subscribed to my position, the majority has emphasized that it takes no position on the underlying dispute between the litigants at this point in the proceeding. *See supra* p. 737, note 38.

² While I find that Friends of the Earth's hearing request lacks sufficient information to show a *de facto* license amendment, I recognize that the majority's referral will provide Friends of the Earth with a chance to develop its position further. Thus, should the Commission be called upon to provide another ruling in this proceeding, the issue we consider then will be different than the one before us today. At that time, I will consider, afresh, the record as it exists, including the additional arguments and potential factual positions that will be developed as a result of this referral.

³ *See Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 326 (1996).

⁴ *Id.*

⁵ *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), CLI-14-11, 80 NRC 167, 173 (2014); *see* 10 C.F.R. § 50.90 ("Whenever a holder of a license . . . desires to amend the license . . . , application for an amendment must be filed with the Commission").

⁶ *St. Lucie*, CLI-14-11, 80 NRC at 173 & n.31.

that a licensee may request an amendment to make unspecified modifications at some uncertain time in the future.”⁷

The majority refers a number of agency communications to the board for consideration, including: (1) the NRC Staff’s March 2012 request for information to all power plant licensees pursuant to 10 C.F.R. § 50.54(f); (2) Research Information Letter 12-01, which documented the Staff’s assessment of the new Shoreline Fault information; (3) the NRC Staff’s October 2012 letter to PG&E that summarized the results of the 2012 assessment and placed the Staff’s further review of new information in the context of the NRC’s section 50.54(f) request for seismic reevaluations by all power reactor licensees; and (4) the NRC Staff’s acceptance of PG&E’s updated final safety analysis report (UFSAR) revision 21.⁸ I have considered each in turn, in light of the foregoing precedent, and find that Friends of the Earth has not shown how any of these regulatory instruments expands PG&E’s operating authority or otherwise alters the terms of the Diablo Canyon operating licenses.⁹

1. The March 12, 2012, Section 50.54(f) Request

First, Friends of the Earth argues that because the March 12, 2012, section 50.54(f) Request directs PG&E to use “*specific* methodologies and assumptions to analyze new seismic data,” it effectively amends the terms of the Diablo Canyon licenses.¹⁰ But this argument fundamentally misapprehends the purpose of the section 50.54(f) Request. Friends of the Earth suggests that because the 50.54(f) Request will effectively amend the analyses relied on to demonstrate plant safety

⁷ *Omaha Public Power District* (Fort Calhoun Station, Unit 1), CLI-15-5, 81 NRC 329, 338 (2015).

⁸ Hearing Request at 14-18, 21-22, 32-33, 48-49; Friends of the Earth Reply at 9, 12-19. “The application for an operating license includes the final safety analysis report (FSAR) which is to contain: a description of the facility; the design bases and limits on operation; and the safety analysis for the structures, systems, and components (SSC) and of the facility as a whole.” Proposed Rule: “Changes, Tests, and Experiments.” 63 Fed. Reg. 56,098, 56,099 (Oct. 21, 1998). A licensee must operate its facility “in accordance with the license and as described in its final safety analysis report.” NUREG-1650, The United States of America Fifth National Report for the Convention on Nuclear Safety, Rev. 3, at 112 (Sept. 2010) (ADAMS Accession No. ML102810031). Thus, if a licensee wishes to change a component of the FSAR, it must follow the process in 10 C.F.R. § 50.59 or obtain a license amendment pursuant to 10 C.F.R. § 50.90. Additionally, licensees must periodically provide updated FSARs under 10 C.F.R. § 50.71(e).

⁹ The majority also notes that the hearing request extensively relies on a Differing Professional Opinion from Dr. Michael Peck, the former Senior Resident Inspector at the plant. *See supra* pp. 732-33, note 11. Because a differing professional opinion does not constitute an agency action, it cannot constitute a *de facto* license amendment in and of itself. Nevertheless, I have considered its contents as support for Friends of the Earth’s claims that other agency actions constituted *de facto* license amendments.

¹⁰ Hearing Request at 34.

in the FSAR and the license, a license amendment is required.¹¹ On its face, however, the section 50.54(f) Request does not propose to change the analysis in any operating plant's existing licensing basis. Rather, it asks licensees, in light of the Fukushima accident, to evaluate plant seismic and flooding design bases using updated analytical methods and to provide information to determine whether any changes to the plants' design bases are warranted.¹² Indeed, the letter explicitly notes that the "evaluations associated with the requested information in this letter do not revise the design basis of the plant."¹³ The letter acknowledges that the contents of the licensees' responses may lead to additional regulatory actions to update plants' licensing bases, such as orders, license amendments, or rulemakings, for which the public would have participation rights.¹⁴ Therefore, with respect to the March 12, 2012, section 50.54(f) Request, Friends of the Earth appears to make the same error as the petitioner in *Fort Calhoun* — seeking a hearing on speculative changes to a plant's licensing basis that may or may not occur.¹⁵ Having previously rejected such claims, the Commission can cite to that finding and reach a similar holding here that the March 12, 2012, section 50.54(f) Request does not constitute a *de facto* license amendment.

2. Research Information Letter 12-01

With regard to Research Information Letter 12-01, Friends of the Earth contends that the Staff's analysis, which concludes that Diablo Canyon can operate safely despite the Shoreline Fault, effectively amends the Diablo Canyon licensing basis to include the prior evaluation of the Hosgri Earthquake as part of the plant's seismic licensing basis.¹⁶ A careful reading of Research Information Letter 12-01, however, does not reveal any instance where the Staff altered the terms of the Diablo Canyon operating licenses or provided PG&E with greater operating authority. Indeed, Research Information Letter 12-01 does not reach any conclusions regarding the Diablo Canyon operating licenses.¹⁷ Rather, it is focused on determining whether the plant can operate safely in light of the risk posed by the Shoreline Fault.¹⁸ The focus here on overall plant safety is not unique in the NRC's regulatory process, and Friends of the Earth has not demonstrated that the Staff's comparison of the Shoreline Fault to the Hosgri Fault, to determine

¹¹ *Id.* at 35-47.

¹² Section 50.54(f) Request at 4.

¹³ *Id.*

¹⁴ *Id.* at 1; *see, e.g.*, 10 C.F.R. §§ 2.309, 2.805.

¹⁵ *Fort Calhoun*, CLI-15-5, 81 NRC at 338.

¹⁶ Hearing Request at 47-70.

¹⁷ 2012 Assessment at 95.

¹⁸ *Id.*

whether Diablo Canyon was operating safely, amounted to a tacit, or *de facto*, amendment to the operating licenses.

Regardless, even assuming the Staff's analysis in Research Information Letter 12-01 has some linkage to the plant's licensing basis, Friends of the Earth still has not shown that the letter expands the licensee's authority or alters the terms of the licenses. Friends of the Earth concedes that the Diablo Canyon UFSAR specifically addressed whether the plant was seismically qualified for the Hosgri Earthquake.¹⁹ Moreover, as PG&E and the Staff noted, the plant's capacity to withstand the Hosgri Earthquake was extensively litigated at the time of initial licensing.²⁰ As a result of that litigation, the Atomic Safety and Licensing Board and the Atomic Safety and Licensing Appeal Board (whose opinions constitute binding precedent at the NRC), both acting on authority delegated from the Commission, found the plant seismically qualified to withstand that earthquake.²¹ Of note in the Appeal Board's order are repeated references to the Hosgri Earthquake as the plant's "Safe Shutdown Earthquake," a term that Friends of the Earth acknowledges is normally associated with a plant's seismic licensing basis.²² Friends of the Earth further agrees that these orders are also part of the plant's licensing basis.²³ Thus, Friends of the Earth has not shown that the Staff's conclusion in Research Information Letter 12-01 expanded PG&E's operating authority or otherwise altered the terms of the licenses. Because Friends of the Earth concedes that the plant's licensing basis already permits the plant to operate in light of the seismic hazard posed by the Hosgri Fault and the Staff found that the seismic hazard from the Shoreline Fault is bounded by that from the Hosgri Fault, the hearing request fails to demonstrate that either the licensee's authority to operate the plant or the terms of the licenses have changed.

Friends of the Earth also asserts that "the Hosgri Evaluation and the [Long Term Seismic Program] were . . . intended to be a one-time exception" from the plant's licensing basis,²⁴ contending that the analysis of the Hosgri Earthquake "did not change the seismic design basis" but was rather a "response to a request by NRC to conduct certain additional analysis."²⁵ However, Friends of the Earth

¹⁹ Friends of the Earth Reply at 6, 9 (citing 10 C.F.R. § 54.3(a) (defining the scope of a reactor's licensing basis) and PG&E, Diablo Canyon Power Plant, Units 1 and 2, Final Safety Analysis Report Update, Rev. 12 (Sept. 1998), at 2.5-58 (discussing the Hosgri Earthquake)).

²⁰ Staff Answer at 3-4, 30-31 (citing *Diablo Canyon*, LBP-79-26, 10 NRC at 453; *Diablo Canyon*, ALAB-644, 13 NRC at 903); PG&E Answer at 6-7 (same).

²¹ *Id.*

²² *Diablo Canyon*, ALAB-644, 13 NRC at 910-11, 913, 923, 941, 990; Hearing Request at 47.

²³ Friends of the Earth Reply at 6.

²⁴ Hearing Request at 20.

²⁵ Friends of the Earth Reply at 9 (emphasis removed). Friends of the Earth consistently conflates
(Continued)

has not substantiated this claim. The statement Friends of the Earth relies on to support this inference pertains to the Long-Term Seismic Program, not the evaluation of the Hosgri Earthquake.²⁶ Friends of the Earth also generally cites to the initial Licensing Board decision on the Hosgri Evaluation to support this claim.²⁷ But this general reference, lacking more, is insufficient to support Friends of the Earth's position. If anything, the extensive record pertaining to the Hosgri Evaluation described in the cited opinion tends to support the opposite inference — that the Hosgri Evaluation is a part of the Diablo Canyon seismic licensing basis.²⁸

In support of its petition, Friends of the Earth critiques the adequacy of the agency's approval of the plant's seismic qualification to the Hosgri Earthquake in the Diablo Canyon licenses.²⁹ Friends of the Earth claims "the LTSP/Hosgri Evaluation is a drastically less comprehensive method and less conservative analytical method than the Standard Method approved by the Commission."³⁰ But the Hosgri Earthquake has been an established part of the Diablo Canyon licensing basis since the facility began operation. Consequently, the opportunity to challenge the adequacy of the Hosgri Earthquake evaluation as an original matter occurred decades ago.³¹ Indeed, the agency extensively considered challenges to the evaluation at that time and concluded that the Hosgri Earthquake evaluation was adequate.³²

Likewise, Friends of the Earth argues that the NRC's evaluations have understated the risk posed by the Shoreline Fault.³³ But again, rather than indicating some alteration to the licenses, these claims go to the accuracy of the Staff's analyses in its ongoing oversight of Diablo Canyon, which is not an appropriate issue for NRC adjudicatory hearings. As the Commission recently observed, "[I]f a hearing could be invoked each time the NRC engaged in oversight over or

the Hosgri Earthquake Evaluation and the Long Term Seismic Program. *E.g.*, Hearing Request at 48 ("The methodologies and assumptions that PG&E employed in the [Long Term Seismic Program] and the associated Hosgri Evaluation were not as conservative as those required by the [safe shutdown earthquake.]"). But as explained in Research Information Letter 12-01, the two are distinct. 2012 Assessment at 5. Moreover, Research Information Letter 12-01 concluded that the seismic hazard posed by the Shoreline Fault was bounded by or equal to the hazard analyzed in both the Long Term Seismic Program and the Hosgri Evaluation. *Id.* at 58.

²⁶ Hearing Request at 20 n.51 (claiming that the Diablo Canyon UFSAR states that the Long Term Seismic Program "does not alter the design bases for" Diablo Canyon).

²⁷ *Id.* at 49-50 (citing LBP-79-26, 10 NRC at 453).

²⁸ ALAB-644, 13 NRC at 903.

²⁹ Hearing Request at 54-59.

³⁰ *Id.* at 58.

³¹ 10 C.F.R. § 2.309(c).

³² ALAB-644, 13 NRC at 910-11, 996.

³³ Hearing Request at 59-64.

inquiry into plant conditions, the NRC's administrative process could be brought to a virtual standstill."³⁴

3. The October 2012 Letter to PG&E

Friends of the Earth points to the October 2012 letter as another instance where Staff action has amounted to a *de facto* license amendment.³⁵ This letter simply summarized the conclusions of the Research Information Letter and requested that PG&E use the process in the 50.54(f) Request to evaluate seismic risk at the site going forward.³⁶ As discussed previously, Friends of the Earth has not shown that either of these two letters constituted *de facto* amendments. For those same reasons, therefore, the hearing request does not demonstrate that the October 2012 letter grants or constitutes expansion of PG&E's operating authority or otherwise alters the terms of the Diablo Canyon operating licenses.³⁷

4. PG&E's UFSAR Update 21

In its reply brief, Friends of the Earth claims that the NRC Staff's acceptance of PG&E's UFSAR update 21 constitutes a *de facto* license amendment to the plant's seismic licensing basis. Specifically, Friends of the Earth contends that UFSAR update 21 inappropriately moves the Hosgri Earthquake into the plant's established seismic design basis.³⁸ Again, these arguments appear to misconstrue our regulatory process. Under 10 C.F.R. § 50.71(e), licensees must periodically submit an updated FSAR to the agency. However, the agency does not review the submittals for accuracy or otherwise approve the analyses therein.³⁹ As clearly

³⁴ *St. Lucie*, CLI-14-11, 80 NRC at 175.

³⁵ Hearing Request at 34.

³⁶ October 12, 2012 Letter at 1.

³⁷ The letter notes that PG&E should update the UFSAR "as necessary, to include the Shoreline scenario in accordance with the requirements of 10 C.F.R. § 50.71(e)." *Id.* at 2. As discussed in the next section, updates to the UFSAR under section 50.71 are controlled by the requirements of 10 C.F.R. §§ 50.90 and 50.59. 10 C.F.R. § 50.71(e). Updates under section 50.90 require a license amendment, with a corresponding opportunity for a public hearing. The Commission has repeatedly held that changes to a UFSAR under section 50.59 do not trigger opportunities for a public hearing. Interpreted within this framework, the phrase "as necessary" within the letter would suggest simply that PG&E should update the UFSAR within the confines of the existing regulatory structure and would not, as Friends of the Earth would have it, constitute a request to circumvent the process for updating the UFSAR.

³⁸ Friends of the Earth Reply at 12-14.

³⁹ While the Staff did perform a review to determine if the submittal met the administrative requirements of section 50.71(e) for timeliness and content, the Staff did not review the technical

(Continued)

stated in its promulgation, this regulation “is only a reporting requirement”; “Submittal of updated FSAR pages does not constitute a licensing action but is only intended to provide information”; and “approvals of license amendments and technical specification changes are independent of the FSAR updating process.”⁴⁰

Indeed, the updates must reflect changes to the FSAR that the licensee has made, either through a license amendment request under 10 C.F.R. § 50.90, with a corresponding opportunity to request a hearing, or through the 10 C.F.R. § 50.59 process. As the Commission has consistently emphasized, licensee actions under 10 C.F.R. § 50.59 do not give rise to hearing rights under the AEA.⁴¹ Rather, such activities are appropriately monitored through staff inspection and oversight. Consequently, with regard to UFSAR update 21, our regulatory process does not call for agency action that would “approve” the changes to the seismic analysis as part of the section 50.71(e) update, and therefore under our established precedent, UFSAR update 21 cannot constitute a *de facto* license amendment with regard to the Diablo Canyon seismic licensing basis. If, as Friends of the Earth would have it, PG&E has inappropriately made changes to the UFSAR without seeking a license amendment or performing a suitable section 50.59 analysis, then that is an issue appropriate for NRC inspection and oversight, not adjudication.⁴²

Furthermore, accepting the interpretation of section 50.71(e) advanced by Friends of the Earth would create absurd results within our regulatory process.⁴³ Under section 50.71(e), licensees must update their UFSARs every 2 years.⁴⁴ Thus, if Friends of the Earth’s understanding of the regulation were correct, every 2 years the agency would effectively approve all section 50.59 changes at a facility and the public would have an opportunity to request hearings on those approvals. A central purpose of section 50.59, however, is to permit licensees to make certain limited changes to their facilities without Commission approval.⁴⁵ Thus, Friends of the Earth’s interpretation would nullify our long-standing rule that a “member of the public may challenge an action taken under 10 C.F.R. § 50.59 only by

adequacy of all of the changes in the update, particularly PG&E’s changes to the seismic analysis. Diablo Canyon Power Plant, Units 1 and 2 — Review of Final Safety Analysis Report Update, Revision 21 (TAC Nos. MF2945 and MF2946) (June 23, 2014) (ADAMS Accession No. ML14022A120).

⁴⁰ Final Rule: “Periodic Updating of Final Safety Analysis Reports,” 45 Fed. Reg. 30,614, 30,615 (May 9, 1980).

⁴¹ *Fort Calhoun*, 81 NRC at 337 (noting that “hearing rights do not attach to licensee changes made under section 50.59 because those changes do not require NRC approval but are instead subject to normal NRC oversight through the inspection process”).

⁴² *Id.*

⁴³ Friends of the Earth Reply at 12-14.

⁴⁴ 10 C.F.R. § 50.71(e)(4).

⁴⁵ Changes, Tests, and Experiments, 64 Fed. Reg. 53,582, 53,584 (Oct. 4, 1999).

means of a petition under 10 C.F.R. § 2.206.”⁴⁶ Additionally, since the UFSAR updated under section 50.71(e) also includes changes the agency approved by the license amendment process under section 50.90, this interpretation would have the agency effectively “approve” these changes for a second time, without apparent purpose or effect. These results counsel against adopting Friends of the Earth’s proffered interpretation.⁴⁷ Consequently, Friends of the Earth has not made a sufficient showing to demonstrate that the agency’s acceptance of UFSAR Update 21 constituted a *de facto* license amendment to the Diablo Canyon operating licenses.

5. Conclusion

In light of the foregoing, and applying the Commission’s precedents in *Perry*, *St. Lucie*, and *Fort Calhoun*, Friends of the Earth has not shown the existence of a *de facto* license amendment proceeding; it fails to call forth any present Staff action that could plausibly be viewed as expanding PG&E’s operating authority or otherwise altering the terms of the Diablo Canyon licenses.

Friends of the Earth also claims that the Staff and PG&E have engaged in backroom negotiations to amend the Diablo Canyon operating licenses but does not cite to any evidence of this alleged improper behavior.⁴⁸ Rather, the record reflects actions by PG&E to monitor the seismic environment around Diablo Canyon and update its analyses accordingly and actions by the Staff to evaluate these analyses, as described in Regulatory Information Letter 12-01. Although these reviews did result, at one point in time, in plans to clarify the Diablo Canyon seismic licensing basis through a license amendment, these plans were subsequently overtaken by the NRC’s generic regulatory response to the events at Fukushima. When the NRC requested that every operating plant, including Diablo Canyon, reevaluate its seismic licensing basis, the Staff and PG&E determined to encompass the review of the Diablo Canyon seismic licensing basis in that reevaluation instead of continuing with a separate process. Diablo Canyon was not unique in this regard. We also folded several ongoing seismic reevaluations of operating plants, being conducted under Generic Issue-199, Implications of Updated Probabilistic Seismic Hazard Estimates in Central and Eastern U.S. on Existing Plants, into our post-Fukushima activities.⁴⁹

⁴⁶ *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 101 n.7 (1994).

⁴⁷ *United States v. Turkette*, 452 U.S. 576, 580 (1981).

⁴⁸ Hearing Request at 4-5.

⁴⁹ Generic Issue Management Control System Report for Fiscal Year 2015 1st Quarter (Dec. 23, 2014) (ADAMS Accession No. ML14351A014) at 13-16 (“The agency incorporated GI-199 into the
(Continued)

B. Referral to Board Needlessly Creates Regulatory Uncertainty

Over 2 years ago, the Commission considered another request to find that Staff oversight activities with regard to the San Onofre Nuclear Generating Station constituted a *de facto* license amendment proceeding.⁵⁰ The request asserted that a Confirmatory Action Letter from the Staff to the licensee, as well as “the process for resolving the issues raised in the Letter,” constituted a *de facto* license amendment.⁵¹ In response, we referred the request to the Atomic Safety and Licensing Board, specifically directing the Board to consider whether “the Confirmatory Action Letter issued to [Southern California Edison] constitutes a *de facto* license amendment.”⁵² In my view, we had referred a narrow question to the Board, regarding whether the letter itself constituted a *de facto* license amendment. The Board did not agree.

Despite the Commission’s plain direction to consider the “Confirmatory Action Letter,” the Board found that “common sense” could not support such a cramped interpretation of the referral because the Commission could have evaluated the letter on its own “without difficulty.”⁵³ Thus, the Board proceeded to examine whether any aspect of the larger Confirmatory Action Letter process, including hundreds of pages of unapproved restart proposals from the licensee, supported by thousands of pages of technical analyses, constituted a *de facto* license amendment.⁵⁴ As we noted in *St. Lucie*, in so doing the Board departed from decades of established *de facto* license amendment precedent, from both the Circuit Courts and the Commission, which had only considered whether agency action could constitute a *de facto* license amendment.⁵⁵ While common sense might suggest that the Commission would have clearly instructed the Board if it had intended to depart so dramatically from past practice, the Board was undeterred.

The Board’s errant conclusion, that unapproved licensee proposals could also amount to *de facto* license amendments, led the Board to request hundreds of pages of briefings and evidence from the litigants. Moreover, the Board’s legal error cascaded into a number of other faulty conclusions, such as its determination

work done by the Japan Lessons-Learned Project Directorate in response to the March 2011 Japan nuclear event. GI-199 activities in NRR are being addressed in the 50.54(f) letters on items 2.1 and 2.3 of the Japanese [Near-Term Task Force] recommendations.”).

⁵⁰ *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 1 and 2), CLI-12-20, 76 NRC 437, 440 (2012).

⁵¹ *Id.*

⁵² *Id.*

⁵³ *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 1 and 2), LBP-13-7, 77 NRC 307, 327, *vacated as moot*, CLI-13-9, 78 NRC 551 (2013).

⁵⁴ *Id.*

⁵⁵ *St. Lucie*, CLI-14-11, 80 NRC at 174 n.33.

that licensing boards could review unilateral, unapproved, licensee actions under section 50.59(c)(2) to determine whether they also constituted *de facto* license amendments.⁵⁶ In the wake of the Board's ruling, the Commission received a number of similar requests for hearings on asserted *de facto* amendments that relied to various degrees on the Board's errors.⁵⁷ Thus, the Commission's simple referral — limited to a focused inquiry on its plain terms — interjected considerable and historic regulatory uncertainty into the agency's oversight of San Onofre.⁵⁸ Moreover, this uncertainty also spread to our oversight of other reactors through a series of similar petitions that seized on the Board's *San Onofre* order as a harbinger of a new, relaxed *de facto* license amendment jurisprudence at the Commission. In recent months, we have spent considerable time and effort dispelling these claims.⁵⁹

While I believe that the Commission can successfully resolve Friends of the Earth's request with the information before it, the majority correctly notes that the "seismic design basis of Diablo Canyon is complex."⁶⁰ In light of the lack of necessity to refer the matter, however, I fear, perhaps needlessly, that this complexity could provide ample thickets for a well-meaning licensing board to roam far afield, in search of some hidden meaning behind the majority's referral of a matter so straightforward and of such limited scope, a matter the Commission could have decided on its own, "without difficulty." History reveals that even plainly stated instructions, such as those provided by the majority here, provide no guarantee that the Board will hew to the Commission's narrow intent.⁶¹ Because the Commission can dispose of this question on its own, there is no need to entertain this peril or to invite such uncertainties into our oversight process once again.⁶²

⁵⁶ *San Onofre*, LBP-13-7, 77 NRC at 333-34.

⁵⁷ *St. Lucie*, CLI-14-11, 80 NRC at 174 n.33; *Fort Calhoun*, CLI-15-5, 81 NRC at 334-35. Indeed, Friends of the Earth restates many of those errors in its own pleading. *E.g.*, Hearing Request at 32 & n.88.

⁵⁸ Of note, the plant closed shortly after the Board's decision. *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-13-9, 78 NRC 551, 553 (2013).

⁵⁹ *St. Lucie*, CLI-14-11, 80 NRC at 174 n.33; *Fort Calhoun*, CLI-15-5, 81 NRC at 334-35.

⁶⁰ See *supra* p. 731, note 2 and accompanying text.

⁶¹ For this reason, I would strongly encourage the Board to refer any questions it has regarding the scope of this referral to the Commission under 10 C.F.R. § 2.341(f)(1) without hesitation and any party to this proceeding who believes that the Board has departed from the scope of the Commission's referral to file a petition for interlocutory review under 10 C.F.R. § 2.341(f)(2).

⁶² The majority reasons that referral is appropriate because "ordinarily, threshold hearing issues are decided by our Boards in the first instance." See *supra* p. 735, note 27. But Friends of the Earth's claim asks us to find malfeasance or nonfeasance on the part of the Staff and convene a hearing where none existed before. Our rules of practice, which span almost 150 pages in the *Code of Federal*

(Continued)

C. The Scope of the Commission's Referral Creates Regulatory Uncertainty for Every Operating Reactor

The Commission's referral is also problematic in its scope, as it invites similar challenges related to every operating power reactor in the country. As mentioned above, the majority refers the March 2012, section 50.54(f) Request to the licensing board to consider whether it constitutes a *de facto* license amendment. As we have sent identical letters to every operating power reactor under our jurisdiction, however, the majority's decision would seem to solicit similar filings asserting *de facto* license amendments related to other operating reactors, with a reasonable expectation of similar referral to the licensing board for further proceedings. While we may ultimately have an opportunity to clarify this issue by ruling on an appeal from this case or another,⁶³ the far more efficient course would be to rule on this request today and avoid the possibility of expending limited agency and stakeholder resources on this question in redundant proceedings.

In light of these concerns and for the reasons provided, I dissent from the majority's proposed course of action in this proceeding. Although the majority has taken considerable steps to cabin the scope of its referral, we can decide the issues raised in Friends of the Earth's hearing request today and should do so, both to embrace judicial economy and to avoid injecting needless uncertainty into our process.

Regulations and provide for at least thirteen different hearing tracks, do not provide any guidance or standards for evaluating such requests. Therefore, I do not find the procedural posture of this proceeding to be ordinary. The majority further supports its reasoning by noting, "Licensing boards are the appropriate finders of fact in most instances." See *id.* (quoting *San Onofre*, CLI-13-9, 78 NRC at 560 & n.36). But again, if no additional fact finding is needed to rule on the hearing request, this argument is unavailing.

⁶³ Of course, the Commission may not have a chance to squarely provide such guidance as parties may decline to appeal licensing board decisions for any number of reasons. See, e.g., *San Onofre*, CLI-13-9, 78 NRC at 553.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Dr. Gary S. Arnold
Dr. Thomas J. Hirons

In the Matter of

Docket No. 50-255-LA
(ASLBP No. 15-936-03-LA-BD01)

ENTERGY NUCLEAR
OPERATIONS, INC.
(Palisades Nuclear Plant)

May 8, 2015

STANDING: PROXIMITY PRESUMPTION

In certain circumstances, the Commission has adopted a proximity presumption that allows a petitioner living, having frequent contacts, or having a significant property interest within 50 miles of a nuclear power reactor to establish standing without the need to make an individualized showing of injury, causation, and redressability. *Florida Power and Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989). The Commission has explained that the proximity presumption applies when there are “clear implications for the offsite environment, or major alterations to the facility with a clear potential for offsite consequences.” *Id.* Therefore, for the presumption to apply in license amendment proceedings, the proposed amendment must have clear implications for the offsite environment or otherwise create an increased potential for offsite consequences.

STANDING: PROXIMITY PRESUMPTION

A change in the safety-related requirements intended to ensure the integrity

of the reactor pressure vessel “obviously bears on the health and safety of those members of the public who reside in the plant’s vicinity.” *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 95-96 (1993). Thus, a license amendment related to RPV embrittlement presents an obvious potential for offsite public health and safety consequences.

STANDING: PROXIMITY PRESUMPTION — FREQUENT CONTACTS

To demonstrate “frequent contacts” within the 50-mile site radius under the proximity presumption, the petitioner (or its member, if the petitioner is an organization claiming representational standing) must show that her contacts are “substantial” and “regular,” and must describe them with specificity. *See PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 140 (2010). Although a member of the petitioning organization states she may spend time by the Palisades site, these statements are too vague to demonstrate a substantial or regular presence within 50 miles of Palisades.

STANDING: PROXIMITY PRESUMPTION — PROPERTY INTEREST

As the Commission noted, “[t]he Atomic Energy Act authorizes the Commission ‘to accord protection from radiological injury to both health and *property* interests.’ Thus, a genuine property interest . . . is sufficient to accord [the petitioner] standing, given that the home is located” within close proximity to the facility. *USEC Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 314 (2005) (quoting *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 48 (1994) (citing 42 U.S.C. §§ 2133(b), 2201(b))) (footnote omitted). The petitioning organization’s member maintains that an accident at Palisades could render her 5 acres of land “permanently uninhabitable.” The Board thus finds that she has demonstrated a sufficient property interest to warrant standing based on proximity.

LICENSE AMENDMENTS: SCOPE OF REVIEW

The NRC regulations define the Commission’s scope of review of a license amendment application broadly: “In determining whether an amendment to a license, construction permit, or early site permit will be issued to the applicant, the Commission will be guided by the considerations which govern the issuance of initial licenses, construction permits, or early site permits to the extent applicable and appropriate.” 10 C.F.R. § 50.92(a). The “considerations” the Commission

should review include those defined in 10 C.F.R. § 50.40, titled “Common standards.”

RULES OF PRACTICE: EXEMPTIONS/WAIVERS OF NRC RULE

When the Commission has opted to address a safety or environmental concern through regulation, it has uniformly prohibited litigation of that same issue in a site-specific adjudicatory proceeding: “Contentions that are the subject of general rulemaking by the Commission may not be litigated in individual license proceedings.” *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 79 n.27 (2014) (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999)).

ALTERNATE PRESSURIZED THERMAL SHOCK RULE (10 C.F.R. § 50.61a)

Petitioners apparently want the Board to preclude Entergy from relying on 10 C.F.R. § 50.61a to avoid meeting the requirements of 10 C.F.R. § 50.61, but that is what section 50.61a allows. The evident purpose of the Alternate Pressurized Thermal Shock Rule’s “Alternate Fracture Toughness Requirements” is to provide an alternative to satisfying the more demanding requirements of section 50.61. Therefore, Petitioners are in substance asking that the Board prohibit what section 50.61a allows. Under 10 C.F.R. § 2.335, the Board may not consider such a contention except under specific conditions not present here.

ALTERNATE PRESSURIZED THERMAL SHOCK RULE (10 C.F.R. § 50.61a)

The Commission noted when it promulgated 10 C.F.R. § 50.61a that this rule “provides reasonable assurance” of public health and safety, thereby endorsing the 50.61a embrittlement model approach and precluding requests to create requirements more restrictive than the rule. Final Rule: “Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events,” 75 Fed. Reg. 13, 22 (Jan. 4, 2010). “When a Commission regulation permits the use of a particular analysis, a contention asserting that a different analysis or technique should be utilized is inadmissible because it indirectly attacks the Commission’s regulations.” *Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 255 (2009) (citing *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), LBP-83-76, 18 NRC 1266, 1273 (1983)), *aff’d on other grounds*, CLI-09-22, 70 NRC 932, 933 (2009).

**ALTERNATE PRESSURIZED THERMAL SHOCK RULE
(10 C.F.R. § 50.61a)**

The purpose of the consistency check — the only portion of the Alternate Pressurized Thermal Shock Rule that may require use of sister plant data — is to validate the basic operation of the embrittlement model with surveillance data. The consistency check seeks to compare, for a specific material type, the model's projected embrittlement with the actual embrittlement values at the same fluence provided by material samples. 10 C.F.R. § 50.61a(f)(6)(i)(B); 75 Fed. Reg. at 16.

**ALTERNATE PRESSURIZED THERMAL SHOCK RULE
(10 C.F.R. § 50.61a)**

Section 50.61a defines surveillance data broadly, to include “any data that demonstrates the embrittlement trends for the beltline materials.” 10 C.F.R. § 50.61a(a)(10). If a capsule had in fact been tested, the resulting data could constitute surveillance data relevant to evaluating embrittlement trends.

**ALTERNATE PRESSURIZED THERMAL SHOCK RULE
(10 C.F.R. § 50.61a)**

The Alternate Pressurized Thermal Shock Rule clearly states that surveillance data must be used in the consistency check when it is (A) “a heat-specific match for one or more of the materials for which RT_{MAX-X} is being calculated,” and (B) “three or more different neutron fluences exist for a specific material.” 10 C.F.R. § 50.61a(f)(6)(i)(A), (B). Thus, the use of a material sample in the consistency check is not dependent on its location inside an RPV, or which RPV it comes from. If the Board were to limit the material samples that may be used in the consistency check to those from a particular location from a particular RPV, we would be adding a new requirement to 10 C.F.R. § 50.61a(f)(6)(i), which is prohibited by 10 C.F.R. § 2.335.

**ALTERNATE PRESSURIZED THERMAL SHOCK RULE
(10 C.F.R. § 50.61a)**

Under section 50.61a(f)(6)(i), when the fluence of a material sample is known it must be used in the consistency check if it is of the appropriate chemical composition. The regulation's consistency check does not rely on information that is unique to a particular RPV, but instead on the chemical properties and fluence of the material samples. *See* 10 C.F.R. § 50.61a, equations 5-7. From the standpoint of the consistency check, a material sample of the same fluence and

material type is no different whether obtained from the Palisades RPV or a sister plant RPV.

NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

A “no significant hazards consideration” determination is a procedural decision barred from litigation by 10 C.F.R. § 50.58(b)(6) and licensing board precedent. *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 560-61 (2004).

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MEMORANDUM AND ORDER
(Ruling on Petition to Intervene and Request for a Hearing)

I. INTRODUCTION

Before the Licensing Board is a petition to intervene and request for a hearing filed by Beyond Nuclear, Don't Waste Michigan, Michigan Safe Energy Future — Shoreline Chapter (Shoreline), and the Nuclear Energy Information Service (NEIS) (collectively Petitioners).¹ We find that Petitioners have established representational standing to intervene in this proceeding. We do not, however, admit Petitioners' contention. Because Petitioners have not proffered an admissible contention, they have not satisfied the prerequisites for the Board to grant their hearing request.²

II. PROCEDURAL BACKGROUND

This proceeding concerns Entergy Nuclear Operations, Inc.'s (Entergy's) request to amend the operating license for the Palisades nuclear plant (Palisades).³ Palisades is a single–pressurized water reactor (PWR) facility located on the

¹ Petition to Intervene and for a Public Adjudication Hearing of Entergy License Amendment Request for Authorization to Implement 10 CFR § 50.61a, “Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events” (Dec. 1, 2014). Petitioners amended their petition on December 8, 2014, and indicated that the sole difference in the amended petition “is correction of the initial *Federal Register* reference as it appeared on page 1 of the December 1 filing to reflect Vol. 79 instead of Vol. 78.” Amended Petition to Intervene and for a Public Adjudication Hearing of Entergy License Amendment Request for Authorization to Implement 10 CFR § 50.61a, “Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events” at 1 n.1 (Dec. 8, 2014) [hereinafter Amended Petition]. The Board references the Amended Petition throughout this Memorandum and Order.

² See 10 C.F.R. § 2.309(a), (f)(1).

³ License Amendment Request to Implement 10 CFR 50.61a, “Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events” (July 29, 2014) (ADAMS Accession No. ML14211A524) [hereinafter LAR].

eastern shore of Lake Michigan, 5 miles south of South Haven, Michigan.⁴ The requested amendment would permit Entergy to use an alternate method to evaluate the minimum fracture toughness required by the Palisades reactor pressure vessel (RPV) to safely withstand a pressurized thermal shock (PTS) event.⁵ That alternate method is set forth in an agency regulation, “Alternate fracture toughness requirements for protection against pressurized thermal shock events.”⁶

In an operating nuclear power plant, the reactor vessel is continuously exposed to neutrons from fission reactions occurring inside the vessel.⁷ Over time, this neutron radiation embrittles the RPV walls, making them less able to resist fracturing, i.e., “fracture toughness” decreases.⁸ If there is a flaw in a reactor vessel wall that is embrittled due to neutron exposure, certain events can cause the flaw to propagate through the wall, resulting in a breach of the RPV and a possible accident.⁹ Of significant concern is a PTS event, which is “characterized by a rapid cooling (i.e., thermal shock) of the internal RPV surface and downcomer, which may be followed by repressurization of the RPV.”¹⁰ The possible triggers of a PTS event include “a pipe break or stuck-open valve in the primary pressure circuit,” or “a break of the main steam line.”¹¹

⁴ NRC Staff Answer to Petition to Intervene and Request for a Hearing Filed by Beyond Nuclear, Don’t Waste Michigan, Michigan Safe Energy Future — Shoreline Chapter, and the Nuclear Energy Information Service at 2 (Jan. 12, 2015) [hereinafter NRC Staff Answer].

⁵ See LAR, Attach. 1, at 1. Entergy enclosed within its LAR a technical report designed “to provide Palisades with the basis for implementation of the” amended PTS screening program. See Westinghouse, Alternate Pressurized Thermal Shock (PTS) Rule Evaluation for Palisades at v (June 2014) (ADAMS Accession No. ML14211A525) [hereinafter Palisades Alternate PTS Rule Evaluation].

⁶ 10 C.F.R. § 50.61a [hereinafter the Alternate PTS Rule] (emphasis removed); see also Final Rule: “Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events,” 75 Fed. Reg. 13, 14 (Jan. 4, 2010).

⁷ Division of Fuel, Engineering, and Radiological Research, Office of Nuclear Regulatory Research, Technical Basis for Revision of the Pressurized Thermal Shock (PTS) Screening Limit in the PTS Rule (10 CFR 50.61) Summary Report, NUREG-1806, at xix (Aug. 2007), available at <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1806/v1/> [hereinafter Alternate PTS Rule Technical Basis Report].

⁸ *Id.* at xx.

⁹ See *id.* at xix.

¹⁰ *Id.*

¹¹ *Id.*; see also 75 Fed. Reg. at 14. As the Alternate PTS Rule Technical Basis Report further explains, during these scenarios, “the water level in the core drops as a result of” depressurization or leaks. Alternate PTS Rule Technical Basis Report at xix. Emergency makeup water is then added to the reactor cooling loop, either manually or automatically, to keep the reactor core covered with water. *Id.* As the makeup water is much colder than the water in the reactor, a rapid cooling of

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On September 30, 2014, the NRC Staff (the Staff) published notice of Entergy's LAR,¹² and concluded that the LAR presents "no significant hazards consideration" under 10 C.F.R. § 50.92(c).¹³ In response to the LAR notice, Petitioners filed the instant petition to intervene and request for a hearing.¹⁴

Petitioners' statement of their contention is:

The licensing framework that the NRC is applying to allow Palisades to continue to operate until August 2017 includes both non-conservative analytical changes and mathematically dubious comparisons to allegedly similar "sister" reactor vessels. Palisades' neutron embrittlement dilemma continues to worsen as the plant ages, and Palisades has repeatedly requested life extensions which have ignored and deferred worsening embrittlement characteristics of the RPV for decades. Presently, Entergy plans to deviate from the regulatory requirements of 10 C.F.R. § 50.61 to § 50.61a (Alternate Fracture Toughness Requirements). This new amendment request introduces further non-conservative analytical assumptions into the troubled forty-three (43) year operational history of Palisades. Entergy's License Amendment Request (LAR) contains an equivalent margins evaluation, which is an untried methodological approach.¹⁵

Petitioners' hearing request was referred to this Board for consideration.¹⁶ Both Entergy and the Staff have filed answers opposing the Amended Petition,¹⁷ to

the outside reactor wall results. *Id.* For over-embrittled RPVs, the temperature shock "could be sufficient to initiate a running crack, which could propagate all the way through the vessel wall." *Id.* As the reactor is still producing heat, even in a shutdown mode, the RPV could repressurize, adding additional stress to the already-propagating crack. *See id.* at xix, xxiv, xxv ("A major contributor to the risk-significance of [certain PTS events] is the return to full system pressure" after cold makeup water is introduced. This could occur, for example, when a stuck-open valve recloses.).

¹² Biweekly Notice, Applications and Amendments to Facility Operating Licenses and Combined Licenses Involving No Significant Hazards Considerations, 79 Fed. Reg. 58,812, 58,814-16 (Sept. 30, 2014).

¹³ *Id.* at 58,815 ("The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.").

¹⁴ Amended Petition.

¹⁵ *Id.* at 11-12.

¹⁶ Entergy Nuclear Operations, Inc.; Establishment of Atomic Safety and Licensing Board, 79 Fed. Reg. 77,041 (Dec. 23, 2014); *see also* Memorandum from Richard J. Laufer, Acting Secretary of the Commission, to E. Roy Hawkens, Chief Administrative Judge, Atomic Safety and Licensing Board Panel, Referring the Amended Petition to the Atomic Safety and Licensing Board Panel for Disposition (Dec. 11, 2014).

¹⁷ Entergy's Answer Opposing Petition to Intervene and Request for Hearing (Jan. 12, 2015) [hereinafter Entergy Answer]; NRC Staff Answer.

which Petitioners have filed a reply.¹⁸ On March 25, 2015, the Board heard oral argument on standing and contention admissibility.¹⁹

III. REGULATORY BACKGROUND

A. The 1985 PTS Rule and Embrittlement Screening Program (10 C.F.R. § 50.61)

In 1985, the NRC implemented a mandatory program to monitor PWR RPVs for embrittlement over time, coupled with screening limits to prevent overembrittled reactors from operating.²⁰ The program to monitor PWR RPVs is described in 10 C.F.R. Part 50, Appendix H, and is titled “Reactor Vessel Material Surveillance Program Requirements” (Surveillance Program).²¹ The purpose of the Surveillance Program “is to monitor changes in the fracture toughness properties of ferritic materials [iron-based metals, such as steel] . . . which result from exposure of these materials to neutron irradiation and the thermal environment.”²² The Surveillance Program relies on physical material samples, also known as specimens, capsules, or coupons,²³ “which are withdrawn periodically from the reactor vessel.”²⁴ The NRC must preapprove the schedule for removing material samples from the reactor vessel.²⁵

¹⁸ Petitioners’ Combined Reply in Support of Amended Petition to Intervene and for a Public Adjudication Hearing of Entergy License Amendment Request for Authorization to Implement 10 CFR § 50.61a, “Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events” (Jan. 20, 2015) [hereinafter Reply].

¹⁹ Transcript of Oral Argument on Contention Admissibility (Mar. 25, 2015) [hereinafter Tr.].

²⁰ See Final Rule: “Analysis of Potential Pressurized Thermal Shock Events,” 50 Fed. Reg. 29,937 (July 23, 1985) (creating the screening criteria); Final Rule: “Fracture Toughness and Surveillance Program Requirements,” 38 Fed. Reg. 19,012 (July 17, 1973) (creating the program to monitor PWR RPVs).

²¹ 10 C.F.R. Part 50, App. H (capitalization modified).

²² *Id.* Part 50, App. H, § I.

²³ Amended Petition at 11; *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 89 (1993).

²⁴ 10 C.F.R. Part 50, App. H, § I. The NRC’s regulations further require that the physical specimens “be located near the inside vessel wall in the beltline region so that the specimen irradiation history duplicates, to the extent practicable within the physical constraints of the system, the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface.” *Id.* Part 50, App. H, § III.B.2.

²⁵ *Id.* Part 50, App. H, § III.B.3. The NRC’s regulations also allow for an “integrated” Surveillance Program among similar reactors, if the reactors “have sufficiently similar design and operating features to permit accurate comparisons of the predicted amount of radiation damage.” *Id.* Part 50, App. H, § III.C. The regulations also allow for an exemption from the Surveillance Program if a reactor’s

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While Appendix H establishes the Surveillance Program by which the RPVs are monitored for fracture toughness, the actual screening limits are established in 10 C.F.R. § 50.61, entitled “Fracture toughness requirements for protection against pressurized thermal shock events.”²⁶ Section 50.61 establishes an analytical approach that relies on data gathered from the Surveillance Program to calculate the RPV wall’s fracture toughness, and compares it with a safety limit that cannot be exceeded.²⁷

In the NRC’s regulations, steel fracture toughness is represented by proxy as a temperature value, known as “reference temperature.” As explained by the Staff, “[r]eference temperature is the metric that the NRC uses to quantitatively assess brittleness, so these terms may be regarded as synonymous. Steel having a high ‘reference temperature’ also has a higher degree of brittleness than steel with a low reference temperature.”²⁸ This is because the ability of steel to resist fracture changes as a function of temperature. When steel is at high temperatures, it can retain its ductility and related ability to resist fracturing from PTS events, even after extended periods of neutron irradiation.²⁹ On the other hand, at very low temperatures, steel is naturally brittle, and even unirradiated steel can potentially suffer brittle failure.³⁰

The point at which steel transitions from the high-temperature, fracture-resistant state, to the low-temperature, brittle state, is called the “RT_{NDT}” or “Transition fracture toughness reference temperature,” or more simply “reference

lifetime irradiation levels are below a certain threshold. *Id.* Part 50, App. H, § III.A (applying to reactors which can conservatively demonstrate by experiments on similar vessels that “the peak neutron fluence at the end of the design life of the vessel will not exceed 10¹⁷ [neutrons per centimeter squared] (E > 1 MeV [mega-electron volt])”).

²⁶ 10 C.F.R. § 50.61 (emphasis removed).

²⁷ *See id.* § 50.61(c)(2)(i) (“Results from the plant-specific surveillance program must be integrated into the [fracture toughness] estimate if the plant-specific surveillance data has been deemed credible”); Alternate PTS Rule Technical Basis Report at xx (“The surveillance results are then used together with the formulae and tables in 10 CFR 50.61 to estimate the fracture toughness” of the RPV wall.).

²⁸ John B. Giessner, Division of Reactor Projects, Summary of the March 19, 2013, Public Meeting Webinar Regarding Palisades Nuclear Plant, encl. 2 at 4 (Apr. 18, 2013) (ADAMS Accession No. ML13108A336) [hereinafter Palisades Webinar].

²⁹ *See* Alternate PTS Rule Technical Basis Report at xxxviii-xxxix (noting that with steel at high temperatures “cleavage cannot occur”). A “Cleavage fracture” is the type of fracture associated with fracture of brittle materials. *See id.* at xxxviii. The Board at times cites to certain Staff guidance documents, such as the Alternate PTS Rule Technical Basis Report, to help explain the background science behind the phenomena at issue in this proceeding. This does not mean, however, that the Board necessarily adopts the Staff’s conclusions put forward in these documents as to whether Palisades’ LAR meets the relevant regulatory requirements. *See infra* Section V.B (Scope of Review of License Amendments).

³⁰ *See id.* at xxxviii-xxxix (noting that with steel at low temperatures, “fracture occurs by cleavage”).

temperature.”³¹ As described by Staff guidance documents, this transition point depends primarily on two factors: (i) material composition and (ii) cumulative irradiation by high-energy neutrons.³² As steel is exposed to more high-energy neutrons (i.e., its fluence increases),³³ RT_{NDT} increases concurrently.³⁴ Thus, as fluence increases, the steel stays brittle at higher and higher temperatures, and it is therefore more likely to fracture as a result of PTS events.

The NRC established screening limits in 10 C.F.R. § 50.61 (the Current Screening Criteria) to reduce the risk that a PTS event will result in an RPV fracture. The screening limits are expressed as temperature values. When the reference temperature of an RPV is above this screening limit, the RPV is considered to have an unreasonably high risk of fracture from a PTS event.³⁵ The PTS “screening criterion is 270°F for plates, forgings, and axial weld materials, and 300°F for circumferential weld materials.”³⁶

If the RT_{NDT} values projected at specific areas of the RPV for the *end of life* of the plant, known as RT_{PTS} ,³⁷ surpass the Current Screening Criteria, the licensee must submit a safety analysis and obtain the approval of the Office of Nuclear Reactor Regulation to continue to operate.³⁸ If that office does not approve continued operation based on the licensee’s safety analysis, the licensee

³¹ *Id.* at xxxiv. “NDT” stands for Nil-Ductility Temperature. *Id.* at xxxi.

³² *Id.* at xx (“[T]ransition temperatures increase as a result of irradiation damage throughout the operational life of the vessel.”); *id.* § 2.1.3 (discussing the factors affecting fracture toughness); *id.* § 2.4.2 (limiting the fluence to only high-energy “fast” neutrons, which have energies above 1 mega-electron volt).

³³ Fluence is the integral of the neutron flux over time. The neutron flux is the total distance traversed by neutrons within a unit volume of material within one unit of time. Typically the unit volume is 1 cubic centimeter and the unit time is 1 second. Thus the unit of neutron flux is neutron-centimeter/centimeter³-second, typically expressed as neutrons/centimeter²-second. See Samuel Glasstone and Alexander Sesonske, *Nuclear Reactor Engineering* § 2.118 (Van Nostrand Reinhold Co. 1967).

³⁴ See Alternate PTS Rule Technical Basis Report § 2.4.1 (discussing the index temperature approach to characterizing fracture toughness in ferritic materials).

³⁵ See 10 C.F.R. § 50.61(b)(2). The Current Screening Criteria “correspond to a limit of 5×10^{-6} events/year on the annual probability of developing a through-wall crack” in the RPV. Alternate PTS Rule Technical Basis Report at xx.

³⁶ 10 C.F.R. § 50.61(b)(2); see also 75 Fed. Reg. at 13 (“The current PTS rule . . . establishes screening criteria below which the potential for a reactor vessel to fail due to a PTS event is deemed to be acceptably low.”).

³⁷ 10 C.F.R. § 50.61(a)(7) (“ RT_{PTS} means the reference temperature, RT_{NDT} , evaluated for the [end of life] Fluence for each of the vessel beltline materials.”); Alternate PTS Rule Technical Basis Report § 11.2 (“10 CFR 50.61 defines RT_{PTS} as the maximum RT_{NDT} of any region in the vessel (a region is an axial weld, a circumferential weld, a plate, or a forging) evaluated at the peak fluence occurring in that region.”).

³⁸ 10 C.F.R. § 50.61(b)(3)-(5).

must request an opportunity to modify the RPV or related reactor systems to “reduce the potential for failure of the reactor vessel due to PTS events.”³⁹

**B. The Alternate PTS Rule and Embrittlement Screening Program
(10 C.F.R. § 50.61a)**

While no reactor is expected to exceed the Current Screening Criteria established in section 50.61 during its 40-year operating license, some plants “are likely to exceed the screening criteria during the extended period of operation of their first license renewal.”⁴⁰ The Staff has noted that Palisades in particular is one of the first plants likely to exceed the Current Screening Criteria, as Palisades’ RPV is “constructed from some of the most irradiation-sensitive materials in commercial reactor service today.”⁴¹ This concern, as well as significant advancements in failure analysis and materials knowledge, prompted the NRC to reexamine the section 50.61 approach for projecting fracture toughness and the Current Screening Criteria.⁴²

In August 2007, the NRC issued NUREG-1806, “Technical Basis for Revision of the [PTS] Screening Limit in the PTS Rule (10 CFR 50.61).” That report summarized the results of a 5-year study by the NRC, the purpose of which “was to develop the technical basis for revision of the Pressurized Thermal Shock (PTS) Rule.”⁴³ The report concluded that through-wall cracks were much harder to create in RPVs than initially thought, and occurred in fewer circumstances.⁴⁴ The report thus recommended a more detailed approach to setting screening criteria that would take into account the varying conditions along different parts of the RPV.⁴⁵ The report also recommended removing the “margin term” that had been included in the Current Screening Criteria to account for unknown factors, because essentially all factors are now known and are effectively quantified.⁴⁶

³⁹ *Id.* § 50.61(b)(6).

⁴⁰ 75 Fed. Reg. at 13.

⁴¹ Alternate PTS Rule Technical Basis Report at xxii.

⁴² See Proposed Rule: “Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events,” 72 Fed. Reg. 56,275, 56,276 (Oct. 3, 2007); Alternate PTS Rule Technical Basis Report at iii, xx-xxiii.

⁴³ Alternate PTS Rule Technical Basis Report at xix.

⁴⁴ See *id.* at xx-xxiii.

⁴⁵ *Id.* at xxv (“Specifically, we recommend a reference temperature for flaws occurring along axial weld fusion lines (RT_{AW} or RT_{AW-MAX}), another for flaws occurring in plates or in forgings (RT_{PL} or TR_{PL-MAX}), and a third for flaws occurring along circumferential weld fusion lines (RT_{CW} or RT_{CW-MAX}).”).

⁴⁶ *Id.* at xxvii.

On October 3, 2007, the Staff published a notice of proposed rulemaking.⁴⁷ The rulemaking notice stated that the Alternate PTS Rule Technical Basis Report “conclude[d] that the risk of through-wall cracking due to a PTS event is much lower than previously estimated,” and that “[t]his finding indicates that the screening criteria in 10 CFR 50.61 are unnecessarily conservative.”⁴⁸ On January 4, 2010, the NRC issued the final rule, creating 10 C.F.R. § 50.61a.

The Alternate PTS Rule makes two important changes.⁴⁹ First, section 50.61a replaces the relatively broad Current Screening Criteria (270°F for plates, forgings, and axial weld materials, and 300°F for circumferential weld materials) with more detailed Alternate Screening Criteria.⁵⁰ The Alternate Screening Criteria consist of eighteen different reference temperature limits that depend on RPV wall thickness and the part of the RPV under consideration.⁵¹

The Alternate PTS Rule also changes how licensees derive projected reference temperatures for the components of their RPVs.⁵² Section 50.61a relies on a probabilistic “embrittlement model” to predict future reference temperatures across the RPV, which is then verified by existing surveillance data in a process called the “consistency check.”⁵³ Section 50.61, by contrast, continuously integrates surveillance data into future embrittlement projections.⁵⁴

In the final rulemaking notice, the Commission concluded that the new “estimation procedures provide a better (compared to the existing regulation) method for estimating the fracture toughness of reactor vessel materials over the lifetime of the plant.”⁵⁵ The final rulemaking notice stated that the Alternate PTS Rule “provides reasonable assurance that licensees operating below the screening criteria could endure a PTS event without fracture of vessel materials, thus assuring

⁴⁷ 72 Fed. Reg. 56,275.

⁴⁸ *Id.* at 56,276.

⁴⁹ Otherwise, like the old rule, the new rule provides measures for ongoing reporting, 10 C.F.R. § 50.61a(d)(1), and mitigation processes for licensees if they project they will exceed (or they do exceed) the Alternate PTS Rules’ screening criteria. *Id.* § 50.61a(d)(2)-(7).

⁵⁰ 75 Fed. Reg. at 18.

⁵¹ 10 C.F.R. § 50.61a(g) tbl. 1.

⁵² *See Id.* § 50.61a(f), (f)(6)(B)(ii).

⁵³ *Id.*

⁵⁴ *Compare id.* § 50.61a(f)(6)(i) (requiring that a licensee perform a “consistency check” of its embrittlement model against available surveillance data) and Alternate PTS Rule Technical Basis Report § 3.1.1 (The Alternate PTS Rule is designed to “enable all commercial PWR licensees to assess the state of their RPVs relative to such a new criterion without the need to make new material property measurements,” instead using “only information that is currently available.”), with 10 C.F.R. § 50.61(c)(2)(i) (requiring that “plant-specific surveillance data must be integrated into the RT_{NDT} estimate”) and Alternate PTS Rule Technical Basis Report § 2.4.2 (Under the Current PTS Rule, material samples “from RPV surveillance programs provide the empirical basis to establish embrittlement trend curves . . .”).

⁵⁵ 75 Fed. Reg. at 18.

integrity of the reactor pressure vessel.”⁵⁶ Furthermore, the final rulemaking stated that “[t]he final rule will not significantly increase the probability or consequences of accidents, result in changes being made in the types of any effluents that may be released off site, or result in a significant increase in occupational or public radiation exposure.”⁵⁷

C. Applying to Use the Alternate PTS Rule

To take advantage of the Alternate PTS Rule, a licensee must request approval from the Office of Nuclear Reactor Regulation, in accordance with the procedures for submitting a license amendment under 10 C.F.R. § 50.90. The application must contain: (i) under section 50.61a(f), the projected embrittlement reference temperatures along various portions of the RPV, from now to a future point, compared to the Alternate Screening Criteria; and (ii) under section 50.61a(e), an assessment of flaws in the RPV.⁵⁸

In calculating embrittlement reference temperatures under section 50.61a(f), a licensee must calculate neutron flux through the RPV “using a methodology that has been benchmarked to experimental measurements and with quantified uncertainties and possible biases.”⁵⁹ From that point, the licensee must establish $RT_{NDT(U)}$ for various key points along the RPV.⁶⁰ Then a licensee uses a series of equations and charts provided in the rule to create an embrittlement model. That model projects the reference temperatures for various parts of the RPV at the *end of life* of the plant, known in the new rule as RT_{MAX-X} .⁶¹ The embrittlement model allows for calculations of RT_{MAX-X} across the RPV using probabilistic analyses, without having to rely on measured data.⁶² The RT_{MAX-X} values are compared to the Alternate Screening Criteria to determine whether the RPV is safe to operate.⁶³

Importantly, as calculations of RT_{MAX-X} are made analytically, without directly incorporating surveillance data, licensees have to verify that their calculations at

⁵⁶ *Id.* at 22.

⁵⁷ *Id.*

⁵⁸ 10 C.F.R. § 50.61a(c)(1)-(2). Under section 50.61a, the licensee must separately examine for flaws in the reactor vessel. *Id.* § 50.61a(c)(2). The analysis of flaws in the Palisades RPV is not in dispute in this proceeding.

⁵⁹ *Id.* § 50.61a(f).

⁶⁰ *Id.* § 50.61a(f)(4). $RT_{NDT(U)}$ is the nil-ductility reference temperature for the RPV material in the annealed state, before the reactor was operational. *Id.* If measured values are not available, a licensee can use a set of generic mean values. *Id.* § 50.61a(f)(4)(i), (ii).

⁶¹ *Id.* § 50.61a(f)(1)-(3). “ RT_{MAX-X} is the equivalent term for RT_{PTS} in 10 CFR 50.61a.” Proposed Rulemaking — Alternate Fracture Toughness Requirements for Protection Against Pressurized Thermal Shock Events (RIN 3150-AI01), SECY-07-0104 (June 25, 2007).

⁶² *See supra* note 54.

⁶³ *See* 10 C.F.R. § 50.61a(c)(3).

the time of the application match up with surveillance data.⁶⁴ To do so, licensees have to perform the “consistency check” of their calculations for specific materials against “heat-specific surveillance data that are collected as part of 10 CFR part 50, Appendix H, surveillance programs.”⁶⁵ The purpose of the check is to “determine if the surveillance data show a significantly different trend than the embrittlement model predicts.”⁶⁶ The check includes three statistical analyses that compare the model’s inputs, fluence and material properties, with the model’s output, reference temperature.⁶⁷

The consistency check is required “[i]f three or more surveillance data points measured at three or more different neutron fluences exist for a specific material.”⁶⁸ The surveillance data must consist of material samples that are the same composition, or “heat,” as the materials being evaluated by the model.⁶⁹ The surveillance data, however, need not be obtained from the same RPV that is the subject of the license amendment: “Surveillance data means *any data* that demonstrates the embrittlement trends for the beltline materials, including, but not limited to, surveillance programs at other plants with or without a surveillance program integrated under 10 CFR part 50, appendix H.”⁷⁰ If, however, “fewer than three surveillance data points exist for a specific material, then the embrittlement model must be used without performing the consistency check.”⁷¹

In the event the embrittlement model deviates from the physical samples over the limits specified in the regulation, the licensee must submit additional

⁶⁴ *Id.* § 50.61a(f)(6)(i).

⁶⁵ 75 Fed. Reg. at 16. The regulatory history of the Alternate PTS Rule and associated draft guidance indicates that uncertainty in surveillance data measurements may be a concern, which licensees’ applications should address. *See id.* at 16-17 (discussing potential concerns with variability in surveillance data); Regulatory Guidance on the Alternate Pressured Thermal Shock Rule, Draft Regulatory Guide DG-1299 at 12 (Mar. 2015) [hereinafter DG-1299] (“The input variables to [the equations comprising the consistency check] are subject to variability and are often based on limited data,” particularly fluence.).

⁶⁶ 10 C.F.R. § 50.61a(f)(6)(i)(B).

⁶⁷ 75 Fed. Reg. at 16 (“The NRC is modifying the final rule to include three statistical tests to determine the significance of the differences between heat-specific surveillance data and the embrittlement trend curve.”). The consistency check compares the mean and slope of the embrittlement model curve against surveillance data, as well as checks to confirm that outliers fall within acceptable residual values provided in the regulation. *See* 10 C.F.R. § 50.61a(f)(6)(ii)-(v).

⁶⁸ 10 C.F.R. § 50.61a(f)(6)(i)(B).

⁶⁹ *Id.* § 50.61a(f)(6)(i)(A). Specifically, the regulation states, “[t]he surveillance material must be a heat-specific match for one or more of the materials” being evaluated through the embrittlement model. *Id.* The term “heat-specific,” however, is not defined in the regulation or in the Alternate PTS Rule Technical Basis Report. The rulemaking, nonetheless, indicates that “heat-specific” refers to a material of the same composition as the type being modeled. *See* 75 Fed. Reg. at 16.

⁷⁰ 10 C.F.R. § 50.61a(a)(10) (emphasis added).

⁷¹ *Id.* § 50.61a(f)(6)(i)(B).

evaluations and seek approval for the deviations from the Director of the Office of Nuclear Reactor Regulation.⁷² The rule, however, gives licensees some discretion in considering other plant-specific information that may be helpful in aligning their embrittlement models with the surveillance data.⁷³

D. The Palisades LAR

Palisades submitted its LAR on July 29, 2014.⁷⁴ This appears to be the first instance in which a nuclear power plant licensee has requested a license amendment under the Alternate PTS Rule, 10 C.F.R. § 50.61a.⁷⁵ Palisades' LAR was accompanied by an "Alternate Pressurized Thermal Shock (PTS) Rule Evaluation for Palisades" (Palisades Alternate PTS Rule Evaluation). It described the results of Entergy's evaluation of the Palisades RPV, pursuant to section 50.61a.⁷⁶ It also provided Palisades' embrittlement model and RT_{MAX-X} calculations across various parts of the RPV,⁷⁷ the result of checks against surveillance data,⁷⁸ and an analysis of flaws in the RPV.⁷⁹

The embrittlement model was checked against surveillance data for three different materials, one material representing the "base metal" for the Palisades RPV upper walls⁸⁰ and two materials representing different types of connecting welds.⁸¹ Entergy acknowledged that its embrittlement model had to be checked against surveillance data for these three materials, because "the materials listed

⁷² *Id.* § 50.61a(f)(6)(vi).

⁷³ *Id.* § 50.61a(f)(6) ("The licensee shall verify that an appropriate RT_{MAX-X} value has been calculated for each reactor vessel beltline material by considering plant-specific information that could affect the use of the model"); 75 Fed. Reg. at 17 ("[T]he rule does not specify a method for adjusting the [model] value based on surveillance data, but rather requires the licensee to propose a case-specific [model] adjustment procedure [I]t is the NRC view that appropriate plant-specific adjustments based upon available surveillance data may be necessary to project reactor pressure vessel embrittlement for the purpose of this rule.").

⁷⁴ *See* LAR.

⁷⁵ *See* Tr. at 35.

⁷⁶ Palisades Alternate PTS Rule Evaluation at v.

⁷⁷ *Id.* §§ 3.1, 8.

⁷⁸ *Id.* § 3.2.

⁷⁹ *Id.* § 3.3.

⁸⁰ *Id.* § 6 ("The base metal surveillance material is a heat-specific match for upper shell plate D-3802-1 and intermediate shell plates D-3803-1 and D-3803-3 (Heat C-1279).").

⁸¹ *Id.* ("The weld wire surveillance materials are heat-specific matches for the upper, intermediate, and lower shell longitudinal welds (Heat W5214) and the intermediate to lower shell circumferential weld (Heat 27204).").

have at least three data points at three or more different neutron fluences,” triggering the requirement to do a check under 10 C.F.R. § 50.61a(f)(6)(i)(B).⁸²

The surveillance data representing the upper “base metal” of the RPV came from material samples taken directly from the Palisades RPV at different points in its operating life.⁸³ For the weld materials, there were not enough material samples pulled directly from the Palisades RPV to allow for a sufficient check.⁸⁴ Therefore, the surveillance data also “contain[ed] sister plant material data from H. B. Robinson Unit 2 (HB2), Indian Point Units 2 and 3 (IP2 and IP3), and Diablo Canyon Unit 1 (DCI),” other PWRs.⁸⁵ Entergy attested that these material samples from the sister plants were either of the same “Material Identification (Heat No.),” or same general type of material as the materials in the Palisades reactor.⁸⁶ The fluence and reference temperature shifts⁸⁷ for each material sample were provided to compare against the model.⁸⁸

Entergy checked its embrittlement model against the surveillance data for the three material types for which such data were available,⁸⁹ and found that the results “satisfy the criteria in the Alternate PTS Rule.”⁹⁰ Thus, Entergy concluded that its embrittlement model provided a satisfactory means to estimate RPV embrittlement under section 50.61a.⁹¹

IV. PETITIONERS’ STANDING TO PARTICIPATE IN THIS PROCEEDING

Entergy, but not the Staff, disputes Petitioners’ standing. We conclude that Petitioners have satisfied the requirements for representational standing.

A. General Requirements for Standing

A petitioner’s participation in a licensing proceeding requires a demonstration

⁸² *Id.* § 8.

⁸³ *Id.* tbl. 6-1.

⁸⁴ Compare 10 C.F.R. § 50.61a(f)(6)(i)(B) (requiring three or more samples to conduct a consistency check) with Palisades Alternate PTS Rule Evaluation tbls. 6-2 to 6-3 (only two samples from Palisades available for each weld material type analyzed).

⁸⁵ Palisades Alternate PTS Rule Evaluation § 6, tbls. 6-2 to 6-3.

⁸⁶ *Id.* tbl. 8.5.

⁸⁷ The reference temperature shift, or ΔT_{30} , is simply the difference in reference temperature from the unirradiated to the post-irradiated states. See *id.* § 3.1; see also 10 C.F.R. § 50.61a, equations 1, 5.

⁸⁸ Palisades Alternate PTS Rule Evaluation tbls. 6-2 to 6-3, 8-7 to 8-8.

⁸⁹ *Id.* § 8.2.

⁹⁰ *Id.*; see also *id.* § 9.

⁹¹ *Id.* § 9.

of standing. This requirement is derived from section 189a of the Atomic Energy Act of 1954 (AEA),⁹² which instructs the NRC to provide a hearing “upon the request of any person whose interest may be affected by the proceeding.”⁹³ The Commission’s regulation implementing the standing requirement, 10 C.F.R. § 2.309(d), directs a licensing board to consider (1) the nature of the petitioner’s right under the AEA or the National Environmental Policy Act to be made a party to the proceeding; (2) the nature and extent of the petitioner’s property, financial, or other interest in the proceeding; and (3) the possible effect of any decision or order that may be issued in the proceeding on the petitioner’s interest.⁹⁴ When assessing whether an individual or organization has set forth a sufficient interest, the Commission has applied contemporaneous judicial concepts of standing, under which the petitioner must allege “a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision.”⁹⁵

In certain circumstances, the Commission has adopted a proximity presumption that allows a petitioner living,⁹⁶ having frequent contacts,⁹⁷ or having a significant property interest⁹⁸ within 50 miles of a nuclear power reactor to establish standing without the need to make an individualized showing of injury, causation, and redressability.⁹⁹ The Commission has explained that the proximity presumption applies when there are “clear implications for the offsite environment, or major alterations to the facility with a clear potential for offsite consequences.”¹⁰⁰ This impact can be assumed in such major actions as construction permit and operating license proceedings for power reactors.¹⁰¹ However, for the proximity

⁹² 42 U.S.C. § 2011 *et seq.*

⁹³ *Id.* § 2239(a)(1)(A); *see also* 10 C.F.R. § 2.105 (providing an opportunity for a hearing for “an amendment to an operating license, combined license, or manufacturing license”).

⁹⁴ 10 C.F.R. § 2.309(d)(1)(ii)-(iv).

⁹⁵ *Perry*, CLI-93-21, 38 NRC at 92 (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992)); *see also, e.g., Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 49 NRC 185, 195 (1998); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

⁹⁶ *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989) (“[L]iving within a specific distance from the plant is enough to confer standing on an individual or group in proceedings for construction permits, operating licenses, or significant amendments thereto.”).

⁹⁷ *Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 (1994) (stating that the proximity presumption also applies to “persons who have frequent contacts in the area near a nuclear power plant”).

⁹⁸ *USEC Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 314 (2005).

⁹⁹ *St. Lucie*, CLI-89-21, 30 NRC at 329.

¹⁰⁰ *See id.*

¹⁰¹ *Id.*

presumption to apply in the more limited license amendment proceedings, the proposed amendment must “‘obvious[ly]’ entail[] an increased potential for offsite consequences.”¹⁰²

Also, when, as here, an organization petitions to intervene in a proceeding, it must demonstrate either organizational or representational standing. To demonstrate organizational standing, the petitioner must show “injury-in-fact” to the interests of the organization itself.¹⁰³ When an organization seeks to establish representational standing, it must demonstrate that at least one of its members would be affected by the proceeding and identify that member. Moreover, the organization must show that the identified members would have standing to intervene in their own right, and that they have authorized the organization to request a hearing on their behalf.¹⁰⁴ In addition, the interests that the representative organization seeks to protect must be germane to its own purpose, and neither the asserted claim nor the relief sought must require an individual member to participate in the organization’s legal action.¹⁰⁵

B. Board Ruling on Petitioners’ Standing

Each of the petitioning organizations seeks representational standing on behalf of one of its members.¹⁰⁶ The organizations explain that their members “seek to protect their lives, health and property by opposing the license amendment,” and fear that the proposed amendment will lead to an increased risk of a loss-of-

¹⁰² *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-08-18, 68 NRC 533, 539 (2008) (first modification in original) (quoting *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 191 (1999) (internal quotation marks omitted) (quoting in turn *St. Lucie*, CLI-89-21, 30 NRC at 329-30)); see also *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 148 (2001) (“[T]he rule laid down in *St. Lucie* is intended to be applied across the board to all proceedings regardless of type because the rationale underlying the proximity presumption is not based on the type of proceeding per se but on whether ‘the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.’” (quoting *Ga. Tech.*, CLI-95-12, 42 NRC at 116)).

¹⁰³ See *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915-16 (2009); *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 183 (2007).

¹⁰⁴ See *Sequoyah Fuels*, CLI-94-12, 40 NRC at 72 (“An organization seeking representational standing on behalf of its members may meet the ‘injury-in-fact’ requirement by demonstrating that at least one of its members, who has authorized the organization to represent his or her interest, will be injured by the possible outcome of the proceeding.”) (citing *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-535, 9 NRC 377, 389-400 (1979)).

¹⁰⁵ *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409 (2007).

¹⁰⁶ Amended Petition at 1, 3, 5.

coolant accident because of a PTS event.¹⁰⁷ Petitioners argue that each individual has standing through the proximity presumption.¹⁰⁸ Petitioners argue that the proximity presumption applies in this proceeding as there is an obvious potential for offsite consequences generally in reactor operating license cases.¹⁰⁹

Attached to the Amended Petition are affidavits of the four individual members. Bette Pierman is a member of Beyond Nuclear and resides approximately 13 miles from Palisades.¹¹⁰ Alice Hirt is a member of Don't Waste Michigan and resides approximately 35 miles from Palisades.¹¹¹ Maynard Kaufman is a member of Shoreline and resides approximately 10 miles from Palisades.¹¹² Lastly, Gail Snyder is a member of NEIS, and, although she lives in Illinois, she owns 5 acres of land in Columbia, Michigan, approximately 15 miles from Palisades.¹¹³ She further states that "[m]y family members have camped on the land, and go there during the warm season on day trips," and that she "lives, recreates and conducts business within the affected vicinity of the nuclear power plant."¹¹⁴ She fears not only for her family's safety in the event of an accident at Palisades, but also that the land she owns "would become permanently uninhabitable."¹¹⁵ Each of the individuals authorizes the petitioning organizations of which they are members to represent them in this proceeding.¹¹⁶

1. Proximity Presumption

Entergy opposes Petitioners' use of the proximity presumption, asserting that

¹⁰⁷ *Id.* at 4.

¹⁰⁸ *Id.* at 3. The Petitioners add that "[a]ll of the petitioning individuals live within 50 miles of [Palisades]." *Id.*

¹⁰⁹ *Id.* at 3-4 (citing *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 426-27 (2002)).

¹¹⁰ Amended Petition, Attach., Amended Declaration of Bette Pierman in Support of Petition to Request a Public Hearing and Leave to Intervene in Opposition to Operating License Amendment for Palisades Nuclear Plant (Dec. 9, 2014).

¹¹¹ Amended Petition, Attach., Declaration of Alice Hirt in Support of Petition to Request a Public Hearing and Leave to Intervene in Opposition to Operating License Amendment for Palisades Nuclear Plant (Dec. 1, 2014).

¹¹² Amended Petition, Attach., Declaration of Maynard Kaufman in Support of Petition to Request a Public Hearing and Leave to Intervene in Opposition to Operating License Amendment for Palisades Nuclear Plant (Nov. 26, 2014).

¹¹³ Amended Petition, Attach., Declaration of Gail Snyder in Support of Petition to Request a Public Hearing and Leave to Intervene in Opposition to Operating License Amendment for Palisades Nuclear Plant (Nov. 30, 2014) [hereinafter Gail Snyder Affidavit].

¹¹⁴ *Id.*

¹¹⁵ *Id.*

¹¹⁶ *Supra* notes 110-113.

the Amended Petition lacks a specific, minimum demonstration that the license amendment portends an “obvious” potential for offsite consequences.¹¹⁷ Entergy argues that Petitioners’ reliance on *Diablo Canyon* is mistaken because *Diablo Canyon* concerned the licensing of an Independent Spent Fuel Storage Facility, while “Petitioners cite no authority for proximity-based standing in a license amendment proceeding similar to this one.”¹¹⁸ Entergy points to a 1998 *Millstone* decision, in which a licensing board declined to apply the proximity presumption, concluding that the proposed license amendment to add a safety-related sump pump subsystem to the existing system in the Engineered Safety Features building failed to present an obvious potential for offsite consequences.¹¹⁹

The Staff disagrees with Entergy, concluding that the proximity presumption does apply to the proposed license amendment. The Staff argues that license amendments related to RPV embrittlement present an obvious potential for offsite public health and safety consequences.¹²⁰ Petitioners in their reply similarly argue “that a pressurized thermal shock-caused failure of a reactor pressure vessel raises an ‘obvious potential for offsite consequences.’”¹²¹ Petitioners also argue that the radius for the proximity presumption has to be at least as large as the range where obvious offsite consequences can occur.¹²²

The Board finds that the proximity presumption applies to Petitioners. In *Perry*, cited by the Staff, a group of petitioners brought a contention concerning a license amendment to move “the schedule for the withdrawal of reactor vessel material specimens” from the technical specifications to the updated safety analysis report.¹²³ The petitioners argued that this move would limit their ability to challenge future amendments to the specimen withdrawal schedule.¹²⁴ The

¹¹⁷ Entergy Answer at 12-15.

¹¹⁸ *Id.* at 13.

¹¹⁹ *Id.* at 13-14 (citing *Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), LBP-98-22, 48 NRC 149, 155, *aff’d*, CLI-98-20, 48 NRC 183, 184 (1998)).

¹²⁰ NRC Staff Answer at 4 (quoting *Perry*, CLI-93-21, 38 NRC at 95-96).

¹²¹ Reply at 15. Petitioners explain that, in *St. Lucie*, the Commission applied the proximity presumption even when the amendment only alleged “management’s lack of the required character and competence,” a less serious issue than alleged here. *Id.* (citing *St. Lucie*, CLI-89-21, 30 NRC 325)).

¹²² See *id.* at 14-15 (citing *Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-08-19, 68 NRC 251, 254 (2008)). Petitioners argue that even if a reduced proximity presumption radius were to apply in this case, many of the petitioners live within 10 to 20 miles of Palisades. *Id.* at 13-14 (citing *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), LBP-87-7, 25 NRC 116, 118 (1987)).

¹²³ *Perry*, CLI-93-21, 38 NRC at 89.

¹²⁴ *Id.* at 90. According to the petitioners in *Perry*, “[i]f the license were amended, the public’s only means to participate in future schedule changes would be through a request for action under 10 C.F.R. § 2.206,” and the public would be unable to request a hearing in front of a licensing board. *Id.* at 91.

Commission concluded that “the instant amendment directly involves surveillance of the reactor vessel’s integrity The material condition of the plant’s reactor vessel obviously bears on the health and safety of those members of the public who reside in the plant’s vicinity.”¹²⁵ The Commission determined that the petitioners had standing even though they did not provide a reactor vessel failure scenario.¹²⁶

Petitioners’ contention relates to a similar potential injury, a release of radiation due to the potential failure of RPV integrity. It is obvious to this Board, as it was to the Commission in *Perry*, that a change in the safety-related requirements intended to ensure the integrity of the RPV “obviously bears on the health and safety of those members of the public who reside in the plant’s vicinity.”¹²⁷ That is all the more apparent in this case because, as Entergy acknowledges, the alternative regulatory requirements proposed by the license amendment are less conservative than those that the amendment is intended to replace.¹²⁸

Entergy’s reliance on the licensing board decision in *Millstone* is misplaced.¹²⁹ The licensing board in that case was understandably confounded by the petitioner’s challenge to the *addition* of a safety system: “[E]ven assuming the instant amendment to add a safety-related sump pump subsystem to the existing sump pump system . . . somehow presents the potential for offsite environmental consequences, that potential is anything but obvious.”¹³⁰ The circumstances in *Millstone* are entirely different from those here, where the potential for offsite consequences from a failure of RPV integrity is obvious.¹³¹

2. NEIS’s Standing

Entergy separately challenges NEIS’s standing, alleging that Ms. Snyder, the NEIS member petitioning to intervene, fails to meet the proximity presumption

¹²⁵ *Id.* at 95-96.

¹²⁶ *Id.* at 95.

¹²⁷ *Id.* at 95-96; *see also Turkey Point*, LBP-01-6, 53 NRC at 149-50 (stating that licensing actions that potentially increase reactor vessel embrittlement, such as license renewals, “hold the potential for offsite consequences that are obvious”).

¹²⁸ *See* Entergy Answer at 6-7.

¹²⁹ *Millstone*, LBP-98-22, 48 NRC at 149.

¹³⁰ *Id.* at 155.

¹³¹ Entergy also alleges that the Amended Petition merely repeats arguments from a prior Palisades license renewal proceeding and is not specific to the license amendment at issue. Entergy Answer at 14. The Board disagrees with Entergy. The Amended Petition presents a specific argument geared toward the LAR. *See* Amended Petition at 11-22; *cf. Millstone*, LBP-98-22, 48 NRC at 155-56 (A petition was not sufficiently specific when it “merely repeat[ed] the contents of [the petitioner’s] earlier petition” concerning a prior license amendment.).

in her own right.¹³² Entergy argues that Ms. Snyder's affidavit is not sufficiently specific to show frequent contact within 50 miles of Palisades,¹³³ as it does not provide an address for her property or give the duration of her family members' visits.¹³⁴ Furthermore, Entergy asserts that Ms. Snyder cannot request standing on the basis of third parties, given that "Ms. Snyder's declaration does not claim that she ever visits her property."¹³⁵

The Staff maintains, however, that Ms. Snyder demonstrates standing. Although the Staff agrees with Entergy that she may not be able to claim standing based on her family's activities or the frequency of her own contacts, it notes that a "harm to a property interest is also sufficient to establish standing."¹³⁶ The Staff acknowledges Ms. Snyder's concern that her property could become uninhabitable in the event of an accident at Palisades.¹³⁷ Petitioners reply that Ms. Snyder also "camps and picnics" on the property she owns.¹³⁸

Entergy is correct that Ms. Snyder cannot gain standing from the interests of third parties except in very limited circumstances not present here.¹³⁹ Moreover, to demonstrate "frequent contacts" within the 50-mile site radius under the proximity presumption, Ms. Snyder must show that her contacts are "substantial" and "regular," and must describe them with specificity.¹⁴⁰ Although Ms. Snyder's affidavit indicates she may spend time by the Palisades site,¹⁴¹ these statements

¹³²Entergy Answer at 15.

¹³³*Id.* at 15-16 (citing *PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 140 (2010)).

¹³⁴*Id.* at 16.

¹³⁵*Id.* Entergy cites as support a licensing board decision in *Fermi*, in which a mother was allegedly denied standing based on her son's residence within 50 miles of a power plant, because she herself lived more than 50 miles away. *See id.* at 16-17 (citing *Detroit Edison Co.* (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-470, 7 NRC 473, 474 n.1 (1978)).

¹³⁶NRC Staff Answer at 5 n.17 (citing *Am. Centrifuge*, CLI-05-11, 61 NRC at 314).

¹³⁷*Id.*

¹³⁸Reply at 14.

¹³⁹*See St. Lucie*, CLI-89-21, 30 NRC at 329 (A petitioner "may not derive standing from the interests of another person or organization"); *see also Fermi*, ALAB-470, 7 NRC at 474 n.1 (noting that a parent could attain standing through reference to her child if the child was "a minor or otherwise under a legal disability," and thus unable to participate herself); *Nuclear Fuel Services* (Erwin, Tennessee), LBP-04-5, 59 NRC 186, 193 n.10 (A petitioner could not rely on "caretakers . . . maintaining and farming the property in [the petitioner's] absence" as grounds for standing.), *aff'd*, CLI-04-13, 59 NRC 244 (2004).

¹⁴⁰*See Bell Bend*, CLI-10-7, 71 NRC at 140 (2010). This is a determination to be made by a licensing board after weighing all the information provided. *See id.* at 139.

¹⁴¹*See* Gail Snyder Affidavit (stating that she "lives, recreates and conducts business" within the vicinity of the plant).

are too vague to demonstrate a substantial or regular presence within 50 miles of Palisades.¹⁴²

Nonetheless, the Staff is correct that a property interest is sufficient to grant standing based on proximity. As the Commission noted in *American Centrifuge*, “[t]he Atomic Energy Act authorizes the Commission ‘to accord protection from radiological injury to both health and *property* interests.’ Thus, a genuine property interest . . . is sufficient to accord [the petitioner] standing, given that the home is located” within close proximity to the facility.¹⁴³ Ms. Snyder has clearly enunciated her concern that an accident at Palisades could render her 5 acres of land “permanently uninhabitable.”¹⁴⁴ The Board thus finds that she has demonstrated a sufficient property interest to warrant standing based on proximity.

3. *Representational Standing*

Neither Entergy nor the Staff challenge Petitioners’ request for representational standing. Although the Board has the obligation to independently assess Petitioners’ standing,¹⁴⁵ we have no difficulty concluding that the requirements for representational standing are met in this case. As discussed above, Petitioners have provided affidavits from their members, each of whom has standing under the proximity presumption and has authorized Petitioners to request a hearing on their behalf.¹⁴⁶ Petitioners have also demonstrated that the interests the representative organizations seek to protect are germane to their own purposes, and that neither the asserted claims nor the relief sought require an individual member to participate in the organization’s legal action.¹⁴⁷

¹⁴² See *Bell Bend*, CLI-10-7, 71 NRC at 140 (The Commission concluded that the petitioner’s statement that he “routinely pierces the 50-mile proximate rule [sic] during his day-to-day activities” by itself was “too vague a statement on which to base standing.”).

¹⁴³ *Am. Centrifuge*, CLI-05-11, 61 NRC at 314 (quoting *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 48 (1994) (citing 42 U.S.C. §§ 2133(b), 2201(b))) (footnote omitted).

¹⁴⁴ Gail Snyder Affidavit. Entergy faults Ms. Snyder for not listing the address of her land in her affidavit. Entergy Answer at 16. However, she has stated that the property is located in Columbia, Michigan, and that it is located approximately 15 miles from Palisades. Gail Snyder Affidavit. Given that Entergy does not question whether the property actually exists, or whether she owns it, we do not find the failure to provide an exact address in her affidavit a limiting concern. See *Am. Centrifuge*, CLI-05-11, 61 NRC at 314-15 (the Commission examined whether the petitioner actually owned the property only after the licensee challenged ownership in its answer).

¹⁴⁵ See 10 C.F.R. § 2.309(d)(2); *supra* notes 110-113 and accompanying text.

¹⁴⁶ *Sequoyah Fuels*, CLI-94-12, 40 NRC at 72.

¹⁴⁷ See Declaration of Authorized Officer of Beyond Nuclear in Support of Petition to Intervene in Docket No. 50-255 (Dec. 1, 2014); Declaration of Authorized Officer of Don’t Waste Michigan
(Continued)

V. ADMISSIBILITY OF PETITIONERS' CONTENTION

A. General Pleading Requirements

In order to participate as a party in this proceeding, a petitioner for intervention must not only establish standing, but must also proffer at least one admissible contention that meets the requirements of 10 C.F.R. § 2.309(f).¹⁴⁸ An admissible contention must: (i) provide a specific statement of the legal or factual issue sought to be raised; (ii) provide a brief explanation of the basis for the contention; (iii) demonstrate that the issue raised is within the scope of the proceeding; (iv) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (v) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at the hearing; and (vi) provide sufficient information to show that a genuine dispute exists in regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or, in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief.¹⁴⁹

The purpose of section 2.309(f)(1) is to "focus litigation on concrete issues and result in a clearer and more focused record for decision."¹⁵⁰ The Commission has stated that it "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing."¹⁵¹ The rules on contention admissibility are "strict by design."¹⁵² Petitioners must comply with all of these requirements.

B. Scope of Review of License Amendments

The NRC regulations define the Commission's scope of review of a license

in Support of Petition to Intervene in Docket No. 50-255 (Dec. 1, 2014); Declaration of Authorized Officer of Michigan Safe Energy Future in Support of Petition to Intervene in Docket No. 50-255 (Dec. 1, 2014); Declaration of Authorized Officer of Nuclear Energy Information Service in Support of Petition to Intervene in Docket No. 50-255 (Dec. 1, 2014); *see also Palisades*, CLI-07-18, 65 NRC at 409.

¹⁴⁸ See 10 C.F.R. § 2.309(a).

¹⁴⁹ *Id.* § 2.309(f)(1).

¹⁵⁰ Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

¹⁵¹ *Id.*

¹⁵² See, e.g., *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003); *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358-59 (2001); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334-35 (1999).

amendment application broadly: “In determining whether an amendment to a license, construction permit, or early site permit will be issued to the applicant, the Commission will be guided by the considerations which govern the issuance of initial licenses, construction permits, or early site permits to the extent applicable and appropriate.”¹⁵³ The “considerations” the Commission should review include those defined in 10 C.F.R. § 50.40, titled “Common standards.” As the Atomic Safety and Licensing Appeals Board explained:

In essence, Section 50.40 requires that the Commission be persuaded, *inter alia*, that the applicant will comply with all applicable regulations, that the health and safety of the public will not be endangered, that the issuance of the amendment will not be inimical to the health and safety of the public, and that any applicable requirements of 10 CFR Part 51 (governing environmental protection) have been satisfied.¹⁵⁴

C. Prohibition Against Challenging NRC Rules in Agency Adjudications

The NRC’s adjudicatory process is not the venue for challenging the NRC’s regulations. When the Commission has opted to address a safety or environmental concern through regulation, it has uniformly prohibited litigation of that same issue in a site-specific adjudicatory proceeding: “Contentions that are the subject of general rulemaking by the Commission may not be litigated in individual license proceedings.”¹⁵⁵ According to 10 C.F.R. § 2.335(a), “no rule or regulation of the Commission, or any provision thereof . . . is subject to attack” in an adjudicatory proceeding unless a waiver is granted by the Commission.¹⁵⁶

¹⁵³ 10 C.F.R. § 50.92(a).

¹⁵⁴ *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 44 (1978); *see also Tennessee Valley Authority* (Browns Ferry Nuclear Plant, Units 1, 2, and 3), ALAB-664, 15 NRC 1, 15-16 (“Prior to license issuance the NRC must first find reasonable assurance that the activities authorized by the amendment can be conducted without endangering the health and safety of the public, and in compliance with Commission regulations.”), *vacated and remanded on other grounds*, CLI-82-26, 16 NRC 880 (1982); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-81-16, 13 NRC 1115, 1120 (1981) (reviewing a proposed license amendment to determine whether it would “endanger the health and safety of the public”).

¹⁵⁵ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 79 n.27 (2014) (citing *Oconee*, CLI-99-11, 49 NRC at 345).

¹⁵⁶ 10 C.F.R. § 2.335(a). A party can petition for a waiver of a specific NRC regulation, based on a showing of “special circumstances” such that application of the rule would not serve the purposes for which it was adopted. *Id.* § 2.335(b); *see also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005) (laying out a four-factor test for determining whether to grant a waiver). However, as Petitioners have not petitioned for a waiver of any NRC regulation, this process need not be discussed further.

D. Board Ruling on Contention Admissibility

Petitioners claim that Entergy's LAR "deviate[s] from the regulatory requirements of 10 C.F.R. § 50.61 to § 50.61a (Alternate Fracture Toughness Requirements)."¹⁵⁷ They assert that "Palisades has an acknowledged problem of worsening reactor vessel embrittlement commencing from the start of operations in the early 1970's," and "[b]asically, 10 C.F.R. § 50.61a allows Entergy to substitute various estimates of the status of the RPV for actual data investigation and analysis."¹⁵⁸ Petitioners "further raise the question of whether Entergy should be allowed to resort to § 50.61a at all."¹⁵⁹

Petitioners provide three specific bases for their contention:

1. **"Analytical vs. Experimental."**¹⁶⁰ Petitioners argue that Entergy cannot provide reasonable assurance of public health and safety under the Alternate PTS Rule without obtaining or using additional data from the Palisades RPV.
2. **"The Comparable Plants Are Not Apples-to-Apples Comparisons."**¹⁶¹ Petitioners argue that "sister plant" surveillance data from reactors with different operating characteristics cannot be combined with Palisades' surveillance data for purposes of the section 50.61a(f)(6) consistency check.
3. **"Cross-Comparisons and Standard Deviations Don't Match Up."**¹⁶² Petitioners argue the applicant's use of surveillance data does not account for spatial variability in fluence across a reactor, and that this variability increases beyond regulatory limits when sister plant surveillance data are used.

Petitioners apparently want the Board to preclude Entergy from relying on section 50.61a to avoid meeting the requirements of section 50.61, but it is just such a "deviation" that section 50.61a authorizes. The evident purpose of the Alternate PTS Rule's "Alternate Fracture Toughness Requirements" is to provide an alternative to satisfying the more demanding requirements of section 50.61. Therefore, Petitioners are in substance asking that the Board prohibit what section

¹⁵⁷ Amended Petition at 11-12.

¹⁵⁸ *Id.* at 10.

¹⁵⁹ *Id.* at 11.

¹⁶⁰ *Id.* at 15.

¹⁶¹ *Id.* at 16.

¹⁶² *Id.* at 18.

50.61a allows. Under 10 C.F.R. § 2.335, we may not consider such a contention except under specific conditions not present here.¹⁶³

Nevertheless, because the petition provides three potential bases of the contention,¹⁶⁴ each of which might be able to stand alone as a separate contention, we have reviewed each of the asserted bases to determine whether any could satisfy the contention admissibility requirements in section 2.309(f)(1) and also comply with section 2.335's prohibition on challenging agency regulations.¹⁶⁵ We conclude that none of the asserted bases could satisfy both requirements.

1. Basis 1: Use of Analytical Models Rather Than Empirical Data

Petitioners contend that the Entergy LAR fails to ensure public health and safety because the analyses undergirding the LAR estimate current and future embrittlement of the Palisades RPV without reliance on empirical data from material samples.¹⁶⁶ The last material sample taken from the Palisades RPV to measure embrittlement was removed in 2003, while the next sample is not scheduled to be removed until 2019. Thus, Petitioners emphasize, “fully 16 years will have passed without development or analysis of new physical evidence of embrittlement.”¹⁶⁷ Quoting from the Declaration of Arnold Gunderson, a nuclear engineer, Petitioners argue that “the NRC has allowed Palisades to make

¹⁶³ See *supra* note 156.

¹⁶⁴ The petition includes a fourth basis, which argues that Entergy's equivalent margins analysis allows Palisades to operate its RPV outside of permissible limits. Amended Petition at 19. In their reply, Petitioners appear to agree with Entergy and the NRC Staff that the equivalent margins analysis is actually the subject of a separate license amendment request. Reply at 11-12. Petitioners have, since filing the petition in this case, filed a separate petition challenging Entergy's separate license amendment request to authorize the equivalent margins analysis. See Petition to Intervene and for a Public Adjudication Hearing of Entergy License Amendment Request for Approval of 10 CFR Part 50 Appendix G Equivalent Margins Analysis, Docket No. 50-255-LA2 (Mar. 9, 2015). A licensing board has been appointed for that separate proceeding. See Entergy Nuclear Operations, Inc., Establishment of Atomic Safety and Licensing Board, 80 Fed. Reg. 15,827 (Mar. 25, 2015); Commission Order (Establishment of Atomic Safety and Licensing Board), Docket No. 50-255-LA2 (Mar. 19, 2015) (unpublished). Petitioners' challenge to the equivalent margins analysis license amendment request is pending before that board. This Board will therefore not consider further the fourth asserted basis of the contention.

¹⁶⁵ Licensing Boards have the authority to reformulate contentions “to consolidate issues for a more efficient proceeding.” *Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552 (2009) (quoting *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-08-11, 67 NRC 460, 482 (2008)) (internal quotation marks omitted).

¹⁶⁶ Amended Petition at 14-16. According to Gunderson, “[a]nalysis is no replacement for testing the capsule coupon.” Gunderson Declaration ¶ 55.

¹⁶⁷ Amended Petition at 15.

unrealistic, unsupported and imprudent safety calculations based on little more than probabilistic risk.”¹⁶⁸

As an alleged example of the dangers of ignoring physical data in favor of modeling, Petitioners claim that a material sample, capsule A-60, was deleted from the Palisades Surveillance Program back in 1984 “precisely because it gave an answer that would have required Palisades to be shut down.”¹⁶⁹ Petitioners repeated at oral argument that Palisades’ LAR “ignores” the data from the alleged 1984 testing of capsule A-60.¹⁷⁰

Entergy responds that this contention is a challenge to section 50.61a itself, which is impermissible under 10 C.F.R. § 2.335.¹⁷¹ The Staff’s answer also emphasizes that section 50.61a is a Commission rule and thus a “petitioner cannot simply argue that § 50.61a is flawed because it fails to require an applicant to do X or should not allow an applicant to do Y.”¹⁷²

Regarding the material sample that was allegedly discarded in 1984, capsule A-60, Entergy responds that it did not discard unfavorable data, but instead simply discarded a sample that was “inadvertently over-irradiated in the 1980s.”¹⁷³ At oral argument Entergy claimed that this capsule was never tested, and thus cannot provide any evidence of embrittlement trends useful for Palisades’ LAR.¹⁷⁴ In its answer, the Staff states that an identical capsule, capsule A-240, was placed in a diametrically opposite position with similar neutron fluences and temperatures as capsule A-60, “making withdrawal and testing of Capsule A-60 unnecessary.”¹⁷⁵ Both Entergy and the Staff also emphasize that Petitioners are complaining about a separate agency action that occurred in 1984, well outside the scope of this proceeding.¹⁷⁶

In their reply, Petitioners reassert that their claims are not impermissible attacks

¹⁶⁸ *Id.* at 16 (quoting Gundersen Declaration ¶ 23) (internal quotation marks omitted); *see also* Gundersen Declaration ¶ 20 (citing Palisades Webinar at 1, encl. 2 at 6 (discussing the surveillance data removal schedule for the Palisades facility)). Gundersen further claims that the agency should have adopted a more evidence-driven approach, but instead has consistently acted otherwise for economic reasons. Gundersen Declaration ¶¶ 16, 24.3.

¹⁶⁹ Amended Petition at 19 (quoting Gundersen Declaration ¶ 42) (internal quotation marks omitted).

¹⁷⁰ Tr. at 15, 65.

¹⁷¹ Entergy Answer at 21.

¹⁷² NRC Staff Answer at 16-17.

¹⁷³ Entergy Answer at 31 n.160. At oral argument, Entergy clarified that “there was an outage when it was scheduled to be removed and they had difficulty removing it. . . . So, they had to leave it in for another cycle. And when eventually they did remove it, it had experienced more irradiation than it would have experienced even beyond 80 years of plant [operation].” Tr. at 93.

¹⁷⁴ Tr. at 85, 95, 96, 118.

¹⁷⁵ NRC Staff Answer at 27 n.123.

¹⁷⁶ Entergy Answer at 31 n.160; NRC Staff Answer at 27.

on NRC regulations.¹⁷⁷ Petitioners argue that “their expert’s critique of the means by which the § 50.61a investigation was conducted . . . cannot be construed as a frontal assault on the regulatory citadel, but must instead be seen, for purposes of the admissibility determination, as an exposé of the flaws caused by straying away from knowable science.”¹⁷⁸ Petitioners comment that their concerns about capsule A-60 are not irrelevant legal arguments, but are instead evidentiary observations, which allegedly show “that the degree of RPV embrittlement in the 1980’s was greatly advanced, given the then-short operational age of the reactor.”¹⁷⁹ At oral argument Petitioners noted that “[t]here is some seriously conflicting information about the status of the [A-60] capsule,”¹⁸⁰ and asserted that there is evidence showing, contrary to Entergy’s claim, that capsule A-60 was indeed tested and embrittlement data noted.¹⁸¹

The Board agrees with Entergy and the Staff that Petitioners’ general claims concerning the use of analytical model results over physical data do not lead to an admissible contention because they amount to a challenge to the Alternate PTS Rule. The Commission noted when it promulgated section 50.61a that this rule “provides reasonable assurance” of public health and safety, thereby endorsing the 50.61a embrittlement model approach and precluding requests to create requirements more restrictive than the rule.¹⁸² As Entergy correctly states, “[w]hen a Commission regulation permits the use of a particular analysis, a contention asserting that a different analysis or technique should be utilized is inadmissible because it indirectly attacks the Commission’s regulations.”¹⁸³

As Intervenors note, although material samples had been pulled from the RPV at a relatively consistent 3- to 5-year interval since the reactor became operational,¹⁸⁴ there is now a projected 16-year gap between the removal of the last sample, capsule W-100, in 2003, and the pulling of the next sample in 2019.¹⁸⁵

¹⁷⁷ Reply at 3.

¹⁷⁸ *Id.* at 4-5.

¹⁷⁹ *Id.* at 10-11.

¹⁸⁰ Tr. at 128.

¹⁸¹ Tr. at 129-30.

¹⁸² 75 Fed. Reg. at 22.

¹⁸³ Entergy Answer at 22 (quoting *Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 255 (internal quotation marks omitted) (citing *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), LBP-83-76, 18 NRC 1266, 1273 (1983)), *aff’d on other grounds*, CLI-09-22, 70 NRC 932, 933 (2009)).

¹⁸⁴ Office of Nuclear Reactor Regulation, Approval of Proposed Reactor Vessel Surveillance Capsule Withdrawal Schedule (Aug. 14, 2007), encl., Neil K. Ray, Surveillance Capsule Withdrawal Schedule, Palisades Nuclear Plant at 3 (ADAMS Accession No. ML071640310) (listing the capsule removal schedule); Palisades Webinar, encl. 2 at 6 (indicating that an additional capsule, capsule SA-240-1, was removed approximately 3 years prior to removal of capsule W-100 in 2003).

¹⁸⁵ Palisades Webinar at 1, encl. 2 at 6.

But, by advocating that the Board require the testing of additional samples, Intervenor is asking the Board to demand more than section 50.61a requires.

We are also not persuaded by Petitioners' claim that Palisades' LAR "ignores" the data from the alleged 1984 testing of capsule A-60.¹⁸⁶ Section 50.61a defines surveillance data broadly, to include "any data that demonstrates the embrittlement trends for the beltline materials."¹⁸⁷ If the capsule had in fact been tested, the resulting data could constitute surveillance data relevant to evaluating embrittlement trends.¹⁸⁸ Entergy appeared to acknowledge that much at oral argument.¹⁸⁹ Thus, a contention alleging that Entergy should have evaluated surveillance data actually obtained from capsule A-60 would not violate section 2.335's prohibition on contentions challenging agency regulations.

Nonetheless, Intervenor has not provided any factual support for their assertion that this capsule was indeed removed and tested for embrittlement data.¹⁹⁰ As noted above, Mr. Gunderson claims that capsule A-60 was deleted from the Palisades Surveillance Program in 1984 "precisely because it gave an answer that would have required Palisades to be shut down."¹⁹¹ Mr. Gunderson fails to explain, however, how he deduced that the capsule was tested, much less how he knows that the testing produced such a significant result. Although the contention admissibility stage is not the appropriate point at which to evaluate witness credibility or to weigh competing evidence, an expert must provide a reasoned basis or explanation for opinions in support of a contention.¹⁹² Mr. Gunderson has provided no such basis or explanation for his belief that the capsule was tested approximately 30 years ago and that the results would have required Palisades to shut down. Amendment 79 to the Palisades license, which authorized the removal of capsule A-60, does not provide any support for Mr. Gunderson's assertions.¹⁹³ In the absence of any factual support for Petitioners' argument, capsule A-60 is not "data that demonstrates the embrittlement trends

¹⁸⁶ Tr. at 15, 65.

¹⁸⁷ 10 C.F.R. § 50.61a(a)(10).

¹⁸⁸ Entergy and the NRC Staff give slightly different reasons in their answers for why the capsule was removed from the program. *Compare* Entergy Answer at 31 n.160 (claiming the capsule was "accidentally over-irradiated in the 1980s") *with* NRC Staff Answer at 27-28, 28 n.123 ("[B]ecause [equivalent] Capsule A-240 had been withdrawn and tested, it could be used to predict the end-of-life material properties of the Palisades reactor vessel, making withdrawal and testing of Capsule A-60 unnecessary.").

¹⁸⁹ *See* Tr. at 101.

¹⁹⁰ Tr. at 85, 95, 96, 118.

¹⁹¹ Gunderson Declaration ¶ 42.

¹⁹² *USEC Inc. (American Centrifuge Plant)*, CLI-06-10, 63 NRC 451, 472 (2006).

¹⁹³ *See* Office of Nuclear Reactor Regulation, Safety Evaluation Report Supporting Amendment 79 to Consumers Power Company Provisional Operating License at 2 (Feb. 28, 1984) (ADAMS Accession No. ML020800206).

for the beltline material,”¹⁹⁴ and therefore the fact that it was excluded from the Palisades LAR is not a material issue.

2. Bases 2 and 3: Use of Sister Plant Comparison Data

We will discuss Bases 2 and 3 together because both concern Entergy’s consistency check of its embrittlement model under section 50.61a(f)(6), and the use of sister plant surveillance data as part of that check.

Under Basis 2, Petitioners contend that the surveillance data provided from other PWR reactor vessels at H. B. Robinson, Indian Point, and Diablo Canyon cannot be compared with the material samples from the Palisades RPV for purposes of verifying the embrittlement model.¹⁹⁵ Petitioners’ expert, Mr. Gundersen, states that “[w]hile it is true that the material used to weld the reactor plates together to create the reactor vessel is similar among the four plants, the dramatically different nuclear core design and operational power characteristics make an accurate comparison impossible.”¹⁹⁶ According to Mr. Gundersen, the different core design and operational characteristics of these reactors are relevant because they “impact[] the neutron flux on each reactor vessel, thus making an accurate comparison of neutron bombardment and embrittlement impossible,” with the Palisades embrittlement model.¹⁹⁷ According to Petitioners, the Staff acknowledges that use of “all possible” plant-specific surveillance data is critical for an effective check of an embrittlement model.¹⁹⁸

Petitioners’ discussion under Basis 3 offers two more specific lines of argument regarding the use of sister plant data. First, Petitioners claim that “there is extraordinary [spatial] variability between the neutron flux across the nuclear core in” the Palisades reactor.¹⁹⁹ In his declaration, Mr. Gundersen contends that given this spatial variability, it is impossible to compare multiple samples from multiple reactors to derive the flux or fluence for a single specific area of an RPV without introducing error.²⁰⁰ For support, Mr. Gundersen cites to a Palisades Reactor Pres-

¹⁹⁴ 10 C.F.R. § 50.61a(a)(10).

¹⁹⁵ Amended Petition at 16.

¹⁹⁶ Gundersen Declaration ¶ 27.

¹⁹⁷ *Id.*

¹⁹⁸ Amended Petition at 20-21 (citing Gundersen Declaration ¶ 53); *see also* Transcript, 619th Meeting, Advisory Committee on Reactor Safeguards (Nov. 6, 2014) (ADAMS Accession No. ML14321A542). Although Petitioners initially state that this view came from the Advisory Committee on Reactor Safeguards, they later assert that it instead came from Mark Kirk from the Office of Regulatory Research, the alleged “primary author of § 50.61a.” Reply at 7. Petitioners in their reply also cite to minutes of a meeting of the Advisory Committee on Reactor Safeguards, alleging that parts of the agency itself have a “dark” and unsafe view of Palisades’ RPV embrittlement. *Id.* at 16.

¹⁹⁹ Amended Petition at 18 (quoting Gundersen Declaration ¶ 34) (internal quotation marks omitted).

²⁰⁰ Gundersen Declaration ¶¶ 30-38.

sure Vessel Fluence Evaluation (Palisades Fluence Evaluation Report), conducted in 2011, which describes “the methodology used in the fluence evaluations for the Palisades plant.”²⁰¹ He points specifically to two charts that allegedly show how neutron flux and fluence vary across the Palisades reactor over location and over time.²⁰² He cites an additional 1990 report, which allegedly concludes that a number of factors, including RPV dimensions and cycle variations, can cause fluence at an RPV wall to vary up to 25% from predictions.²⁰³

Second, Petitioners claim that “the most serious analytical problem in the use of sister plants” is the alleged difficulty or impossibility of the data from the sister plants staying within one standard deviation, or 20%, from Palisades’ data.²⁰⁴ Petitioners, however, do not point to any regulation as the origin of this alleged requirement. Instead, Mr. Gundersen cites the Palisades Fluence Evaluation Report, which states that “the [fluence] calculations and [material sample] measurements should agree within 20% at the 1 σ level.”²⁰⁵ Mr. Gundersen claims that, as a result, “[a] 1 σ analysis appears to be binding within the Palisades data,” but the NRC has allowed the use of sister plant data “without requiring the same 1 σ variance with Palisades.”²⁰⁶

Entergy responds that Bases 2 and 3 of the contention are vague, unclear, and “do not articulate any specific deficiency in Entergy’s LAR.”²⁰⁷ Entergy admits

²⁰¹ *Id.* ¶ 30 (citing Westinghouse, Palisades Reactor Pressure Vessel Fluence Evaluation, WCAP-15353, Supplement 2, Revision 0 (July 2011) (ADAMS Accession No. ML14316A207) [hereinafter Palisades Fluence Evaluation Report]).

²⁰² *See id.* ¶¶ 34, 35. Both charts cited by Mr. Gundersen (charts 2.2-3 and 2.2-4) actually discuss flux characteristics for the Palisades RPV; neither discusses fluence. At oral argument, Petitioners clarified that Mr. Gundersen meant to cite to chart 2.2-5, which discusses fluence, instead of chart 2.2-4. Tr. at 127. Petitioners also commented that the two concepts are related, as “flux essentially drives fluency.” *Id.* at 59.

²⁰³ Gundersen Declaration ¶ 37 (citing Analysis of the Reactor Pressure Vessel Fast Neutron Fluence and Pressurized Thermal Shock Reference Temperatures for the Palisades Nuclear Plant § 4.3 (May 17, 1990) (ADAMS Accession No. ML052720270) (page 55 of PDF counter) [hereinafter Palisades 1990 Fluence Analysis] (noting that a number of factors contribute to fluence uncertainty along a reactor vessel wall, including material composition, vessel dimensions, and cycle-by-cycle variation)).

²⁰⁴ Amended Petition at 18. Petitioners do not specify the specific variable to which this 20% limit applies.

²⁰⁵ Gundersen Declaration ¶ 30. In his declaration, Gundersen also alleges that the NRC authorized deletion of capsule A-60 “because its measured neutron value exceeded this 1 σ variation.” *See id.* ¶¶ 40-42 (citing Division of Licensing, Amendment to Provisional Operating License, Amendment No. 79 to License No. DPR-20, Reactor Vessel Surveillance Capsule Program (Feb. 28, 1984) (ADAMS Accession No. ML020800206)).

²⁰⁶ *Id.* ¶ 32.

²⁰⁷ Entergy Answer at 25. Entergy also noted at oral argument that “neither the Petition nor the Gundersen declaration makes a single reference to the actual Westinghouse report [Palisades Alternate

(Continued)

that sister plant data are required for consistency checks of the embrittlement model,²⁰⁸ but contends that section 50.61a(f)(6) *requires* the use of any available sister plant data, if it is of the same material heats used in the Palisades RPV.²⁰⁹ Entergy asserts it thus had to use the sister plant data, and any allegations it should not have done so are challenges to the Commission's rules.²¹⁰ Turning to Petitioners' suggestion that there is a hard 20% deviation limit among material samples, Entergy responds that Petitioners mix "apples and oranges in multiple ways."²¹¹ Referring to Regulatory Guidance 1.190, used for calculating neutron fluence in a reactor vessel,²¹² Entergy maintains that "[t]he 1 σ /20% standard . . . applies to estimates of the *uncertainty* in specific fluence calculations at a particular location — not to 'variations' in fluence across the core at different locations."²¹³ Entergy also maintains that "[t]he 20%/1 σ screening standard for plant-specific fluence inputs" is not relevant to any of the consistency checks using sister plant data performed in accordance with section 50.61a.²¹⁴

The Staff argues that "surveillance data" is necessarily a broad term, and a consistency check with sister plant data is required whenever there is a "heat-specific" match and three or more data points exist.²¹⁵ The Staff asserts that "Petitioners have not challenged Entergy's compliance with the rule by alleging, for example, that the surveillance data from sister plants is not a 'heat-specific match' or that Entergy's analysis of the sister-plant data was deficient," but instead have challenged the concept of using sister-plant data at all.²¹⁶ Regarding Mr. Gundersen's concerns about variability in neutron flux among sister plant reactor cores and the existence of a 20% limit, the Staff generally responds that this

PTS Rule Evaluation] that was submitted with the license application to show compliance with Section 50.61a." Tr. at 70.

²⁰⁸ Entergy Answer at 27.

²⁰⁹ *Id.*

²¹⁰ *Id.* ("Entergy had no discretion here: 'If three or more surveillance data points measured at three or more different neutron fluences *exist for a specific material*, the licensee *shall* determine if the surveillance data show a significantly different trend than the embrittlement model predicts.'" (quoting 10 C.F.R. § 50.61a(f)(6))).

²¹¹ *Id.* at 29.

²¹² Office of Nuclear Regulatory Research, Calculational and Dosimetry Methods for Determining Pressure Vessel Neutron Fluence, Regulatory Guide 1.190 (Mar. 2001) (ADAMS Accession No. ML010890301) [hereinafter Regulatory Guide 1.190].

²¹³ Entergy Answer at 31.

²¹⁴ *Id.* at 29-30. Entergy admits, however, that the 20% requirement applies when using calculated fluence values to project "the reference transition temperature for a material." *Id.*

²¹⁵ NRC Staff Answer at 21-22 (citing 10 C.F.R. § 50.61a(a)(10)).

²¹⁶ *See id.* at 22-24.

contention does “not identify any error or omission in Entergy’s LAR analysis,” or otherwise indicate any flaws in the application.²¹⁷

Petitioners reply that they do not mean to argue “that Entergy should not be allowed to analyze sister-plant data at all,”²¹⁸ but that “comparables should be comparable,” and Entergy misapplied the consistency check in this instance.²¹⁹ Petitioners state that Mr. Gundersen critiqued the specific use of surveillance samples from the other plants, but did not attack the surveillance data prong of the Alternate PTS Rule as a whole.²²⁰ Petitioners argue that under section 50.61a there is significant leeway in the calculation and verification of RT_{MAX-X} under the Alternate PTS Rule, and the methodology and choice of data for those analyses must be disclosed and reviewed.²²¹ According to Petitioners, “[w]here there is discretion vested in the regulator, differences of opinion, interpretation, and expert analysis are legitimate bases for challenging the decision.”²²²

Petitioners also contend in their reply that even if their contention goes beyond the bounds of what is covered under section 50.61a, “a contention about a matter not covered by a specific rule need only allege that the matter poses a significant safety problem.”²²³ According to Petitioners, the Board has the authority to look at what Entergy is using to “fill[] in the blanks,” apart from what is explicitly defined in the Alternate PTS Rule, “and decide if that represents a bona fide, valid approach.”²²⁴ Moreover, Petitioners argue that, just as the Staff has the authority to reject the Palisades LAR, “the Board similarly has the authority to find that an application is not complete.”²²⁵

Petitioners also attempt to clarify their earlier statements about the 20% error band in fluence calculations, asserting more specifically that the LAR omits a study of fluence variability: “Gundersen stated . . . that there is a need for consistency in comparing the 20% error band among the sister plants and that under 10 C.F.R. § 50.61a, Entergy has not made that showing.”²²⁶

We conclude that Basis 2 is inadmissible because it conflicts with section 50.61a(f)(6)(i) regarding the use of surveillance data in the consistency check. The purpose of the consistency check — the only portion of the Alternate PTS

²¹⁷ *Id.* at 26.

²¹⁸ Reply at 6.

²¹⁹ Tr. at 20-21, 47.

²²⁰ Reply at 6 (citing Gundersen Declaration ¶ 27).

²²¹ *Id.* at 4.

²²² *Id.*

²²³ *Id.* (citing 10 C.F.R. § 50.57(a)(3); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), LBP-82-116, 16 NRC 1937, 1946 (1982)).

²²⁴ Tr. at 67.

²²⁵ *Id.* at 131-32.

²²⁶ Reply at 8; Tr. at 31.

Rule that may require use of sister plant data — is to check the basic operation of the embrittlement model with surveillance data. The consistency check seeks to compare, for a specific material type, the model’s projected embrittlement with the actual embrittlement values at the same fluence provided by material samples.²²⁷ The Alternate PTS Rule clearly states that surveillance data must be used in the consistency check when it is (A) “a heat-specific match for one or more of the materials for which RT_{MAX-X} is being calculated,” and (B) “three or more different neutron fluences exist for a specific material.”²²⁸ Thus, the use of a material sample in the consistency check is not dependent on its location inside an RPV, or which RPV it comes from.²²⁹ If we were to limit the material samples that may be used in the consistency check to those from a particular location from a particular RPV, we would be adding a new requirement to 10 C.F.R. § 50.61a(f)(6)(i), which is prohibited by 10 C.F.R. § 2.335.

Petitioners argue that because the sister plants are operated differently from the Palisades reactor, there is significant spatial variability in the flux and fluence between plants, making a comparison between plants impossible.²³⁰ As support, the Gundersen Declaration points to multiple sources of data that indicate that neutron flux can vary dramatically across a reactor vessel.²³¹ We recognize that the neutron flux hitting a material will be different at different parts of the reactor. Any variation in flux, however, is captured in the material’s fluence measurement, because fluence is the integral of flux over time. Under section 50.61a(f)(6)(i), when the fluence of a material sample is known it must be used in the consistency check if it is of the appropriate chemical composition. The regulation’s consistency check does not rely on information that is unique to a particular RPV, but instead on the chemical properties and fluence of the material samples.²³² From the standpoint of the consistency check, a material sample of the same fluence and material type is no different whether obtained from the Palisades RPV or a sister plant RPV.

We also conclude that Basis 3 is inadmissible, although in this instance the problem is the lack of support for Petitioners’ argument rather than a conflict with section 50.61a(f)(6)(i). Petitioners argue that the use of sister plant surveillance data in combination with Palisades’ data violates a “binding” 20% error limit.²³³ This portion of the contention is not well explained, but the Board examined

²²⁷ 10 C.F.R. § 50.61a(f)(6)(i)(B); 75 Fed. Reg. at 16.

²²⁸ 10 C.F.R. § 50.61a(f)(6)(i)(A), (B).

²²⁹ *Id.* § 50.61a(a)(10).

²³⁰ Amended Petition at 18; Gundersen Declaration ¶¶ 34-38.

²³¹ Gundersen Declaration ¶¶ 34, 35; *id.* ¶ 37 (citing Palisades 1990 Fluence Analysis § 4.3).

²³² *See* 10 C.F.R. § 50.61a, equations 5-7.

²³³ Amended Petition at 18.

the issue in an attempt to understand Petitioners' concerns.²³⁴ The Gundersen Declaration, in citing the alleged 20% limit, references a Palisades Fluence Evaluation Report, which in turn references Regulatory Guide 1.190, pertaining to how fluence is modeled within a single reactor.²³⁵ Regulatory Guide 1.190 requires that a certain portion of all projections derived from a fluence model fall within 20% of empirical measurements, if these calculations are to be used as inputs into embrittlement determinations.²³⁶ Therefore, the limit discussed by Mr. Gundersen pertains to *projected* fluence values for an RPV, and does not pertain to comparisons of the Palisades embrittlement model with *measured* fluence and embrittlement values coming from either Palisades or sister plant material samples. We therefore cannot admit Basis 3.

When the Commission has determined that compliance with a regulation is sufficient to provide for reasonable assurance of public health and safety, a licensing board cannot impose requirements that exceed those in the regulation.²³⁷ Here, given that the Commission has made such a determination regarding section 50.61a, the Board may only review the LAR to decide if it meets the rule's requirements; it may not impose additional requirements that a petitioner believes would better protect public health and safety. Bases 2 and 3 fail to show that Entergy's consistency check violated section 50.61a, and thus they do not support an admissible contention.

E. Additional Arguments Raised by Petitioners

In addition to the contention explicitly put forward by Petitioners, the Amended Petition raises other potential challenges to the LAR. These are briefly addressed below.

²³⁴ A licensing board "may appropriately view Petitioners' support for its contention in a light that is favorable to the Petitioner," although it may not do so by ignoring other admissibility requirements. *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991); *see also Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644 (1979) (indicating reluctance to deny intervention petition on basis of skill in pleading).

²³⁵ Gundersen Declaration ¶ 30 (citing Regulatory Guide 1.190).

²³⁶ *See* Regulatory Guide 1.190, at 3, 31; *see also* Tr. at 54-55.

²³⁷ 75 Fed. Reg. at 22; *Fermi 3*, LBP-09-16, 70 NRC at 255. Petitioners are also incorrect in implying that the NRC Staff has the authority to deviate from the agency's regulations. Tr. at 131-32. All agencies must adhere to their own regulations. *Frizelle v. Slater*, 111 F.3d 172, 177 (D.C. Cir. 1997).

1. No Significant Hazards Consideration Determination²³⁸

The Amended Petition contends that the Staff was incorrect in concluding that the LAR “involves no significant hazards consideration.”²³⁹ Petitioners instead argue that “there is a consequential possibility that significant hazards associated with implementation of the alternative calculation method under 10 C.F.R. § 50.61a may occur, in the form of a material underestimate of the prospects of a severe PTS incident which could lead to a LOCA [loss-of-coolant accident] involving the Palisades RPV.”²⁴⁰ Petitioners therefore contend that “the standards of 10 CFR § 50.92 have not been satisfied,” and the Staff should not have concluded that the LAR involves a no significant hazards consideration.²⁴¹

This argument does not lead to an admissible contention. A “no significant hazards consideration” determination is a procedural decision barred from litigation pursuant to 10 C.F.R. § 50.58(b)(6) and licensing board precedent.²⁴²

2. Operation as a Test or Experiment

Petitioners repeatedly assert in the Amended Petition that operation of Palisades without pulling more material samples from the RPV “means that Entergy may be operating Palisades as a *test* according to 10 C.F.R. § 50.59.”²⁴³ Mr. Gundersen states that, given Palisades’ alleged status as “one of the most embrittled reactors in the United States,”²⁴⁴ “its continued operation as an embrittlement experiment, likely in violation of 10 CFR 50.59,” will render Palisades “the symbol of a regulator-endorsed national test attempting to determine how long a damaged

²³⁸ When a licensee submits its application for a license amendment to the NRC, it must provide the agency “its analysis about the issue of no significant hazards consideration using the standards in [10 C.F.R.] § 50.92.” 10 C.F.R. § 50.91(a)(1). A final “no significant hazards consideration” determination allows the Commission to issue the challenged license amendment before the petitioner’s request for a hearing is adjudicated. *Id.* § 50.91(a)(4) (“[T]he amendment will be effective on issuance, even if adverse public comments have been received and even if an interested person meeting the provisions for intervention called for in § 2.309 of this chapter has filed a request for a hearing.”). But such a determination does not either prevent the adjudication from proceeding or restrict the licensing board’s substantive determination on public health and safety issues. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-91-7, 33 NRC 179, 183 (1991) (“A determination of no significant hazards consideration is not a substantive determination of public health and safety issues for the hearing on the proposed amendment.”).

²³⁹ Amended Petition at 9 (quoting 79 Fed. Reg. at 58,815) (internal quotation marks omitted).

²⁴⁰ *Id.*

²⁴¹ *Id.*

²⁴² *Entergy Nuclear Vermont Yankee* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 560-61 (2004).

²⁴³ Amended Petition at 12 (quoting Gundersen Declaration ¶ 8) (internal quotation marks omitted).

²⁴⁴ Gundersen Declaration ¶ 50.

vessel can continue to operate.”²⁴⁵ Mr. Gundersen proposes that the LAR, according to 10 C.F.R. § 50.59, should “trigger the requirement for additional public scrutiny in the form of a public licensing process.”²⁴⁶

This argument does not lead to an admissible contention. Section 50.59 defines what activities the licensee may pursue *without* submitting a license amendment request, including certain “tests or experiments.”²⁴⁷ Since Entergy is seeking a license amendment for use of the Alternate PTS Rule, Petitioners’ argument is misplaced.

3. *Chemical Composition of Sister Plant Material Samples*

Petitioners contend in their reply that “Gundersen [in his declaration] has attested to the lack of proof that the metals from the various RPVs match.”²⁴⁸ Petitioners appear to argue that the sister plant material samples fail to support the consistency check because they are of different chemical compositions than the materials found in the Palisades RPV.²⁴⁹ Petitioners alleged at oral argument that, although this statement was made in their reply, it reflects a position taken by Mr. Gundersen with the filing of the original petition to intervene.²⁵⁰

Entergy disputed at oral argument whether this argument was actually made by Mr. Gundersen in his declaration.²⁵¹ The Staff separately responded that the equations underlying the Alternate PTS Rule account for “differences between the impurities” among material samples of the same heat.²⁵²

Under section 50.61a, material samples that are to be used for the consistency check must be of the same “heat.”²⁵³ As noted above, the term “heat” or “heat-specific match” is not defined in the Alternate PTS Rule; however, it is clear that the essence of the requirement is that the materials be of the same composition.²⁵⁴

Our review of the Gundersen Declaration indicates that Mr. Gundersen did not raise the argument that the sister plant material samples are of different chemical composition compared to Palisades’ samples. Instead, Mr. Gundersen admits

²⁴⁵ *Id.* ¶ 16.

²⁴⁶ *Id.* ¶ 50.

²⁴⁷ 10 C.F.R. § 50.59(c)(1).

²⁴⁸ Reply at 5.

²⁴⁹ *Id.*

²⁵⁰ Tr. at 47.

²⁵¹ Tr. at 87.

²⁵² Tr. at 118.

²⁵³ 10 C.F.R. § 50.61a(f)(6)(i)(A).

²⁵⁴ *Supra* note 69; *see* 75 Fed. Reg. at 16.

that the sister plant and Palisades samples are similar.²⁵⁵ Therefore, Petitioners inappropriately raised this argument in their reply.²⁵⁶

In addition, their argument is without support and contradicts the statement of their expert. The Board's review of the Palisades Alternate PTS Rule Evaluation shows no reason to doubt that the sister plant material samples are the same "heat" or composition compared to the materials in the Palisades RPV. Although the sister plant material samples do have slightly different amounts of copper, nickel, phosphorus, and manganese than the materials in the Palisades RPV,²⁵⁷ these differences are accounted for in the consistency check.²⁵⁸

VI. CONCLUSION

Although Petitioners have demonstrated standing to intervene, they have not put forward an admissible contention. Therefore, their petition to intervene and request for a hearing is *denied*. Petitioners may appeal this decision to the Commission pursuant to 10 C.F.R. § 2.311(c), within 25 days of service of this Order.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Dr. Thomas J. Hirons
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 8, 2015

²⁵⁵ Gundersen Declaration ¶ 27 ("[I]t is true that the material used to weld the reactor plates together to create the reactor vessel is similar among the four plants . . .").

²⁵⁶ *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004).

²⁵⁷ Palisades Alternate PTS Rule Evaluation, tbls. 6-2 to 6-3.

²⁵⁸ See 10 C.F.R. § 50.61a(f)(6), equations 5-7 (accounting for differing amounts of copper, nickel, phosphorous, and manganese between material samples for the consistency check); Tr. at 118-19.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
Dr. Michael F. Kennedy
Dr. Richard E. Wardwell

In the Matter of

Docket No. 50-271-LA-2
(ASLBP No. 15-937-02-LA-BD01)

ENTERGY NUCLEAR VERMONT
YANKEE, LLC, and ENTERGY
NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power
Station)

May 18, 2015

Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc., request a license amendment to reduce emergency planning requirements at Vermont Yankee Nuclear Power Station to reflect the plant's permanently defueled status. Because the current levels of emergency planning are required by regulation, Entergy cannot make these changes without first receiving certain regulatory exemptions. On February 9, 2015, the State of Vermont, through the Vermont Department of Public Service, moved for admission of two contentions arguing that the license amendment was not ready for review until the exemptions were granted and the requested changes would hamper the state's ability to protect its residents during an emergency. This order concludes that Vermont's first contention is moot since the Commission granted the exemptions on March 2, 2015. The second contention is inadmissible because it challenges the adequacy of the exemption request; the correctness of Commission-approved regulatory exemptions is not subject to review in a hearing before a Licensing Board.

RULES OF PRACTICE: STANDING

A state government has standing to challenge a nuclear power reactor's license amendment request when the facility is located within the boundaries of the state. 10 C.F.R. § 2.309(h)(2).

RULES OF PRACTICE: CHALLENGE TO REGULATORY EXEMPTIONS

A Licensing Board assumes the correctness of the Commission's decision to grant regulatory exemptions. The Board's role is therefore limited to determining whether the petitioner has proffered an admissible contention based on the NRC's regulations as exempted.

MEMORANDUM AND ORDER (Denying Hearing Request)

The State of Vermont, through the Vermont Department of Public Service, seeks to challenge a license amendment request (LAR) by Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Entergy), to reduce emergency planning requirements at the Vermont Yankee Nuclear Power Station.¹ Although Vermont submitted a timely hearing petition and has standing,² neither of Vermont's two proffered contentions satisfies the admissibility criteria of 10 C.F.R. § 2.309(f). Accordingly, the Board denies Vermont's hearing request.

I. BACKGROUND

On June 12, 2014, Entergy submitted an LAR to revise the site emergency plan and emergency alert scheme to reflect Vermont Yankee's permanently defueled status.³ In the analysis supporting its request, Entergy concluded that the risk of offsite radiological releases will be significantly lower once the spent fuel has cooled for 15.4 months after final defueling, making it unnecessary to maintain

¹ State of Vermont's Petition for Leave to Intervene, and Hearing Request (Feb. 9, 2015) [hereinafter Petition].

² Vermont has standing because Vermont Yankee is "located within the boundaries of the State" and "no further demonstration of standing is required." 10 C.F.R. § 2.309(h)(2).

³ Letter from Christopher J. Wamser, Site Vice President, Entergy, to Document Control Desk, NRC, Vermont Yankee Permanently Defueled Emergency Plan and Emergency Action Level Scheme, Vermont Yankee Nuclear Power Station, Docket No. 50-271, License No. DPR-28 (June 12, 2014) (ADAMS Accession No. ML14168A302) [hereinafter LAR].

the same level of emergency planning as when the plant was operating.⁴ Among other changes, Entergy seeks to increase the time for providing emergency alerts to the State from 15 minutes to an hour and requests reduction of the Emergency Planning Zone to the site boundary.⁵ Because the current levels of emergency planning are required by regulation, Entergy cannot make the changes contemplated in its LAR without first receiving certain regulatory exemptions.⁶

The NRC Staff accepted the LAR for review and informed the public of the opportunity to petition for a hearing in a *Federal Register* notice on December 9, 2014.⁷ The Secretary of the Commission referred Vermont's timely petition to the Atomic Safety and Licensing Board Panel, and this Licensing Board was established on February 19, 2015.⁸

On March 2, 2015, the Commission approved Entergy's requested regulatory exemptions related to Vermont Yankee's emergency planning requirements.⁹ These exemptions eliminate the need for offsite emergency planning, extend the time for providing emergency notifications, and remove the requirement to prepare for "hostile action."¹⁰ On March 12, 2015, Vermont submitted a petition for reconsideration, which remains pending before the Commission.¹¹

Meanwhile, Entergy and the NRC Staff submitted answers opposing Vermont's hearing request on March 6,¹² and Vermont filed its reply on March 17, 2015.¹³ The

⁴ LAR, Attach. 1, Description and Evaluation of Proposed Changes, at 1.

⁵ *Id.* at 3, 6.

⁶ *Id.* at 1 (citing Letter from Christopher J. Wamser, Site Vice President, Entergy, to Document Control Desk, NRC, Request for Exemptions from Portions of 10 CFR 50.47 and 10 CFR 50, Appendix E, Vermont Yankee Nuclear Power Station (Mar. 14, 2014) (ADAMS Accession No. ML14080A141)); *see also* 10 C.F.R. § 50.12(a)(2)(ii).

⁷ Biweekly Notice; Applications and Amendments to Facility Operating Licenses and Combined Licenses Involving No Significant Hazards Considerations, 79 Fed. Reg. 73,106 (Dec. 9, 2014).

⁸ Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.; Establishment of Atomic Safety and Licensing Board, 80 Fed. Reg. 10,165 (Feb. 25, 2015).

⁹ Commission Voting Record, Request by Entergy Nuclear Operations, Inc. for Exemptions from Certain Emergency Planning Requirements, SECY-14-0125 (Mar. 2, 2015) (ADAMS Accession No. ML15062A135).

¹⁰ Memorandum from Mark Satorius, Executive Director for Operations, to the Commissioners, SECY-14-0125, encl. at 1-2, 7 (Nov. 14, 2014) (ADAMS Accession No. ML14227A711).

¹¹ State of Vermont's Petition for Reconsideration of Commission Decision Approving Entergy's Exemption Requests (Mar. 12, 2015).

¹² Entergy's Answer Opposing Petition for Leave to Intervene and Hearing Request (Mar. 6, 2015) [hereinafter Entergy's Answer]; NRC Staff's Answer to State of Vermont's Petition for Leave to Intervene and Hearing Request (Mar. 6, 2015) [hereinafter NRC Staff's Answer].

¹³ The State of Vermont's Reply to NRC Staff and Entergy Answers to Petition for Leave to Intervene and Hearing Request (Mar. 17, 2015) [hereinafter Reply]; *see* Licensing Board Order (Denying Motion to Stay the Proceeding and Extending Deadline for Reply) (Mar. 16, 2015) (unpublished).

Board heard oral argument regarding the admissibility of Vermont's contentions on April 8, 2015.¹⁴

II. DISCUSSION

The NRC has never promulgated comprehensive regulations governing the decommissioning of nuclear power reactors.¹⁵ Nor do NRC emergency planning regulations distinguish between the risks at operating reactors and those associated with reactors that have been permanently shut down and defueled.¹⁶ Absent such regulatory distinctions, the NRC has historically granted regulatory exemptions for permanently decommissioned reactors.¹⁷

Under the Atomic Energy Act of 1954,¹⁸ a petitioner such as Vermont may

¹⁴Tr. at 1. After oral argument the Board received three additional submissions. *See* State of Vermont's Notice of Supplemental Authority (May 4, 2015); Entergy's Response to the State of Vermont's Notice of Supplemental Authority (May 11, 2015); NRC Staff's Answer to Vermont's Notice of Supplemental Authority (May 11, 2015).

¹⁵*See* NRC Staff's Answer at 6 n.19 (explaining that NRC Staff prepared draft decommissioning regulations, but later deferred the rulemaking "in light of higher priority work after the terrorist attacks of September 11, 2001").

¹⁶10 C.F.R. § 50.54(q)(2) (requiring all 10 C.F.R. Part 50 licensees to meet the emergency planning requirements, regardless of whether the facility is operating or has been permanently shut down and defueled); *see* Letter from Allison M. Macfarlane, Chairman, NRC, to Senator Edward J. Markey, at 1 (June 26, 2014) (ADAMS Accession No. ML14147A108) ("The practice of considering exemptions [for decommissioning plants] acknowledges this regulatory construct and is a well-established part of the NRC's regulatory process that allows licensees to address site-specific situations or implement alternative approaches for circumstances not necessarily contemplated in the regulations for operating reactors.").

¹⁷*See* Memorandum from Annette L. Vietti-Cook, Office of the Secretary, to Mark A. Satorius, Executive Director for Operations, SRM-SECY-14-0144 (Mar. 2, 2015) (ADAMS Accession No. ML15061A521) (approving certain emergency planning exemptions for San Onofre Nuclear Generating Station); Memorandum from Annette L. Vietti-Cook, Office of the Secretary, to Mark A. Satorius, Executive Director for Operations, SRM-SECY-14-0118 (Dec. 30, 2014) (ADAMS Accession No. ML14364A111) (same for Crystal River Nuclear Generating Plant, Unit 3); Memorandum from Annette L. Vietti-Cook, Office of the Secretary, to Mark A. Satorius, Executive Director for Operations, SRM-SECY-14-0066 (Aug. 7, 2014) (ADAMS Accession No. ML14219A366) (same for Kewaunee Power Station); *see also* Commonwealth Edison Company (Zion Nuclear Power Station, Units 1 and 2), Exemption, 64 Fed. Reg. 48,856, 48,857 (Sept. 8, 1999); Consumers Energy Company, Big Rock Point Nuclear Plant; Exemption, 63 Fed. Reg. 53,940, 53,943 (Oct. 7, 1998); Maine Yankee Atomic Power Company, Maine Yankee Atomic Power Station, Exemption, 63 Fed. Reg. 48,768, 48,770 (Sept. 11, 1998); Connecticut Yankee Atomic Power Company and Haddam Neck Plant, Exemption, 63 Fed. Reg. 47,331, 47,332 (Sept. 4, 1998); Exemption, 58 Fed. Reg. 52,333, 52,334 (Oct. 7, 1993) (granting emergency planning exemptions for Trojan Nuclear Plant).

¹⁸42 U.S.C. § 2011 *et seq.*

request a hearing to challenge an LAR.¹⁹ The extent to which Vermont can challenge exemption-related issues is less clear. Because the Act does not list exemption requests as agency actions subject to a hearing, the Commission has concluded that petitioners generally cannot seek hearings on exemptions.²⁰ As the Commission has explained, exemptions “ordinarily do not trigger hearing rights” when “[a]n already-licensed facility [is] asking for relief from performing a duty imposed by NRC regulations.”²¹ The Commission recognized an exception to this rule, however, in *Private Fuel Storage*, CLI-01-12, where it ruled a hearing on exemption-related matters was necessary insofar as “resolution of the exemption request directly affect[ed] the licensability of the proposed” fuel storage site and “the exemption raise[d] material questions directly connected to an agency licensing action.”²²

In this case, as a practical matter, the Board need not test the boundaries of the Commission’s *Private Fuel Storage* decision. There, the NRC Staff granted an exemption from a regulation in the midst of an adjudicatory proceeding concerning compliance with that very regulation.²³ Here, the Commission *itself* has already reviewed and approved the requested exemptions,²⁴ and by reason of Vermont’s pending petition for reconsideration has the opportunity to review them again. Does the Commission wish its Licensing Boards to conduct evidentiary hearings on the wisdom of the Commission’s decisions? We think not: “It is for the Commission, not licensing boards, to revise its rulings.”²⁵

¹⁹ 42 U.S.C. § 2239(a)(1)(A) (granting the right to request a hearing on agency licensing actions including “granting, suspending, revoking, or amending of any license or construction permit”).

²⁰ *Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 94-98 (2000) (“Congress intentionally limited the opportunity for a hearing to certain designated agency actions — that do *not* include exemptions.”) (citing 42 U.S.C. § 2239(a)(1)(A)); *see also Massachusetts v. NRC*, 878 F.2d 1516 (1st Cir. 1989).

²¹ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-12, 53 NRC 459, 467 (2001).

²² *Id.*; *see also Honeywell International, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 10 (2013) (“[W]hen a licensee requests an exemption in a related license amendment application, we consider the hearing rights on the amendment application to encompass the exemption request as well.”).

²³ *Private Fuel Storage*, CLI-01-12, 53 NRC at 463.

²⁴ Although the Commission has delegated to the NRC Staff authority to grant exemptions to some emergency planning regulations, Commission approval is still required for any exemption that reduces the effectiveness of a licensee’s emergency response plan. Memorandum from Annette L. Vietti-Cook, Office of the Secretary, to R. W. Borchardt, Executive Director for Operations, SRM-SECY-08-0024 (May 19, 2008) (ADAMS Accession No. ML 081400510).

²⁵ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 184, *aff’d*, CLI-09-20, 70 NRC 911 (2009).

Absent contrary direction from the Commission,²⁶ the Board assumes the correctness of the Commission's decision. As Entergy and the NRC Staff contend,²⁷ the Board's role is therefore limited to determining whether Vermont has asserted admissible contentions concerning whether Entergy's LAR is consistent with NRC's regulations *as exempted*.

In making this determination, the Board applies the usual six criteria set forth in 10 C.F.R. § 2.309(f)(1). An admissible contention must (i) provide a specific statement of the issue of law or fact to be raised; (ii) explain briefly the basis for the contention; (iii) show that the issue is within the scope of the license amendment proceeding; (iv) demonstrate that the issue is material to the findings the NRC must make to support the LAR; (v) state concisely the alleged facts or expert opinions that support its position on the issue; and (vi) show that a genuine dispute exists with Entergy on a material issue of law or fact, with reference to the disputed portion of the LAR.²⁸

A. Contention 1

Vermont's first contention, which was submitted before exemptions were approved by the Commission, states:

Entergy's license amendment request is not ready for review, as the amendment request is predicated upon and assumes approval of an exemption request that has not been ruled upon by the Nuclear Regulatory Commission and/or Atomic Safety and Licensing Board.²⁹

Because the Commission has now approved the pertinent regulatory exemptions, this contention is moot.³⁰

B. Contention 2

Vermont's second contention states:

²⁶ Should the Commission reconsider its initial ruling in whole or in part, as Vermont has requested, the Commission could of course clarify, if it wishes, the issues (if any) that might then be appropriate for adjudication by a Licensing Board.

²⁷ Entergy's Answer at 11; NRC Staff's Answer at 22-23.

²⁸ 10 C.F.R. § 2.309(f)(1); *see FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 395-96 (2012).

²⁹ Petition at 3.

³⁰ Even if the Commission were to grant reconsideration, this contention would remain moot because the Commission would have yet again addressed the exemptions.

Entergy's license amendment request, if approved along with the predicate requested exemptions, fails to account for all credible emergency scenarios, undermines the effectiveness of the site emergency plan and off-site emergency planning, and poses an increased risk to the health and safety of Vermont citizens in violation of NRC regulatory requirements 10 CFR § 50.54(q)(4) and Appendix E to Part 50.³¹

Based on statements from three state employees, Vermont asserts that, in a variety of ways, the requested changes would hamper the state's ability to protect its residents during an emergency.³²

The focus of Vermont's petition and supporting statements, however, is squarely on the adequacy of Entergy's exemption request and associated analyses, and not on any alleged deficiencies in the LAR itself. As Vermont asserts, "[t]he LAR meets the requirements of § 50.54(q)(4) only in the event Entergy is exempted from material requirements of Part 50, Appendix E."³³ Neither Entergy nor the NRC Staff disagrees.

As the Board has concluded, however, the correctness of Commission-approved regulatory exemptions is not subject to review in a hearing before a Licensing Board. The relevant question, therefore, is whether Contention 2 embodies plausible and adequately supported allegations that the LAR still fails to comply with 10 C.F.R. § 50.54(q)(4), assuming the validity of the Commission-approved exemptions.

Although the principal focus of Contention 2 concerns the effect of the "predicate requested exemptions,"³⁴ Vermont also claims that Entergy's proposed reduction in emergency response capabilities violates the requirements of 10 C.F.R. § 50.54(q)(4) "even in the event that Entergy is exempted from portions [of] 10 CFR § 50.47 and Part 50, Appendix E."³⁵ Vermont asserts that "[t]he lack of adequate safety analysis regarding credible accident scenarios applies independently to the LAR in addition to applying to the directly related exemption request."³⁶

But Vermont fails to back up its position with sufficient clarity and support to satisfy 10 C.F.R. § 2.309(f)(1). Although expressly advised that the Board wished the parties to address at oral argument "whether Contention 2 is admissible re-

³¹ Petition at 6.

³² *Id.* at 6-10, Attachs., Statement of Anthony Leshinskie (Feb. 9, 2015) [hereinafter Leshinskie Statement]; Statement of Erica Bornemann (Feb. 9, 2015) [hereinafter Bornemann Statement]; Statement of Dr. William Irwin (Feb. 9, 2015).

³³ Petition at 9.

³⁴ *Id.* at 6.

³⁵ Reply at 7.

³⁶ *Id.*

ardless of whether the Commission reconsiders Entergy’s exemption request,”³⁷ Vermont’s counsel was essentially unable to do so.³⁸ Neither in its pleadings nor at oral argument was Vermont able to articulate a challenge to any aspect of the LAR — independent of Entergy’s exemption request — that set forth sufficient factual support or raised a genuine dispute with the application.³⁹

For example, although Erica Bornemann, the Chief of Staff for the Vermont Division of Emergency Management and Homeland Security, alleges in her statement that the LAR relies on an out-of-date Letter of Agreement with the State of Vermont,⁴⁰ she does not specify what support the State will be unable to provide that is still required under 10 C.F.R. § 50.47(b)(3). Similarly, her assertion that the LAR lacks local response “Implementing Procedures and Support Plans” does not explain the significance of those implementation details.⁴¹ Without further explanation and support, her allegations do not genuinely dispute the LAR’s compliance with the regulations that remain in place notwithstanding approval of the exemption request.⁴²

The same is true of Vermont’s allegations concerning high-burnup fuel, which is fuel that has been in the core longer or at higher power levels.⁴³ Anthony Leshinskie, the State Nuclear Engineer and Decommissioning Coordinator, asserts that Entergy failed “to properly analyze the risks of an accident while transferring fuel from the spent fuel pool to dry casks.”⁴⁴ He further asserts that “this risk is heightened at Vermont Yankee because of the existence of high-burnup fuel at the site.”⁴⁵ But he has not disputed any specific portion of Entergy’s fuel handling

³⁷ Licensing Board Notice and Order (Scheduling and Providing Instructions for Oral Argument) (Apr. 1, 2015) at 1 (unpublished).

³⁸ See Tr. at 10-12.

³⁹ See 10 C.F.R. § 2.309(f)(1)(v)-(vi).

⁴⁰ Bornemann Statement at 5 (citing LAR, Attach. 2, App. D, Letters of Agreement, at 50); see generally *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-90-3, 31 NRC 219, 232 (1990) (noting that arrangements for requesting and effectively using assistance resources should be “identified and supported by appropriate letters of agreement”).

⁴¹ See Bornemann Statement at 5 (citing LAR, Attach. 2, App. E, Index of Emergency Plan Implementing Procedures and Support Plans, at 52-53).

⁴² 10 C.F.R. § 2.309(f)(1)(v)-(vi); see *Seabrook*, CLI-90-3, 31 NRC at 248 (upholding Board’s decision that lack of detail for sheltering option was not significant because size of sheltering population was very small).

⁴³ Office of Public Affairs, NRC, *High Burnup Spent Fuel*, Backgrounder (Dec. 2013), available at <http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/bg-high-burnup-spent-fuel.pdf>.

⁴⁴ Leshinskie Statement at 3.

⁴⁵ *Id.*

accident analysis,⁴⁶ so this aspect of Contention 2 is likewise inadmissible for lack of a genuine dispute.⁴⁷

III. ORDER

For the reasons stated, Vermont's hearing petition is *denied* and this adjudicatory proceeding is *terminated*.

An appeal of this Memorandum and Order may be filed within 25 days of service of this decision by filing a notice of appeal and an accompanying supporting brief under 10 C.F.R. § 2.311(b). Any party opposing an appeal may file a brief in opposition. All briefs must conform to the requirements of 10 C.F.R. § 2.341(c)(3).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

Dr. Michael F. Kennedy
ADMINISTRATIVE JUDGE

Dr. Richard E. Wardwell
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 18, 2015

⁴⁶LAR, Attach. 1, at 3 (citing Letter from Christopher J. Wamser, Site Vice President, Entergy, to Document Control Desk, NRC (Nov. 14, 2013) (ADAMS Accession No. ML13323A516)).

⁴⁷10 C.F.R. § 2.309(f)(1)(vi); *see Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 436-37 (2011).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

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

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

FIRSTENERGY NUCLEAR
OPERATING COMPANY
(Davis-Besse Nuclear Power
Station, Unit 1)

Docket No. 50-346-LR

LUMINANT GENERATION
COMPANY LLC
(Comanche Peak Nuclear Power
Plant, Units 3 and 4)

Docket Nos. 52-034-COL
52-035-COL

NUCLEAR INNOVATION
NORTH AMERICA LLC
(South Texas Project, Units 3
and 4)

Docket Nos. 52-012-COL
52-013-COL

PROGRESS ENERGY FLORIDA, INC.
(Levy County Nuclear Power
Plant, Units 1 and 2)

Docket Nos. 52-029-COL
52-030-COL

**STP NUCLEAR OPERATING
COMPANY
(South Texas Project, Units 1
and 2)**

**Docket Nos. 50-498-LR
50-499-LR**

**TENNESSEE VALLEY AUTHORITY
(Sequoyah Nuclear Plant, Units 1
and 2)**

**Docket Nos. 50-327-LR
50-328-LR**

**TENNESSEE VALLEY AUTHORITY
(Watts Bar Nuclear Plant,
Unit 2)**

Docket No. 50-391-OL

**VIRGINIA ELECTRIC AND
POWER COMPANY d/b/a
DOMINION VIRGINIA
POWER and OLD DOMINION
ELECTRIC COOPERATIVE
(North Anna Nuclear Power
Station, Unit 3)**

Docket No. 52-017-COL

June 9, 2015

MEMORANDUM AND ORDER

Several environmental organizations (collectively, Petitioners) have moved to reopen the captioned proceedings and request that we allow them to lodge “placeholder” contentions that challenge the 2014 Continued Storage Rule and associated Generic Environmental Impact Statement for Continued Storage.¹ As Petitioners acknowledge, these filings are substantively identical to the motions and proposed contentions recently filed in the *Callaway* license renewal proceeding and the *Fermi* combined license proceeding.² For the reasons set forth in our

¹ See, e.g., Blue Ridge Environmental Defense League’s Hearing Request and Petition to Intervene in Combined License Proceeding for W.S. Lee Nuclear Power Plant (filed Apr. 22, 2015) (Petition); Declaration of Charles L. Moss Jr. (filed Apr. 22, 2015); Blue Ridge Environmental Defense League’s Motion to Reopen the Record of Combined License Proceeding for W.S. Lee Nuclear Power Plant (filed Apr. 22, 2015). All of the pleadings related to Petitioners’ requests are listed in an Appendix to this Order.

² See Petition at 1 n.1; Missouri [Coalition] for the Environment’s Hearing Request and Petition to Intervene in License Renewal Proceeding for Callaway Nuclear Power Plant (Dec. 8, 2014); Missouri
(Continued)

decisions denying the requests in the *Callaway* and *Fermi* matters, we likewise *deny* these petitions and motions.³

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK

Secretary of the Commission

Dated at Rockville, Maryland,
this 9th day of June 2015.

[Coalition] for the Environment's Motion to Reopen the Record of License Renewal Proceeding for Callaway Unit 1 Nuclear Power Plant (Dec. 8, 2014); Beyond Nuclear's Hearing Request and Petition to Intervene in Combined License Proceeding for Fermi Unit 3 Nuclear Power Plant (Feb. 12, 2015) (Petition); Beyond Nuclear's Motion to Reopen the Record of Combined License Proceeding for Fermi Unit 3 Nuclear Power Plant (Feb. 12, 2015).

³ See *Union Electric Co.* (Callaway Plant, Unit 1), CLI-15-11, 81 NRC 546 (2015); *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-12, 81 NRC 551 (2015).

APPENDIX

I. PETITIONS

1. *Duke Energy Carolinas, LLC* (William States Lee III Nuclear Station, Units 1 and 2), Blue Ridge Environmental Defense League's Hearing Request and Petition to Intervene in Combined License Proceeding for W.S. Lee Nuclear Power Plant (filed Apr. 22, 2015); Declaration of Charles L. Moss Jr. (filed Apr. 22, 2015); Blue Ridge Environmental Defense League's Motion to Reopen the Record of Combined License Proceeding for W.S. Lee Nuclear Power Plant (filed Apr. 22, 2015).
2. *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), Beyond Nuclear's Hearing Request and Petition to Intervene in License Renewal Proceeding for Davis-Besse Nuclear Power Plant (filed Apr. 22, 2015); Declaration of Victoria Clemons (filed Apr. 22, 2015); Beyond Nuclear's Motion to Reopen the Record of License Renewal Proceeding for Davis-Besse Nuclear Power Plant (filed Apr. 22, 2015); Beyond Nuclear's Motion to Amend NEPA Placeholder Contention in License Renewal Proceeding for Davis-Besse Nuclear Power Plant (filed May 8, 2015).
3. *Luminant Generation Company LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), SEED Coalition's Hearing Request and Petition to Intervene in Combined License Proceeding for Comanche Peak Units 3 and 4 Nuclear Power Plant (filed Apr. 24, 2015); Declaration of Representative Lon Burnam (filed Apr. 24, 2015); SEED Coalition's Motion to Reopen the Record of Combined License Proceeding for Comanche Peak Units 3 and 4 Nuclear Power Plant (filed Apr. 24, 2015).
4. *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), SEED Coalition's Hearing Request and Petition to Intervene in Combined License Proceeding for South Texas Units 3 and 4 Nuclear Power Plant (filed Apr. 24, 2015); Declaration of Susan Dancer (filed Apr. 24, 2015); SEED Coalition's Motion to Reopen the Record of Combined License Proceeding for South Texas Units 3 and 4 Nuclear Power Plant (filed Apr. 24, 2015).
5. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), Nuclear Information and Resource Service's Hearing Request and Petition to Intervene in Combined License Proceeding for Levy County Nuclear Power Plant (filed Apr. 21, 2015); Declaration of Amanda Hancock Anderson (filed Apr. 21, 2015); Declaration of William Russell Anderson (filed Apr. 21, 2015); Declaration of Emily Casey (filed Apr. 21, 2015); Nuclear Information and Resource Service's Motion to Reopen the Record

of Combined License Proceeding for Levy County Units 1 and 2 Nuclear Power Plant (filed Apr. 21, 2015).

6. *STP Nuclear Operating Co.* (South Texas Project, Units 1 and 2), SEED Coalition's Hearing Request and Petition to Intervene in License Renewal Proceeding for South Texas Units 1 and 2 (filed Apr. 24, 2015); Declaration of Susan Dancer (filed Apr. 24, 2015); SEED Coalition's Motion to Reopen the Record of License Renewal Proceeding for South Texas Units 1 and 2 (filed Apr. 24, 2015).
7. *Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2), Blue Ridge Environmental Defense League's Hearing Request and Petition to Intervene in License Renewal Proceeding for Sequoyah Units 1 and 2 (filed Apr. 22, 2015); Declaration of Sandra L. Kurtz (filed Apr. 22, 2015); Blue Ridge Environmental Defense League's Motion to Reopen the Record of License Renewal Proceeding for Sequoyah Nuclear Power Plant Units 1 and 2 (filed Apr. 22, 2015).
8. *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), Southern Alliance for Clean Energy's Hearing Request and Petition to Intervene in Operating License Proceeding for Watts Bar Unit 2 Nuclear Power Plant (filed Apr. 22, 2015); Declaration of Sandra L. Kurtz (filed Apr. 22, 2015); Declaration of Jeannie V. McKinney (filed Apr. 22, 2015); Declaration of Victoria Anne Murchie (filed Apr. 22, 2015); Southern Alliance for Clean Energy's Motion to Reopen the Record of Operating License Proceeding for Watts Bar Unit 2 Nuclear Power Plant (filed Apr. 22, 2015).
9. *Virginia Electric and Power Co. d/b/a Dominion Virginia Power and Old Dominion Electric Cooperative* (North Anna Power Station, Unit 3), Blue Ridge Environmental Defense League's Hearing Request and Petition to Intervene in Combined License Proceeding for North Anna Unit 3 Nuclear Power Plant (filed Apr. 22, 2015); Declaration of John A. Cruickshank (filed Apr. 22, 2015); Blue Ridge Environmental Defense League's Motion to Reopen the Record of Combined License Proceeding for North Anna Unit 3 Nuclear Power Plant (filed Apr. 22, 2015).

II. RESPONSIVE PLEADINGS

1. *Duke Energy Carolinas, LLC* (William States Lee III Nuclear Station, Units 1 and 2), Duke's Answer Opposing Blue Ridge Environmental Defense League's Motion to Reopen and Petition to Intervene in the Combined License Proceeding for William States Lee III Nuclear Station, Units 1 and 2 (May 7, 2015); NRC Staff Answer to Blue Ridge Environmental Defense

League's Motion to Reopen the Record and Petition to Intervene (Apr. 29, 2015).

2. *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), FirstEnergy Nuclear Operating Company Response Opposing Motion to Reopen and "Placeholder" Contention Regarding Continued Storage Rule (May 4, 2015); NRC Staff Answer to Beyond Nuclear's Hearing Request and Petition to Intervene and Motion to Reopen the Record in the License Renewal Proceeding for Davis-Besse Nuclear Power Plant (May 1, 2014); FirstEnergy Nuclear Operating Company Response Opposing Motion to Amend "Placeholder" Contention Regarding Continued Storage Rule (May 18, 2015); NRC Staff Answer to Beyond Nuclear's Motion to Amend NEPA Placeholder Contention in License Renewal Proceeding for Davis-Besse Nuclear Power Plant (May 18, 2015).
3. *Luminant Generation Company LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), Luminant Response Opposing Motion to Reopen and "Placeholder" Contention Regarding Continued Storage Rule (May 4, 2015); NRC Staff Answer to SEED Coalition Motion to Reopen the Record and Petition to Intervene (May 4, 2015).
4. *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), Nuclear Innovation North America LLC Response Opposing Motion to Reopen and "Placeholder" Contention Regarding Continued Storage Rule (May 4, 2015); NRC Staff Answer to SEED Coalition's Motion to Reopen the Record and Petition to Intervene (May 4, 2015).
5. *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), Duke's Answer Opposing Nuclear Information and Resource Service's Motion to Reopen and Petition to Intervene in the Combined License Proceeding for Levy County Nuclear Power Plant, Units 1 and 2 (May 7, 2015); NRC Staff Answer to Nuclear Information and Resource Service's Motion to Reopen the Record and Petition to Intervene (Apr. 29, 2015).
6. *STP Nuclear Operating Co.* (South Texas Project, Units 1 and 2), STP Nuclear Operating Company Response Opposing Motion to Reopen and "Placeholder" Contention Regarding Continued Storage Rule (May 4, 2015); NRC Staff Answer to SEED Coalition's Hearing Request and Petition to Intervene and Motion to Reopen the Record in the License Renewal Proceeding for South Texas Units 1 and 2 (May 1, 2015).
7. *Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2), Tennessee Valley Authority's Answer Opposing Blue Ridge Environmental Defense League's Hearing Request and Petition to Intervene and Motion to

Reopen the Record and Admit a New Contention (May 4, 2015); NRC Staff Answer to Blue Ridge Environmental Defense League's Hearing Request and Petition to Intervene and Motion to Reopen the Record in the License Renewal Proceeding for Sequoyah Nuclear Power Plant, Units 1 and 2 (May 4, 2015).

8. *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), Tennessee Valley Authority's Answer Opposing Southern Alliance for Clean Energy's Motions to Reopen the Record and Admit a New Contention (May 1, 2015); NRC Staff Answer to Southern Alliance for Clean Energy's Hearing Request and Petition to Intervene and Motion to Reopen the Record in the Operating License Proceeding for Watts Bar Unit 2 (May 1, 2015).
9. *Virginia Electric and Power Co. d/b/a Dominion Virginia Power and Old Dominion Electric Cooperative* (North Anna Power Station, Unit 3), Dominion's Answer Opposing Blue Ridge Environmental Defense League's Motion to Reopen and Petition to Intervene in the Combined License Proceeding for North Anna Power Station, Unit 3 (May 7, 2015); NRC Staff Answer to Blue Ridge Environmental Defense League's Motion to Reopen the Record and Petition to Intervene (May 1, 2015).
10. Reply by Beyond Nuclear, Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, SEED Coalition and Southern Alliance for Clean Energy to Oppositions by Applicants and NRC Staff to Motions to Admit New Contentions (filed on the dockets for the captioned proceedings May 6, 2015, through May 8, 2015).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Stephen G. Burns, Chairman
Kristine L. Svinicki
William C. Ostendorff
Jeff Baran

In the Matter of

**Docket Nos. 50-237-EA
50-249-EA**

**EXELON GENERATION
COMPANY, LLC
(Dresden Nuclear Power Station,
Units 2 and 3)**

June 11, 2015

NOTIFICATION

The duty to report material significant developments in a matter under adjudication arises immediately upon discovery of that information. This obligation extends to all parties.

MEMORANDUM AND ORDER

Pending before us is the appeal of Local 15, International Brotherhood of Electrical Workers, AFL-CIO, of the Atomic Safety and Licensing Board's decision in LBP-14-4 denying Local 15's petition to intervene and request for hearing.¹ Local 15's challenge centers on the NRC Staff's issuance of a Confirmatory Order under which the licensee, Exelon Generation Company, LLC, among other things,

¹ Notice of Appeal of LBP-14-04 by Local 15, International Brotherhood of Electrical Workers, AFL-CIO (May 12, 2014); Brief in Support of Appeal of LBP-14-04 (May 12, 2014, corrected May 13, 2014) (Local 15 Appeal Brief); *see* LBP-14-4, 79 NRC 319 (2014).

issued Revision 10 of its procedure implementing the Behavioral Observation Program.²

Before the Board, Local 15 proffered three contentions. In Contention 1, Local 15 asserted that the Confirmatory Order should not be sustained because it imposes obligations on off-duty Exelon employees without justification.³ In Contention 2, the Local asserted that the Confirmatory Order should not be sustained because it imposes on Exelon employees behavioral observation and reporting requirements “that are vague, over-broad and not carefully tailored . . . and improperly delegates to Exelon the discretion to interpret and implement NRC standards” for behavioral observation.⁴ The Local’s Contention 3 raised concerns about possible violations of the National Labor Relations Act; the Board excluded Contention 3, and the Local did not appeal that ruling.⁵ Related to its Contention 3, but as a matter separate from this adjudication, Local 15 pursued unfair labor practice charges before the National Labor Relations Board (NLRB).⁶

During the pendency of the Local’s appeal, Exelon informed the Staff that it had entered into a settlement agreement with the NLRB and requested a temporary relaxation of the Confirmatory Order to effectuate actions pursuant to that agreement.⁷ In particular, Exelon stated that “it is in its best interest to settle

² See In the Matter of Exelon Generation Company, LLC; Dresden Nuclear Power Station Confirmatory Order Modifying License, 78 Fed. Reg. 66,965, 66,965 (Nov. 7, 2013) (Confirmatory Order). Prior to the settlement that resulted in the Confirmatory Order, Exelon had revised its Behavioral Observation Program (as Revision 9); Exelon further revised the program pursuant to the Confirmatory Order (as Revision 10). Compare SY-AA-103-513, “Behavioral Observation Program” (Rev. 10) (2014) (attached as Ex. 3 to Reply of Local Union No. 15, International Brotherhood of Electrical Workers, AFL-CIO to NRC Staff and Exelon Answers Opposing Local 15’s Petition to Intervene and Request for Hearing (Feb. 14, 2014)), with SY-AA-103-513, “Behavioral Observation Program” (Rev. 9) (2013) (attached as Ex. 2 to Local 15 Reply); SY-AA-103-513, “Behavioral Observation Program” (Rev. 8) (2010) (enclosed as Attachment 4 to Exelon’s Answer Opposing the Petition to Intervene and Hearing Request Filed by Local Union No. 15, International Brotherhood of Electrical Workers, AFL-CIO (Jan. 24, 2014). Revision 10 of the Behavioral Observation Program currently is in place.

³ Petition to Intervene and Request for Hearing (Dec. 12, 2013) at 15.

⁴ *Id.* at 18.

⁵ See LBP-14-4, 79 NRC at 331 (holding that concerns about possible labor disputes do not establish standing); *id.* at 337 (rejecting Contention 3, which asserted that the Confirmatory Order should not be sustained because it “improperly endorses and confirms” Exelon’s asserted failure to bargain with Local 15).

⁶ See LBP-14-4, 79 NRC at 337; Memorandum of Local 15, International Brotherhood of Electrical Workers, AFL-CIO Responding to Atomic Safety and Licensing Board Questions for Oral Argument (Feb. 28, 2014) at 9-10 (providing the status of the NLRB matter).

⁷ Exelon indicated that the NLRB ultimately agreed that Exelon was not obliged to bargain over either the decision to enter the settlement agreement with the Staff and consent to the Confirmatory Order or the decision to retain the changes confirmed in Revision 9 of the Behavioral Observation

(Continued)

the unfair labor practice charges with the NLRB and to agree, subject to NRC approval, to bargain with Local 15 over the content of the additional guidance to be provided regarding ‘the types of offsite activities, if observed, or credible information that should be reported to reviewing officials’” that was adopted in Revision 10 of Exelon’s Behavioral Observation Program procedure. Of particular note, Exelon requested that the Staff relax section V(A)(A.1(1)) of the Confirmatory Order to “permit a temporary rescission of the additional guidance to employees concerning their reporting obligations” provided in Revision 10, to allow Exelon and Local 15 to bargain “over the effects of [Exelon’s] decisions to make revisions to its [Behavioral Observation Program] to comply with the Confirmatory Order.”⁸

The Staff recently informed us that it has approved Exelon’s request.⁹ The Staff explains that the approval of Exelon’s relaxation request permits Exelon to “revert to [Revision 9 of the Behavioral Observation Program] until Exelon and Local 15 can bargain on a new revision that complies with the Confirmatory Order.”¹⁰

Program (which Exelon implemented prior to issuance of the Confirmatory Order). But the NLRB concluded that Exelon was obliged to give Local 15 notice and an opportunity to bargain “over the effects of [Exelon’s] decision to implement changes in the terms and conditions of [the employees’] employment that [Exelon] made pursuant to the [Confirmatory Order].” See Marik, Shane, Exelon Generation Company, LLC, Letter to Cynthia D. Pederson, Regional Administrator, Region III, NRC, “Request for Relaxation of Condition V(A)(A.1(1)) of Confirmatory Order EA-13-068” (Jan. 26, 2015), at 4-5 (ADAMS Accession No. ML15030A079) (Relaxation Request).

⁸ *Id.* at 5-6. Section V(A)(A.1(1)) of the Confirmatory Order provided that, within 90 days of the effective date of the Confirmatory Order, Exelon would revise its Behavioral Observation Program “(1) to provide additional guidance on the types of offsite activities, if observed, or credible information that should be reported to reviewing officials, and (2) to ensure that procedural requirements to pass information forward without delay are clearly communicated.” Confirmatory Order, 78 Fed. Reg. at 66,966. In a supplement to its Relaxation Request, Exelon requested that two other sections of the Confirmatory Order likewise be relaxed — section V(A)(A.2), related to training, and section V(A)(A.3), related to the effectiveness assessment. Domeyer, Tamra, Exelon Generation Company, LLC, Letter to Jared Heck, Regional Counsel, NRC, “Supplemental Information for Request for Relaxation of Condition V(A)(A.1(1)) of Confirmatory Order EA-13-068” (Apr. 13, 2015) (ADAMS Accession No. ML15106A427).

⁹ Hair, Christopher C., Counsel for the Staff, Memorandum to the Commissioners (May 6, 2015) (Staff Notification), attaching Pederson, Cynthia D., Regional Administrator, NRC, Letter to Bryan C. Hanson, Exelon Generation Company, LLC, and Exelon Nuclear, “Dresden Nuclear Power Station — Request for Relaxation of Confirmatory Order” (May 4, 2015) (ADAMS Accession No. ML15125A103) (Relaxation Letter).

¹⁰ Staff Notification at 1. The Staff’s approval extends the dates for compliance with the Confirmatory Order to allow for the actions discussed above. The relaxation revises section V(A)(A.1(1)) to provide for revision of Exelon procedure SY-AA-103-513 until November 30, 2015, section V(A)(A.2) to provide that Exelon shall provide training to its staff on this revision by January 15, 2016, and section V(A)(A.3) to provide for Exelon’s development and conduct of an effectiveness assessment of the revised procedure and associated training by May 31, 2016. Relaxation Letter at 2.

The actions to be taken in furtherance of the settlement of Local 15's NLRB claim appear to address the concerns raised by Local 15 in its Contentions 1 and 2.¹¹ At bottom, it appears that Local 15 has achieved the outcome it desired — rescission of Revision 10 of the Behavioral Observation Program procedure and the opportunity to negotiate with Exelon revised language concerning the types of obligations to be imposed on Exelon employees under the program. Upon consideration of these developments, therefore, we *direct* the litigants to provide either (1) a joint stipulation that Local 15's appeal should be dismissed or (2) briefing on the question whether Local 15's appeal should be dismissed as moot and this proceeding terminated. A joint stipulation, if filed, will be due within 15 calendar days of the date of this order. Likewise, if briefs are filed, Local 15, Exelon, and the Staff may file initial briefs within 15 calendar days of the date of this order. Reply briefs may be filed within 7 calendar days of the initial briefs' filing. If the litigants anticipate that they may agree to a joint stipulation dismissing the case but need more than 15 days to make that determination, the litigants should file a joint motion for extension of time.

IT IS SO ORDERED.

For the Commission

ROCHELLE C. BAVOL
Acting Secretary of the
Commission

Dated at Rockville, Maryland,
this 11th day of June 2015.

¹¹ We observe that the litigants did not promptly notify us of the Relaxation Request, which has been before the Staff since January of this year. Litigants are reminded that the duty to report material significant developments in a matter under adjudication arises immediately upon discovery of that information. The obligation extends to all parties; the Staff in particular is not to delay in reporting until it has completed its own evaluation of the matter. While it is true that the *grant* of the relaxation is the action of most significance here, a notification of such a request's pendency tends to inform us as to whether — and when — to act on an affected appeal. See *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), CLI-76-22, 4 NRC 480, 491 n.11 (1976); *Georgia Power Co.* (Alvin W. Vogtle Nuclear Plant, Units 1 and 2, ALAB-291, 2 NRC 404, 408 (1975).

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)**

June 10, 2015

In this proceeding, applicant Florida Power & Light Company seeks combined licenses to construct and operate two new nuclear power reactors in Homestead, Florida. The City of Miami, Florida, petitioned to intervene, proffering three contentions challenging the adequacy of the NRC Staff's Draft Environmental Impact Statement (DEIS), or, in the alternative, seeking to participate in the proceeding as an interested local governmental body. In this Memorandum and Order, the Licensing Board denies Miami's petition to intervene because, although it established standing, Miami failed to proffer an admissible contention. The Board, however, grants Miami's request to participate as an interested local governmental body.

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(d)(1))

To determine whether a petitioner satisfies the standing requirements of 10

C.F.R. § 2.309(d)(1), the Commission traditionally applies contemporaneous judicial concepts of standing.

RULES OF PRACTICE: STANDING (PROXIMITY PRESUMPTION)

When a governmental body within close proximity of a proposed nuclear reactor unit seeks to intervene in a combined license proceeding, the Commission grants standing under the “proximity presumption,” effectively dispensing with the need to make an affirmative showing of injury, causation, and redressability.

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(f)(2))

Pursuant to 10 C.F.R. § 2.309(f)(2), contentions arising under the National Environmental Policy Act (NEPA) must initially be filed based on an applicant’s environmental report.

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(c)(1))

If a petitioner seeks leave to intervene after the initial deadline for the filing of contentions, it must demonstrate good cause for its belated filing under 10 C.F.R. § 2.309(c)(1).

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(f)(1))

The Commission has emphasized that the contention admissibility standards in 10 C.F.R. § 2.309(f)(1) are “strict by design” and that failure to comply with any of the requirements renders a contention inadmissible.

NATIONAL ENVIRONMENTAL POLICY ACT: ENVIRONMENTAL IMPACTS

It is well established that NEPA itself does not mandate particular results, but simply prescribes the necessary process that agencies must follow in evaluating environmental impacts. So long as an agency’s DEIS takes a “hard look” at the environmental impacts arising from the licensing action, nothing in NEPA requires the analysis to preclude any particular environmental impact.

REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309(f)(1)(v))

The Commission has said that although a licensing board may appropriately view petitioners’ support for its contention in a light that is favorable to the

petitioner, it cannot do so by ignoring the 10 C.F.R. § 2.309(f)(1)(v) requirement that all petitioners provide a statement of fact or expert opinion upon which they intend to rely.

MEMORANDUM AND ORDER
(Denying the City of Miami's Petition to Intervene, but
Granting Its Request to Participate as an Interested
Local Governmental Body)

The City of Miami, Florida, petitions to intervene in this proceeding involving the combined license (COL) application of Florida Power & Light Company (FPL) for Turkey Point Units 6 and 7.¹ Miami's petition proffers three contentions challenging the adequacy of the NRC Staff's Draft Environmental Impact Statement (DEIS) for Turkey Point Units 6 and 7. Should its petition be denied, Miami seeks in the alternative to participate in this proceeding as an interested local governmental body. For the reasons discussed below, we conclude that, although Miami has established standing, it fails to proffer an admissible contention. We therefore deny Miami's petition to intervene. We grant, however, its request to participate as an interested local governmental body.

I. BACKGROUND

On June 18, 2010, after receiving FPL's COL application for Turkey Point Units 6 and 7, the NRC Staff published a notice of hearing and opportunity to petition to intervene.² The notice of hearing prompted the submittal of three intervention petitions — one from Southern Alliance for Clean Energy, the National Parks Conservation Association, Mark Oncavage, and Dan Kipnis (collectively, Joint Intervenors); another from Citizens Allied for Safe Energy, Inc. (CASE); and the third from the Village of Pinecrest, Florida.³ On February 28, 2011, this Board granted two of the petitions, admitting Joint Intervenors' Contention 2.1 and CASE's Contentions 6 and 7.⁴ The Board later resolved both of CASE's

¹ Petition by the City of Miami, Florida, for Leave to Intervene in a Hearing on [FPL's] Combined Construction and Operating License Application for Turkey Point Units 6 & 7, or in the Alternative, Participate as a Non-Party Local Government (Apr. 13, 2015) [hereinafter Petition].

² 75 Fed. Reg. 34,777 (June 18, 2010).

³ See LBP-11-6, 73 NRC 149, 164-65 (2011).

⁴ LBP-11-6, 73 NRC at 251-52. Although the Board denied the Village of Pinecrest's petition to intervene, we granted its request to participate as an interested local governmental body. See *id.*

contentions in favor of FPL.⁵ Joint Intervenor's Contention 2.1, as amended and reformulated, is now the sole contention pending before the Board.⁶

In February 2015, the NRC published the DEIS for Turkey Point Units 6 and 7.⁷ On April 13, 2015, Miami filed its petition to intervene, seeking to admit three contentions challenging the adequacy of the NRC Staff's environmental review in the DEIS.⁸ In the alternative, Miami requests to participate in the proceeding as an interested local governmental body pursuant to 10 C.F.R. § 2.315(c).⁹

On May 8, 2015, FPL¹⁰ and the NRC Staff¹¹ each filed answers opposing Miami's petition. Neither FPL nor the NRC Staff contests Miami's standing to intervene; however, both argue that Miami's petition should be denied because the three proposed contentions fail to satisfy either the timeliness standards of 10 C.F.R. § 2.309(c)(1) or the admissibility standards of 10 C.F.R. § 2.309(f)(1).¹² Neither FPL nor the NRC Staff opposes Miami's alternative request to participate in this proceeding as an interested local governmental body.¹³ Miami did not file a reply to the FPL and NRC Staff answers.

II. STANDING

To participate in an NRC licensing proceeding, a petitioner must establish

⁵ See Licensing Board Memorandum and Order (Granting FPL's Motions to Dismiss Joint Intervenor's Contention 2.1 and CASE's Contention 6 as Moot) at 6 (Jan. 26, 2012) (unpublished); Licensing Board Memorandum and Order (Granting FPL Motion for Summary Disposition of CASE Contention 7) at 13 (Feb. 28, 2012) (unpublished).

⁶ In May 2012, we admitted an amended version of Joint Intervenor's Contention 2.1, *see* LBP-12-9, 75 NRC 615, 629 (2012), and in August 2012, we reformulated the contention to eliminate an issue rendered moot by FPL's curative action. *See* Licensing Board Memorandum and Order (Granting in Part and Denying in Part Motion for Summary Disposition of Amended Contention 2.1) at 10 (Aug. 30, 2012) (unpublished) [hereinafter August 2012 Order]. The current version of Contention 2.1 is located *infra* text accompanying note 33.

⁷ Division of New Reactor Licensing, Office of New Reactors, Environmental Impact Statement for Combined Licenses (COLs) for Turkey Point Nuclear Plant Units 6 and 7 Draft Report for Comment, NUREG-2176 (Feb. 2015) (ADAMS Accession No. ML15055A103) [hereinafter DEIS].

⁸ *See* Petition at 1. The Board established April 13, 2015, as the deadline for the filing of new contentions based upon the DEIS. *See* Licensing Board Order (Granting Motion for Additional Time) at 3 (Mar. 25, 2015) (unpublished).

⁹ *See* Petition at 12-13. The litigation opportunities available to an entity participating as a local governmental body pursuant to 10 C.F.R. § 2.315(c) are discussed *infra* Part V.

¹⁰ *See* [FPL's] Answer Opposing City of Miami's Petition to Intervene in a Hearing on [FPL's] Combined Construction and Operating License Application for Turkey Point Units 6 & 7 (May 8, 2015) [hereinafter FPL Answer].

¹¹ *See* NRC Staff Answer to [Petition] (May 8, 2015) [hereinafter NRC Staff Answer].

¹² *See* FPL Answer at 1-2; NRC Staff Answer at 1-2.

¹³ *See* FPL Answer at 2; NRC Staff Answer at 2.

standing to intervene.¹⁴ To that end, the regulations require a petitioner to state (1) the nature of the petitioner's right under either the Atomic Energy Act or the National Environmental Policy Act (NEPA) to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest.¹⁵ In determining whether a petitioner has demonstrated standing, the Commission traditionally has applied contemporaneous judicial concepts of standing.¹⁶ However, when a governmental body within close proximity of a proposed nuclear reactor unit seeks to intervene in a COL proceeding, the Commission grants standing under the "proximity presumption," effectively dispensing with the need to make an affirmative showing of injury, causation, and redressability.¹⁷

Miami is a "Florida municipal corporation . . . located 25 miles from Turkey Point" and "FPL's proposed transmission corridor . . . is located directly within [Miami's] limits."¹⁸ As the NRC Staff acknowledges,¹⁹ this alone is sufficient for Miami to establish standing under the proximity presumption.

III. LEGAL STANDARDS FOR CONTENTION ADMISSIBILITY

Initially, contentions arising under NEPA must be filed based on an applicant's environmental report (ER).²⁰ When a petitioner seeks leave to intervene after the initial deadline for the filing of contentions, it must demonstrate good cause for its belated filing by showing that:

- (i) The information upon which the filing is based was not previously available;

¹⁴ See 10 C.F.R. § 2.309(a).

¹⁵ 10 C.F.R. § 2.309(d)(1).

¹⁶ See *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993) (citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992)); see, e.g., *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

¹⁷ "Where . . . a municipality seeks to participate in a reactor licensing proceeding that does not involve a facility within the municipality's boundaries, it can, for purposes of establishing standing, rely on the 50-mile 'proximity' presumption to the same extent as an individual or an organization." LBP-11-6, 73 NRC at 169-70 (omitting footnotes) (citing *Power Authority of the State of New York* (James A. Fitzpatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 295 (2000); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 33-34 (1998)).

¹⁸ Petition at 3.

¹⁹ See NRC Staff Answer at 8-9.

²⁰ See 10 C.F.R. § 2.309(f)(2).

- (ii) The information upon which the filing is based is materially different from information previously available; and
- (iii) The filing has been submitted in a timely fashion based on the availability of the subsequent information.²¹

In addition to being timely, the proposed new contention must satisfy the six-factor contention admissibility standard in 10 C.F.R. § 2.309(f)(1), which states, in relevant part, that a petitioner must:

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . . ;
- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
- (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; [and]
- (vi) . . . [P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief.²²

The Commission has emphasized that the contention admissibility standards are "strict by design."²³ Failure to comply with any of the section 2.309(f)(1) requirements renders a contention inadmissible.²⁴

²¹ 10 C.F.R. § 2.309(c)(1).

²² 10 C.F.R. § 2.309(f)(1). To satisfy section 2.309(f)(1)(vi), a petitioner must show that a genuine dispute exists on a material issue of law or fact relating to the application. In this case, Miami challenges the NRC's DEIS, which is the applicable environmental document at this stage of the proceeding.

²³ *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001); *accord USEC Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006).

²⁴ *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

IV. CONTENTION ADMISSIBILITY ANALYSIS

Miami's petition proffers three contentions, all of which allege that the DEIS for Turkey Point Units 6 and 7 is deficient in certain respects. FPL and the NRC Staff oppose admission of the contentions. As explained below, we conclude that the contentions are not admissible and, accordingly, we deny Miami's petition to intervene.

A. Contention 1

The draft EIS is deficient in concluding that the environmental impacts from FPL's proposed deep injection wells will be "small" because the draft EIS fails to identify the source data of the chemical concentrations in draft EIS Table 3-5 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.²⁵

1. *Miami's Position on Contention 1*

In Contention 1, Miami alleges that the DEIS contains inadequacies in its (1) "assessment of the chemical and radiological constituents of the plant liquid waste streams;" and (2) evaluation of "the potential for upward migration of injectate and infiltration of contaminants [from the Boulder Zone] into the Lower Floridan Aquifer."²⁶ In support of its first claim, Miami faults the DEIS for failing to identify the total amount of various chemicals in the plant's waste streams and for including only a password protected table of effluent constituents and concentrations.²⁷ Miami also faults the DEIS for failing to identify safe release levels for each chemical.²⁸ Regarding the second claim, Miami alleges that the DEIS assumed geological isolation, resulting in a failure to analyze the potential for and environmental consequences of chemical migration into drinking water and the Biscayne Bay.²⁹

²⁵ Petition at 6.

²⁶ Petition at 6-7.

²⁷ See *id.* at 7.

²⁸ See *id.*

²⁹ See *id.* at 7, 8.

2. Board Ruling on Contention 1

Miami's Contention 1 is virtually identical to the version of Joint Intervenors' Contention 2.1 admitted by this Board on May 2, 2012. The only difference between the two is that Joint Intervenors' contention alleges a deficiency in FPL's ER Table 3.6-2, while Miami's contention alleges a deficiency in the NRC Staff's DEIS corresponding Table 3-5.³⁰ Both contentions allege, *inter alia*, that the environmental review documents fail to identify "the source data of the chemical concentrations . . . for ethylbenzene, heptachlor, tetrachloroethylene, and toluene."³¹ Shortly after our May 2012 decision, however, FPL provided the missing "source data," and we therefore granted summary disposition to FPL on that aspect of Contention 2.1 in our August 30, 2012 order.³² In the same order, we reformulated Contention 2.1, narrowing it as follows to reflect FPL's curative action:

The ER is deficient in concluding that the environmental impacts from FPL's proposed deep injection well will be "small" because the chemical concentrations in ER Rev. 3 Table 3.6-2 for ethylbenzene, heptachlor, tetrachloroethylene, and toluene may be inaccurate and unreliable. Accurate and reliable calculations of the concentrations of those chemicals in the wastewater are necessary so it might reasonably be concluded that those chemicals will not adversely impact the groundwater should they migrate from the Boulder Zone to the Upper Floridan Aquifer.³³

As is evident from comparing Miami's Contention 1 with the May 2012 and August 2012 versions of Joint Intervenors' Contention 2.1, the contention Miami seeks to admit has been a part of this proceeding for more than 3 years. Miami does not endeavor to support its contention with any new information that is materially different from what has long been previously available. Indeed, Miami acknowledges that the DEIS makes the same assumptions related to geological isolation that FPL made in its ER.³⁴ We therefore deny admission of Contention 1 as untimely under all three elements of 10 C.F.R. § 2.309(c)(1).³⁵

³⁰ Compare Petition at 6 (Miami's Contention 1) with LBP-12-9, 75 NRC at 629 (Joint Intervenors' Contention 2.1).

³¹ Petition at 6.

³² See August 2012 Order at 7-10.

³³ *Id.* at 10.

³⁴ Petition at 7.

³⁵ As discussed *infra* Part V, Miami will be permitted to participate in this proceeding as an interested local governmental body, and it will thus have the opportunity to support Joint Intervenors' already-admitted Contention 2.1 consistent with the provisions of 10 C.F.R. § 2.315(c).

B. Contention 2

The draft EIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that the radial collector wells will change the plume dynamics of the Industrial Wastewater Facility/Cooling Canal contaminant plume.³⁶

1. *Miami's Position on Contention 2*

Contention 2 alleges that the DEIS fails adequately to analyze the impact that operation of the Turkey Point radial collector wells will have on the contaminant plume that extends outwards from the industrial wastewater facility that serves Turkey Point Units 3 and 4.³⁷ To support Contention 2, Miami cites to (1) “data submitted by FPL as part of the application to the State of Florida for the Units 6 and 7 project,” including aquifer performance testing conducted in April and May 2009 that reveals (a) “unusually high sulfate levels” indicating that the contaminant plume had directly entered the surface water;³⁸ and (b) “extraordinarily low groundwater levels” resulting from water uptake from surrounding aquifers into Turkey Point’s industrial wastewater facility;³⁹ (2) “tracer data from the Uprate Monitoring;”⁴⁰ and (3) FPL’s “proposed diver[sion] to the [industrial wastewater facility] [of] additional supplies of water from the Floridan Aquifer and the L-31 [canal].”⁴¹ According to Miami, more of the plume will be recaptured by the wastewater facility, which will further increase the salinity of the Biscayne aquifer.⁴² Ultimately, Miami contends, these concerns, along with the cumulative impact of operations at Turkey Point Units 6 and 7 and the uprated Turkey Point Units 3 and 4, are not adequately discussed in the DEIS discussion of radial collector wells.⁴³

³⁶ Petition at 8.

³⁷ *Id.* According to the DEIS, the radial collector wells pull water from the Biscayne aquifer to serve as an alternative water source for system cooling. DEIS at 2-26. The primary water source for cooling purposes would be reclaimed water from the Miami-Dade Water and Sewer Department. *Id.*

³⁸ Petition at 8.

³⁹ *Id.* at 8-9.

⁴⁰ *Id.* at 9. Although Miami’s reference is not clear, the Board assumes that Miami is referring to the 2012 power uprate of Turkey Point Units 3 and 4.

⁴¹ *Id.* at 10 n.3.

⁴² *Id.* at 9.

⁴³ *Id.*

2. Board Ruling on Contention 2

We deny admission of Contention 2 as untimely under 10 C.F.R. § 2.309(c)(1) because Miami does not show that the contention is based upon new information that is materially different from that which was previously available. The aquifer testing data are clearly not new information, and FPL indicates that it has been available on ADAMS since at least 2011.⁴⁴ Likewise, the power uprate of Turkey Point Units 3 and 4 took place in 2012, and FPL indicates that the monitoring data referred to by Miami was collected between June 2010 and May 2011.⁴⁵ Further, FPL's requested diversion of water from the L-31 canal, while more recent, still occurred on February 18, 2015, nearly 2 months prior to submittal of CASE's petition.⁴⁶

More fundamentally, Contention 2 challenges the adequacy of the DEIS analysis of the radial collector wells without explaining how the information presented in the DEIS differs from what was previously available in FPL's ER. Miami provides nothing to suggest that Contention 2 could not have been filed in response to the NRC's original notice of opportunity to request a hearing in June 2010. Contention 2 is therefore inexcusably late under all three elements of section 2.309(c)(1).

Even if Miami had shown good cause for its belated filing of Contention 2, the Board deems the contention inadmissible because Miami does not (1) raise an issue material to the findings the NRC Staff must make, as required by 10 C.F.R. § 2.309(f)(1)(iv); (2) provide adequate support for the contention, as required by 10 C.F.R. § 2.309(f)(1)(v); or (3) demonstrate a genuine dispute with the DEIS, as required by 10 C.F.R. § 2.309(f)(1)(vi).

First, Contention 2 claims that the DEIS is deficient because it “does not preclude the possibility that the radial collector wells will change the [contaminant] plume dynamics.”⁴⁷ Yet, Miami does not — and cannot — explain why, pursuant to NEPA standards, the DEIS must “preclude” the possibility of such a change in plume dynamics. It is well established that “NEPA itself does not mandate particular results, but simply prescribes the necessary process” that agencies must follow in evaluating environmental impacts.⁴⁸ So long as the DEIS takes a “hard

⁴⁴ See FPL Answer at 17. ADAMS is the acronym for “Agencywide Documents Access and Management System,” which is the official recordkeeping system through which the NRC provides public access to documents related to the agency's regulatory activities.

⁴⁵ See FPL Answer at 17 n.8.

⁴⁶ See Staletovich, Jenny, *[FPL] Spars with National Park over Water Needs for Nuclear Plant*, Miami Herald (Feb. 18, 2015) <http://www.miamiherald.com/news/local/environment/article10655732.html>. Regardless, Miami's reference to FPL's proposed water diversion is so cursory that it could hardly support admission of a contention pursuant to section 2.309(f)(1)(v)-(vi). See Petition at 10 n.3.

⁴⁷ *Id.* at 8.

⁴⁸ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989).

look” at the environmental impacts arising from the licensing of Turkey Point Units 6 and 7, nothing in NEPA requires the NRC Staff’s analysis to “preclude” any particular environmental impact. Contention 2 thus fails to raise a material issue pursuant to 10 C.F.R. § 2.309(f)(1)(iv).

Second, Miami provides little by way of alleged facts or expert opinions to support its assertions in Contention 2. While Miami claims that the radial collector wells will impact bay salinity in various ways, it does not support these assertions with any documentary or expert opinion support. Rather, as the NRC Staff points out,⁴⁹ Miami merely avers that each assertion “is believed.” This is not sufficient to satisfy the 10 C.F.R. § 2.309(f)(1)(v) requirement for specific references in support of a petitioner’s contention.

Finally, assuming that Contention 2 intends to challenge the adequacy of the DEIS impacts analysis related to radial collector wells, rather than impose the substantive result described above, Miami fails to identify any specific inadequacies in the DEIS. Instead, Miami simply states that the impacts “should be evaluated more thoroughly”⁵⁰ and that the evaluation “is not adequate to address any of [Miami’s] concerns.”⁵¹ This statement ignores the multiple places where the DEIS analyzes the impact that the radial collector wells may have on the contaminant plume.⁵² Admittedly, Miami does specifically allege that the DEIS requires a “multi density hydrologic model with coupled surface and groundwater since, according to Appendix G of the [DEIS], the current groundwater model is inadequate.”⁵³ This assertion, however, fails to acknowledge that because the NRC Staff found FPL’s groundwater model to be inadequate, “[t]he NRC commissioned the U.S. Geological Survey (USGS), to conduct additional modeling to help identify the potential effects of [radial collector well] pumping.”⁵⁴ Having failed to recognize the existence of this additional analysis in the DEIS, and in the absence of any more specific identification by Miami of allegedly deficient portions of the DEIS, we conclude that Contention 2 fails to demonstrate a genuine dispute with the DEIS, as required by 10 C.F.R. § 2.309(f)(1)(vi).

C. Contention 3

Concerning the radial collector wells, Appendix G, page G-28, of the draft EIS states that “[t]he base case model predicted that 1.9 percent of the water extracted

⁴⁹ NRC Staff Answer at 16.

⁵⁰ Petition at 8.

⁵¹ *Id.* at 9.

⁵² NRC Staff Answer at 14-15.

⁵³ Petition at 10.

⁵⁴ DEIS at G-26.

by the [radial collector wells] would come from the industrial wastewater facility. A ‘worst’ case of 3.3 percent of the extracted water coming from the industrial wastewater facility was predicted by cutting the vertical conductivity of all layers in half.” This portion of the draft EIS is deficient because it does not address what percentage of water would come from under the [industrial wastewater facility]. Due to differences in vertical and horizontal transmissivity, it can be assumed that a greater quantity of water would come from deeper ground waters under the [industrial wastewater facility], including the hypersaline plume, than from the surface waters in the [industrial wastewater facility].⁵⁵

1. *Miami’s Position on Contention 3*

Contention 3 alleges that the DEIS is deficient because it fails to identify “the percentage of [radial collector well] water that could conceivably come from underneath the [industrial wastewater facility].”⁵⁶ In support of Contention 3, Miami claims that (1) FPL’s groundwater model shows that intermittent operation of the radial collector wells could increase migration of hypersaline water into Biscayne Bay;⁵⁷ (2) the radial collector wells would draw more water from the contaminant plume underneath the industrial wastewater facility than from its surface water due to limitations on vertical transmissivity in the upper Biscayne Aquifer;⁵⁸ and (3) the density of the hypersaline water underneath the wastewater facility would in turn lead to greater demand on the freshwater aquifer.⁵⁹

2. *Board Ruling on Contention 3*

We deny admission of Contention 3 as untimely under 10 C.F.R. § 2.309(c)(1)(i)-(iii) because Miami fails to show that the contention is based on materially different information from that which was previously available. Rather, the contention focuses solely on FPL’s base case groundwater model, which has been available for years as a part of FPL’s initial application. Had Contention 3 focused on some alleged deficiency in the NRC’s commissioned USGS modeling, Miami might have been able to show the requisite good cause for filing a late contention. As it is, Contention 3 is grounded on information that long has been available and, therefore, it must be rejected as inexcusably late.

Even if Contention 3 were timely, the Board would deny its admission because Miami does not (1) raise an issue material to the findings the NRC Staff must

⁵⁵ Petition at 10.

⁵⁶ *Id.* at 11.

⁵⁷ *Id.* at 10-11.

⁵⁸ *Id.* at 11.

⁵⁹ *Id.*

make, as required by 10 C.F.R. § 2.309(f)(1)(iv); (2) provide adequate support for the contention, as required by 10 C.F.R. § 2.309(f)(1)(v); or (3) demonstrate a genuine dispute with the DEIS, as required by 10 C.F.R. § 2.309(f)(1)(vi).

First, Contention 3 fails to raise an issue material to the findings the NRC must make. Miami never explains why the DEIS must identify the percentage of radial collector well water drawn from underneath the industrial wastewater facility. Miami's failure to explain why this information is relevant, much less necessary, to the NRC's NEPA analysis renders the contention inadmissible pursuant to section 2.309(f)(1)(iv).

Second, Miami fails to provide alleged facts or expert opinion to support admission of Contention 3. Miami makes a number of assertions about how water of varying salinity and depth will react to the radial collector wells, but it does not provide any documentary or expert opinion to support its claims. Although the Commission has said that a licensing board may "appropriately view [p]etitioners' support for its contention in a light that is favorable to the [p]etitioner, it cannot do so by ignoring [the regulatory requirement] that all petitioners provide . . . a statement of fact or expert opinion upon which they intend to rely."⁶⁰ Miami's failure to provide such supporting information mandates rejection of Contention 3 pursuant to section 2.309(f)(1)(v).

Third, Contention 3 fails to present a genuine dispute with the DEIS. Miami alleges that the DEIS discussion of radial collector wells is deficient, but it cites only to the portion of the discussion related to FPL's groundwater model. As stated earlier (*supra* text accompanying note 54), the NRC found FPL's model to be inadequate and commissioned additional modeling by the USGS. The DEIS contains extensive discussion of the USGS model,⁶¹ none of which is addressed by Miami. Miami's failure to do so renders Contention 3 inadmissible pursuant to section 2.309(f)(1)(vi).

V. PARTICIPATION AS AN INTERESTED LOCAL GOVERNMENTAL BODY

Miami also requests that, should the Board deny admission of the proposed contentions, it be permitted to participate in this proceeding as an interested local governmental body pursuant to 10 C.F.R. § 2.315(c).⁶² Neither FPL nor the NRC Staff opposes this request.

⁶⁰ *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

⁶¹ See DEIS at G-30 to G-45.

⁶² Petition at 12.

Section 2.315(c) instructs licensing boards to “afford an interested State, local governmental body (county, municipality or other subdivision), and Federally-recognized Indian Tribe that has not been admitted as a party under § 2.309, a reasonable opportunity to participate in a hearing.” Due to Miami’s close proximity to the proposed Turkey Point Units 6 and 7, and its clear interest in preserving the health and safety of its residents, we grant Miami’s unopposed request to participate in this proceeding pursuant to 10 C.F.R. § 2.315(c).⁶³

VI. CONCLUSION

For the foregoing reasons, the Board *denies* Miami’s petition to intervene. The Board *grants* Miami’s alternative request to participate in this proceeding as a local governmental body pursuant to 10 C.F.R. § 2.315(c).

Miami may file an appeal from this Memorandum and Order within twenty-five (25) days of service of this decision by filing a notice of appeal and an accompanying supporting brief pursuant to 10 C.F.R. § 2.311(b). Any party opposing an appeal may file a brief in opposition to the appeal. All briefs must conform to the requirements of 10 C.F.R. § 2.341(c)(3).

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
June 10, 2015

⁶³ As provided by section 2.315(c), at any hearing, the designated representative of an interested local governmental body will have the opportunity to “introduce evidence, interrogate witnesses where cross examination by the parties is permitted, advise the Commission without requiring the representative to take a position with respect to the issue, file proposed findings in those proceedings where findings are permitted, and petition for review by the Commission.” 10 C.F.R. § 2.315(c).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Dr. Gary S. Arnold
Dr. Thomas J. Hirons

In the Matter of

Docket No. 50-255-LA-2
(ASLBP No. 15-939-04-LA-BD01)

ENTERGY NUCLEAR
OPERATIONS, INC.
(Palisades Nuclear Plant)

June 18, 2015

Entergy Nuclear Operations, Inc. seeks a license amendment concerning the fracture toughness of the reactor pressure vessel at Palisades Nuclear Power Plant. The amendment relies on an “equivalent margins analysis” to show that three plate and weld materials will continue to provide adequate margins of safety after dropping below the regulatory screening criterion. On March 9, 2015, Beyond Nuclear, Don’t Waste Michigan, Michigan Safe Energy Future — Shoreline Chapter, and the Nuclear Energy Information Service requested a hearing and argued that the analysis is inadequate because it does not include recent test data from capsules inside the reactor vessel and does not analyze the potential for “microcracking,” a phenomenon recently detected at two Belgian reactors. Concluding that these issues form an admissible contention, the Board grants the petitioners’ hearing request.

RULES OF PRACTICE: STANDING

Under the Commission’s proximity presumption, a person living, having frequent contacts, or having a significant property interest within 50 miles of

a nuclear power reactor has standing when a license amendment involves an obvious risk of offsite radiological releases.

LICENSE AMENDMENT: SCOPE OF REVIEW

The Board's review of a license amendment includes challenges concerning whether the applicant has complied with all applicable regulations and whether the issuance of the amendment will be inimical to the health and safety of the public.

REGULATIONS: INTERPRETATION (10 C.F.R. PART 50, APPENDIX H)

Appendix H sets the minimum frequency for testing capsules inside the reactor vessel for neutron embrittlement and fracture toughness.

REGULATIONS: INTERPRETATION (10 C.F.R. PART 50, APPENDIX G)

Appendix G grants licensees the option of demonstrating that levels of fracture toughness below the regulatory screening criterion will provide margins of safety against fracture equivalent to those required by the American Society of Mechanical Engineers' Boiler and Pressure Vessel Code, Section XI, Appendix G.

RULES OF PRACTICE: CHALLENGE TO REGULATIONS

The Staff's decision to approve a withdrawal schedule in accordance with Appendix H of 10 C.F.R. Part 50 does not preclude modification of the schedule, much less allow the existing schedule to be a defense to compliance with other regulations.

STAFF GUIDANCE: INTERPRETATION (REGULATORY GUIDE 1.161)

Regulatory Guide 1.161 provides guidance on how to conduct a successful equivalent margins analysis in several areas not covered by regulation, such as analyzing different fracture event sequences, calculating transients (e.g., pressure along the vessel wall and other physical changes in the vessel), and selecting appropriate material properties as inputs for the models.

RULES OF PRACTICE: CHALLENGE TO REGULATIONS

A challenge to the sufficiency of the methodologies described in Staff regulatory guidance is not prohibited by 10 C.F.R. § 2.335(a).

RULES OF PRACTICE: CONTENTIONS (BASIS)

The requirement of 10 C.F.R. § 2.309(f)(1)(ii), that the petition include a “brief explanation of the basis” for the contention, merely requires an explanation of the rationale or theory of the contention, not evidence or supporting factual information.

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

Under 10 C.F.R. § 2.309(f)(1)(iv), there must be some significant link between the claimed deficiency and the agency’s ultimate determination whether the applicant will adequately protect the health and safety of the public and the environment.

RULES OF PRACTICE: CONTENTIONS (FACTUAL SUPPORT)

With respect to the requirement for petitioners to provide sufficient factual support to demonstrate a genuine dispute, they are required to make “a minimal showing that material facts are in dispute, thereby demonstrating that an ‘inquiry in depth’ is appropriate.” *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994) (citing Final Rule: “Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process,” 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989)).

RULES OF PRACTICE: CONTENTIONS (FACTUAL SUPPORT)

At the contention admissibility stage, petitioners are not required to prove their case on the merits or even to provide expert or factual support as strong as that necessary to withstand a summary disposition motion.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

Although the admissibility criteria are strict by design, the Commission has also repeatedly warned against turning them into a “fortress to deny intervention.” *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 414 n.49 (2007).

RULES OF PRACTICE: EVIDENCE

The Board does not consider evidentiary objections made for the first time after briefing has been completed because to do so would unfairly deprive the petitioners of the opportunity to file the response expressly provided in the NRC's procedural rules.

RULES OF PRACTICE: CONTENTIONS (GENUINE DISPUTE)

The requirement to dispute specific portions of the application is satisfied when a commonsense reading of the petition makes abundantly clear which sections of the application the petitioners are challenging, even though the petitioners do not specifically cite particular sections.

MEMORANDUM AND ORDER

(Granting Petition to Intervene and Request for a Hearing)

Beyond Nuclear, Don't Waste Michigan, Michigan Safe Energy Future — Shoreline Chapter, and the Nuclear Energy Information Service (collectively "the Petitioners") seek a hearing on a license amendment request ("LAR") concerning whether the reactor vessel plate and weld materials at Palisades Nuclear Plant ("Palisades") have been shown to provide adequate margins of safety against fracture.¹ Because the Petitioners have submitted a timely petition, have established representational standing, and have proffered an admissible contention,² the Licensing Board grants their hearing request.³

I. BACKGROUND

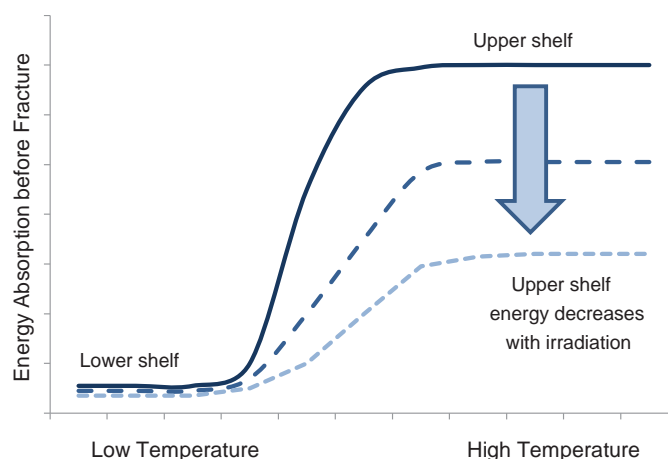
This license amendment proceeding concerns the material properties of the Palisades reactor pressure vessel. "Long-term exposure to neutron radiation and elevated temperatures in a reactor vessel affects vessel materials. Over

¹ Petition to Intervene and for a Public Adjudication Hearing of Entergy License Amendment Request for Approval of 10 CFR Part 50 Appendix G Equivalent Margins Analysis (Mar. 9, 2015) [hereinafter "Petition"]. The Petitioners first raised this concern with respect to an earlier LAR, but they later deferred that argument to this license amendment proceeding. *See* LBP-15-17, 81 NRC 753, 780 n.164 (2015).

² *See* 10 C.F.R. § 2.309(a), (f)(1).

³ Judge Arnold agrees that the Petitioners have submitted a timely petition and have standing, but he disagrees with the Board's conclusion that their contention is admissible. His dissent from the Board's contention admissibility ruling is attached to the end of this Memorandum and Order.

time, the ductility of ferritic materials decreases, thereby decreasing the vessel materials' 'fracture toughness,' or resistance to fracture."⁴ Accordingly, Nuclear Regulatory Commission ("NRC") regulations require that materials in a reactor vessel maintain a minimum level of fracture toughness; this minimum is set at 50 foot-pounds (ft-lb) of Charpy upper-shelf energy, which is a measurement of the amount of energy the material can absorb at high temperatures before it fractures and fails.⁵ Charpy upper-shelf energy decreases with exposure to neutron radiation over the reactor vessel's lifetime,⁶ as illustrated in this diagram:⁷



Accordingly, if part of a reactor pressure vessel is expected to fall below the 50 ft-lb standard, the vessel's licensee must demonstrate "that lower values of Charpy upper-shelf energy will provide margins of safety against fracture

⁴ *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 317 (1996).

⁵ 10 C.F.R. Part 50, App. G. The Charpy impact test measures the energy required to fracture metal by striking a sample with a pendulum until the sample breaks. See Lowe, Arthur L., Jr., *Factors Influencing Accuracy of Charpy Impact Test Data*, in Charpy Impact Test: Factors and Variables, American Society for Testing & Materials ["ASTM"] Selected Technical Papers 1072, at 55-56 (John M. Holt ed., 1990). The term "upper-shelf" refers to the materials' ability to absorb more energy at higher temperatures. *Id.*

⁶ See Office of Nuclear Regulatory Research, NRC, Radiation Embrittlement of Reactor Vessel Materials, Regulatory Guide 1.99, at 1 (rev. 2 May 1988) (ADAMS Accession No. ML003740284) [hereinafter "Regulatory Guide 1.99"] (describing methods for calculating "changes in fracture toughness of reactor vessel materials caused by neutron radiation throughout the service life").

⁷ This graph is offered for illustrative purposes and is not part of the record as provided by the parties.

equivalent to those required by Appendix G of Section XI of the [American Society of Mechanical Engineers' Boiler and Pressure Vessel ('ASME BPV')] Code.”⁸

Entergy Nuclear Operations, Inc. (“Entergy”) predicted that a plate material and a weld material in the Palisades reactor will fall below the 50 ft-lb standard during the reactor’s lifetime, leading the company in October 2013 to submit an analysis to the NRC Staff (“the Staff”) to show that the materials provided “margins of safety” that are “equivalent” to those required by ASME BPV Code, Section XI, Appendix G.⁹ Following discussions with the Staff, the company resubmitted its equivalent margins analysis (“EMA”) on November 12, 2014, as a license amendment request.¹⁰ The LAR predicts that lower shell plate material D-308-1 will drop below the 50 ft-lb screening criterion in December 2016 and that weld material 9-112 will drop below this criterion in November 2027.¹¹ Entergy’s analysis also concludes that a different material, upper shell plate material D-3802-3, could fall below the 50 ft-lb standard “if future operation includes higher flux levels, longer operating cycles, or changes to the reactor internals.”¹²

In its analysis, Entergy determined that all three materials nevertheless show safety margins equivalent to those required by ASME BPV Code, Section XI, Appendix G.¹³ The company based its calculations on ASME BPV Code, Section XI, Appendix K, “Assessment of Reactor Vessels with Low Upper Shelf Charpy Impact Energy Levels,” as supplemented by Regulatory Guide 1.161.¹⁴

The Staff’s regulatory guide describes procedures that the Staff considers

⁸ 10 C.F.R. Part 50, App. G, § IV.1.a. “This analysis must use the latest edition and addenda of the ASME Code incorporated by reference into [10 C.F.R.] § 50.55a(b)(2) at the time the analysis is submitted.” *Id.* The NRC has incorporated Section XI of the ASME BPV Code “through the 2007 Edition with the 2008 Addenda.” *Id.* § 50.55a(b)(2). As used in this Order, Section XI refers to Section XI, Division 1, of the ASME BPV Code.

⁹ Letter from Anthony J. Vitale, Site Vice President, Palisades Nuclear Plant, to Document Control Desk, NRC, Palisades Nuclear Plant 10 CFR 50 Appendix G Equivalent Margins Analysis (Oct. 21, 2013) (ADAMS Accession No. ML13295A448).

¹⁰ Letter from Anthony J. Vitale, Site Vice President, Palisades Nuclear Plant, to Document Control Desk, NRC, License Amendment Request for Approval of Palisades Nuclear Plant 10 CFR 50 Appendix G Equivalent Margins Analysis (Nov. 12, 2014) (ADAMS Accession No. ML14316A190) [hereinafter “LAR”]. The license amendment request and all attachments are available at ADAMS Package No. ML14316A370.

¹¹ LAR, Attach. 1, at 2.

¹² *Id.*

¹³ *Id.* at 2-4.

¹⁴ *Id.* at 3; Office of Nuclear Regulatory Research, Evaluation of Reactor Pressure Vessels with Charpy Upper-Shelf Energy Less Than 50 ft-lb, Regulatory Guide 1.161 (June 1995) (ADAMS Accession No. ML003740038) [hereinafter “Regulatory Guide 1.161”].

acceptable for demonstrating equivalent safety margins,¹⁵ provides models for four different operating and emergency scenarios (known as Level A, B, C, and D conditions),¹⁶ and includes references for generic data on correlations between Charpy impact energy and fracture toughness.¹⁷ The guide explains that the use of generic reference materials will often be necessary for an EMA, rather than testing material samples directly:

Unfortunately, the specific material of interest (i.e., the material from the beltline region of the reactor vessel under operation) is seldom available for testing. Thus, testing programs have used generic materials that are expected to represent the range of actual materials used in fabricating reactor pressure vessels in the United States.¹⁸

Entergy relied on these generic reference materials in its analysis.¹⁹ The Staff's guidance also authorizes methods other than the generic analyses "on an individual-case basis if justified."²⁰

The Staff published notice of Entergy's LAR in the *Federal Register* on January 6, 2015, and concluded that it qualifies for a "no significant hazards consideration" finding under 10 C.F.R. § 50.92(c).²¹ On March 9, 2015, the

¹⁵ See Regulatory Guide 1.161, at 1, 8-11. The Staff most recently reviewed this guide in March 2014 and found that it was acceptable for continued use. Memorandum from David Rudland, Chief, Component Integrity Branch, to Michael J. Case, Director, Division of Engineering (Mar. 13, 2014) (ADAMS Accession No. ML14070A206). The Staff is, however, continuing to investigate crack driving forces and methods to improve the reference data on correlations between Charpy impact energy and fracture toughness. See Component Integrity Branch, Regulatory Guide Periodic Review of Regulatory Guide 1.161, at 1-2 (Mar. 2013) (ADAMS Accession No. ML14070A207).

¹⁶ Regulatory Guide 1.161, at 3-4. The Level A scenario concerns normal operating conditions; the Level B scenario concerns "Upset" conditions; the Level C scenario concerns low-probability "Emergency" conditions; and the Level D scenario concerns the lowest-probability "Faulted" conditions. ASME BPV Code § XI, Art. IWA-9000 Glossary; *id.*, Art. XI-3000, at IX-3200.

¹⁷ Regulatory Guide 1.161, at 2 (citing E. D. Eason, J. E. Wright, and E. E. Nelson, Multivariable Modeling of Pressure Vessel and Piping J-R Data, NUREG/CR-5729 (May 1991)).

¹⁸ *Id.* at 2.

¹⁹ LAR, Attach. 5, at 5-2.

²⁰ Regulatory Guide 1.161, at 2; see *id.* at 3 ("Licensees may follow this regulatory guide to determine the equivalent safety margins, or they may use any other methods, procedures, or selection of materials data and transients to demonstrate compliance with Appendix G to 10 CFR Part 50.").

²¹ Applications and Amendments to Facility Operating Licenses and Combined Licenses Involving No Significant Hazards Considerations, 80 Fed. Reg. 520, 523-24 (Jan. 6, 2015).

Petitioners submitted a timely hearing request.²² Entergy and the Staff filed answers opposing the petition,²³ and the Petitioners filed a reply.²⁴

II. PETITIONERS' STANDING TO PARTICIPATE IN THIS PROCEEDING

The standing issue in this case is nearly identical to that recently decided in LBP-15-17, in which the licensing board ruled that the same Petitioners had standing to challenge a related license amendment request for the Palisades plant.²⁵ In this case, the four petitioning organizations each seek representational standing on behalf of one of its members, the same four individuals who were found to have standing in LBP-15-17.²⁶ The three individuals who are members of Beyond Nuclear, Don't Waste Michigan, and Michigan Safe Energy Future — Shoreline Chapter reside within 50 miles of Palisades,²⁷ while the fourth, Nuclear Information Resource Service ("NEIS") member Gail Snyder, states that she owns 5 acres of land approximately 15 miles from Palisades that she and her family use and on which they intend to construct a house.²⁸ All four state that they fear that the risk of the Palisades reactor vessel cracking is greater than Entergy predicts in its LAR, and that Palisades may operate unsafely and pose an unacceptable risk to their health and safety and that of their families unless the safety and environmental concerns of the petitioning organizations are addressed.²⁹

In certain circumstances, the Commission has adopted a proximity presumption that allows a person living, having frequent contacts, or having a significant property interest within 50 miles of a nuclear power reactor to establish standing without the need to make an individualized showing of injury, causation, and

²² Petition at 1.

²³ Entergy's Answer Opposing Petition to Intervene and Request for Hearing (Apr. 3, 2015) [hereinafter "Entergy Answer"]; NRC Staff's Answer to Petition to Intervene and Hearing Request Filed by Beyond Nuclear, Don't Waste Michigan, Michigan Safe Energy Future — Shoreline Chapter, and the Nuclear Energy Information Service (Apr. 3, 2015) [hereinafter "Staff Answer"].

²⁴ Petitioners' Reply in Support of Petition to Intervene on Entergy License Amendment Request for Approval of 10 CFR Part 50 Appendix G Equivalent Margins Analysis (Apr. 10, 2015) [hereinafter "Reply"].

²⁵ LBP-15-17, 81 NRC at 771-72.

²⁶ *See id.* at 772.

²⁷ Petition, Attachs., Declaration of Bette Pierman ¶ 2 (Mar. 9, 2015); Declaration of Alice Hirt ¶ 2 (Mar. 9, 2015); Declaration of Maynard Kaufman ¶ 2 (Mar. 9, 2015) [hereinafter "Petitioners' standing declarations"].

²⁸ Declaration of Gail Snyder ¶ 2 (Mar. 9, 2015) [hereinafter "Snyder Decl."].

²⁹ Petitioners' standing declarations; Snyder Decl. ¶ 3.

redressability.³⁰ The Petitioners and the Staff agree that the proximity presumption should apply.³¹ The Staff observes that “[t]he material condition of the plant’s reactor vessel obviously bears on the health and safety of those members of the public who reside in the plant’s vicinity,”³² that the EMA “relates to the integrity of the RPV,”³³ and that “a deficiency in the licensee’s application could result in unintended safety consequences.”³⁴

In this case, unlike LBP-15-17, Entergy does not object to standing for the three members living within 50 miles of Palisades.³⁵ Entergy argues, however, that NEIS lacks standing because Gail Snyder’s declaration did not include the street address for her property and failed to provide sufficient detail concerning the frequency and duration of her visits and those of her family.³⁶

The Board concludes that the proximity presumption applies in this case because a contention concerning the fracture toughness of the reactor vessel, like the contention in LBP-15-17, involves an obvious risk of offsite radiological releases.³⁷ The Board further concludes that the Petitioners have satisfied the requirements of representational standing for the reasons given in LBP-15-17.³⁸ As to Ms. Snyder, we find, for the reasons stated in LBP-15-17, that her property interest, well within the 50-mile area covered by the proximity presumption, is sufficient to support her standing.³⁹ Given that Entergy does not dispute that the property actually exists or that Ms. Snyder owns it, we will not deny NEIS standing because she did not provide an exact address.⁴⁰

³⁰ See, e.g., *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989) (“[L]iving within a specific distance from the plant is enough to confer standing on an individual or group in proceedings for construction permits, operating licenses, or significant amendments thereto.”); *Sequoyah Fuels Corp.* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 (1994).

³¹ Petition at 4-7; Staff Answer at 3-5.

³² Staff Answer at 4 (quoting *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 95-96 (1993) (internal quotation marks omitted)).

³³ *Id.* at 4-5.

³⁴ *Id.* at 5.

³⁵ Entergy Answer at 5.

³⁶ *Id.*

³⁷ See LBP-15-17, 81 NRC at 772-74.

³⁸ *Id.* at 776.

³⁹ *Id.*

⁴⁰ *Id.* at 776 n.144. A petition must contain the name, address, and phone number of “the requestor or petitioner,” 10 C.F.R. § 2.309(d)(1)(i), but NEIS, not Ms. Snyder, is the petitioner. Ms. Snyder’s declaration provides the address for NEIS. Snyder Decl. ¶ 1.

III. ADMISSIBILITY OF PETITIONERS' CONTENTION

A. Summary of the Parties' Arguments

The Petitioners' contention states:

The methods of prediction used by Entergy concerning whether steel plate and weld materials within the reactor pressure vessel ("RPV") at the Palisades Nuclear Power Plant possess Charpy upper shelf energy ("USE") values of less than 50 ft.-lbs. of ductility stress do not provide adequate assurance of margins of safety against fracture or rupture which are equivalent to those required by Appendix G of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code.⁴¹

Relying primarily on a declaration from Arnold Gundersen, a nuclear engineer, the Petitioners argue that Entergy's analysis is deficient because it relies exclusively on models instead of testing the materials of interest.⁴²

The Petitioners and Mr. Gundersen are particularly concerned that Entergy did not test available "coupons" or "capsules" in connection with the EMA. Appendix H to 10 C.F.R. Part 50 "directs licensees to attach a particular number of surveillance 'capsules' to specified areas within the reactor vessel, typically near the inside vessel wall at the beltline."⁴³ Each capsule contains a number of material specimens, or "coupons," that remain exposed to radiation during plant operation.⁴⁴ "Under the Appendix H surveillance program, licensees must periodically withdraw capsules from the reactor vessel. Capsule removal permits the material specimens to be tested for changes in ductility and fracture toughness — effects of the neutron irradiation and elevated temperatures in a given reactor pressure vessel."⁴⁵ The Petitioners stress that "Entergy has not removed or examined any coupons since a 2003 refueling outage, and does not intend to study [another] coupon until at least 2019."⁴⁶ The Petitioners contend that "no accurate current assessment of Palisades' severe embrittlement condition exists."⁴⁷ They argue that sufficient capsules remain inside the reactor to permit additional withdrawal and testing, and that some of these capsules should be removed and tested rather than

⁴¹ Petition at 12.

⁴² *Id.* at 13-15, 17-19; *see* Declaration of Arnold Gundersen ¶¶ 8, 18, 48 (Dec. 1, 2014) [hereinafter "Gundersen Decl."].

⁴³ *Perry*, CLI-96-13, 44 NRC at 317.

⁴⁴ *Id.*

⁴⁵ *Id.*

⁴⁶ Petition at 14.

⁴⁷ *Id.* at 18 (quoting Gundersen Decl. ¶ 21 (internal quotation marks omitted)).

allowing the proposed license amendment based solely upon an “extrapolated analysis.”⁴⁸

The Petitioners also allege that Entergy’s fracture toughness calculations are deficient because of sparse data on beltline materials and the Staff’s limited understanding of fracture mechanics “of steel plating with low Charpy upper-shelf energy.”⁴⁹ The Petitioners further contend that the safety analysis does not account for the Palisades reactor vessel’s lower-than-average fracture toughness resulting from the vessel’s high sulfur content and “nickel impurities.”⁵⁰

The Petitioners also point to safety concerns raised by two material science professors, Digby Macdonald of the University of California at Berkeley and Walter Bogaerts of the Katholieke Universiteit Leuven in Belgium, regarding the discovery of microscopic cracks (also known as microcracks or quasi-laminar indications) in two Belgian RPVs.⁵¹ The professors maintain that any RPV can be susceptible to these cracks because, contrary to previous thinking, the alleged microcracking may be the result of hydrogen atoms migrating into RPV walls during operation.⁵² The Petitioners argue that Entergy’s EMA is deficient because it has not considered this new source of material weakening and potential cracking at Palisades.⁵³

In response, Entergy and the Staff both argue that the contention is an impermissible challenge to the NRC’s regulations because it seeks additional testing of the capsules containing material samples that are located in the Palisades RPV.⁵⁴ They assert that Palisades’ current capsule testing schedule was approved by the NRC under the process laid out in Appendix H of 10 C.F.R. Part 50.⁵⁵ And with respect to “cleavage mode-conversion,” nickel impurities, and microcracking, Entergy and the Staff maintain that the Petitioners have not provided enough factual support to show a genuine dispute.⁵⁶ They note that these three topics are not discussed in Gundersen’s declaration and, they assert, the Petitioners do not explain how they are relevant to the Palisades reactor vessel.⁵⁷

The Petitioners reply that allowing Entergy to rely on pure computation is an

⁴⁸ *Id.* at 19 (quoting Gundersen Decl. ¶ 51 (internal quotation marks omitted)).

⁴⁹ *Id.* at 20-21, 23-24 (citing Regulatory Guide 1.161, at 1).

⁵⁰ *Id.* at 19-20.

⁵¹ *Id.* at 21-22 (citing Greenpeace, Nuclear Reactor Pressure Vessel Crisis (Feb. 15, 2015) (ADAMS Accession No. ML15068A456) [hereinafter “Greenpeace Report”]).

⁵² *Id.*

⁵³ *Id.*

⁵⁴ Entergy Answer at 14-16; Staff Answer at 15-17.

⁵⁵ Entergy Answer at 14-15; Staff Answer at 15-17, 27.

⁵⁶ Entergy Answer at 19-22, 25-26; Staff Answer at 20-24.

⁵⁷ Entergy Answer at 19-22, 25-26; Staff Answer at 20-24.

abuse of the Staff's discretion when physical samples are available.⁵⁸ They note that the Staff has admitted that there are not specific regulations for demonstrating "equivalent margins of safety."⁵⁹ They maintain that Palisades is being allowed to operate by the Staff in "ever more dangerous metallurgical conditions" based on untested hypotheses.⁶⁰

B. Admissibility Standards

An admissible contention must satisfy all six criteria of 10 C.F.R. § 2.309(f)(1). It must (i) provide a specific statement of the legal or factual issue; (ii) explain briefly the basis for the contention; (iii) demonstrate that the issue is within the scope of the proceeding; (iv) show that the issue is material to findings the NRC must make to grant the license amendment; (v) state concisely the alleged facts or expert opinions that support the petitioners' position, including references to specific sources and documents; and (vi) provide enough information to show that a genuine dispute exists over a material issue of law or fact, by either referencing portions of the application that the petitioner disputes or identifying alleged deficiencies in the application.⁶¹

Petitioners cannot challenge an NRC regulation without first obtaining a waiver under 10 C.F.R. § 2.335(b).⁶² But they may raise issues not addressed by a specific regulation when unique features in the facility or ongoing development of a generic solution mean that there are some gaps in the regulatory scheme that must be addressed on a case-by-case basis.⁶³

C. Scope of Review of License Amendments

NRC regulations define the Commission's scope of review of a license amendment application broadly: "In determining whether an amendment to a license, construction permit, or early site permit will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses, construction permits, or early site permits to the extent applicable

⁵⁸ Reply at 2-4.

⁵⁹ *Id.* at 3 (citing Staff Answer at 9).

⁶⁰ *Id.* at 6; *see id.* at 4 (citing Gundersen Decl. ¶48).

⁶¹ 10 C.F.R. § 2.309(f)(1); *see FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 395-96 (2012).

⁶² 10 C.F.R. § 2.335(a)-(b).

⁶³ *See Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), LBP-82-116, 16 NRC 1937, 1946 (1982) (citing *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-491, 8 NRC 245 (1978)).

and appropriate.”⁶⁴ The “considerations” the Commission (and the Board, acting based on the Commission’s delegation) should review include those defined in 10 C.F.R. § 50.40, entitled “Common standards.” As the Atomic Safety and Licensing Appeal Board has explained:

In essence, Section 50.40 requires that the Commission be persuaded, *inter alia*, that the applicant will comply with all applicable regulations, that the health and safety of the public will not be endangered, that the issuance of the amendment will not be inimical to the health and safety of the public, and that any applicable requirements of 10 CFR Part 51 (governing environmental protection) have been satisfied.⁶⁵

Similarly, under the general requirement for operating licenses in 10 C.F.R. § 50.57(a)(3), the Commission must find that the activities that would be authorized by the amendment can be conducted without endangering the health and safety of the public and will be in compliance with Commission regulations.⁶⁶

D. The Board’s Ruling

1. The Contention Is Not Barred by 10 C.F.R. § 2.335(a)

Entergy and the Staff argue that the contention is an impermissible challenge to 10 C.F.R. Part 50, Appendices G and H, and to the 2007 capsule withdrawal schedule.⁶⁷ We are not persuaded by these arguments.

a. Appendix H to Part 50 and the 2007 Capsule Withdrawal Schedule

Entergy and the Staff argue that the Petitioners’ contention is an impermissible challenge to 10 C.F.R. Part 50, Appendix H, and the 2007 capsule withdrawal schedule, because it alleges the need to withdraw and test additional capsules to

⁶⁴ 10 C.F.R. § 50.92(a).

⁶⁵ *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 44 (1978); *see also Tennessee Valley Authority* (Browns Ferry Nuclear Plant, Units 1, 2, and 3), ALAB-664, 15 NRC 1, 15-16 (1982) (“Prior to license issuance the NRC must first find reasonable assurance that the activities authorized by the amendment can be conducted without endangering the health and safety of the public, and in compliance with Commission regulations.”), *vacated and remanded on other grounds*, CLI-82-26, 16 NRC 880 (1982); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-81-16, 13 NRC 1115, 1120 (1981) (reviewing a proposed license amendment to determine whether it would “endanger the health and safety of the public”).

⁶⁶ *General Public Utilities Nuclear Corp.* (Three Mile Island Nuclear Station, Unit 2), LBP-89-7, 29 NRC 138, 190-91 (1989); *Catawba*, LBP-82-116, 16 NRC at 1946 (citing *North Anna*, ALAB-491, 8 NRC at 245).

⁶⁷ Entergy Answer at 14-16; Staff Answer at 15-17, 19-20.

justify the EMA. However, this misinterprets the Petitioners' contention. The contention is not a challenge to Appendix H or the schedule, but instead contests the adequacy of the Licensee's EMA. Appendix H does not establish requirements for an EMA, and therefore the contention does not implicate any provision of Appendix H. It is Appendix G to 10 C.F.R. Part 50, not Appendix H, that grants licensees the option of demonstrating that values of Charpy upper-shelf energy below 50 ft-lb "will provide margins of safety against fracture equivalent to those required by Appendix G of Section XI of the ASME [BPV] Code."⁶⁸ In arguing that additional testing of capsules from the Palisades reactor should be required, the Petitioners are seeking an EMA that provides margins of safety equivalent to those of ASME BPV Code Appendix G, not to challenge any provision of, or add requirements to, 10 C.F.R. Part 50, Appendix H.

To be sure, if the Petitioners' challenge to the EMA were to prevail on the merits, Entergy would need to test one or more capsules sooner than 2019 to provide adequate support for its EMA. But this does not transform the Petitioners' challenge to the EMA into a challenge to Appendix H or to the NRC's 2007 approval of the current testing schedule. On the contrary, although Appendix H allows plants to set a schedule for pulling capsules during normal operations, Appendix H itself requires plants to modify their capsule withdrawal schedules when necessary. The minimum frequency with which capsules must be tested is set by ASTM Standard E 185 (1982 version), which is incorporated into Appendix H.⁶⁹ However, "[t]he ASTM standard anticipates that during the course of a nuclear power plant's life the withdrawal schedule may need to be revised; the standard allows and provides for such changes."⁷⁰ While Appendix H provides a procedure for seeking Staff approval to set or modify the withdrawal schedule, this schedule is itself not part of the plant's license.⁷¹ Furthermore, "the very nature of a withdrawal schedule is such that modifications may need to be made."⁷² Thus, the Staff's decision to approve a withdrawal schedule in accordance with Appendix H does not preclude modification of the schedule, much less allow the existing schedule to be a defense to compliance with other regulations.

Modification of the schedule could only be claimed to be contrary to Appendix H if the additional testing requested by the Petitioners would necessarily conflict with the requirements of ASTM Standard E 185 (1982 version). Entergy contends

⁶⁸ 10 C.F.R. Part 50, App. G, § IV.1.a.

⁶⁹ 10 C.F.R. Part 50, App. H, § I.

⁷⁰ *Perry*, CLI-96-13, 44 NRC at 328.

⁷¹ 10 C.F.R. Part 50, App. H, § III.B.3; *see Perry*, CLI-96-13, 44 NRC at 327 ("[A]ny changes to the material specimen withdrawal schedule that conform to the ASTM standard referenced in Appendix H will not alter the [plant's] license."). Accordingly, a license amendment is not required to change the capsule testing schedule. *Perry*, CLI-96-13, 44 NRC at 321.

⁷² *Perry*, CLI-96-13, 44 NRC at 322.

that the minimum recommended number of surveillance capsules that need to be tested for Palisades under the ASTM standard is five.⁷³ As of 2003, Entergy had tested four capsules, and the company plans to test the fifth in 2019.⁷⁴ However, the standard not only permits but encourages actual physical testing of materials in situations such as this one:⁷⁵

If the Charpy upper shelf energy of any of the beltline materials is predicted to drop to a marginal level (currently considered to be 68 J (50 ft-lbf) at the quarter thickness (1/4 T) location^[76]) during the operating lifetime of the vessel, provisions *shall be made* to also include that material in the surveillance program, preferably in the form of fracture toughness specimens.⁷⁷

Section 6.1 confirms that “[a]dditional fracture toughness test specimens *shall be employed* to supplement the information from the Charpy v-notch specimens if the surveillance materials are predicted to exhibit marginal properties.”⁷⁸ Thus, not only is there no conflict between the Petitioners’ request for additional capsule testing and ASTM Standard E 185, but the Petitioners’ request appears consistent with the standard’s requirements for additional testing when beltline materials are predicted to exhibit marginal properties.

The Staff approved the current Palisades withdrawal schedule in 2007.⁷⁹ The EMA, by contrast, is dated October 21, 2013, and was submitted to the NRC as part of the LAR on November 12, 2014.⁸⁰ Given that the Staff’s approval of

⁷³ Letter from Paul A. Harden, Site Vice President, Palisades Nuclear Plant, to Document Control Desk, NRC, Encl. 1, at 2 (Jan. 30, 2007) (Supplement to Reactor Vessel Surveillance Coupon Removal Schedule Palisades Nuclear Plant) (ADAMS Accession No. ML070300405) [hereinafter “Coupon Removal Supplement”].

⁷⁴ *Id.*

⁷⁵ Two of the materials at issue in Entergy’s EMA, lower shell plate material D-308-1 and weld material 9-112, are part of the beltline region. LAR, Attach. 5, at 4-1.

⁷⁶ Appendix G to the ASME BPV Code Section XI sets the minimum requirements for fracture toughness assuming the presence of defects in the material. *See* ASME BPV Code § XI, App. G, § G-2120. The appendix assumes a maximum postulated defect size having “a depth of one-fourth of the section thickness,” *id.*, and appears to measure fracture toughness at the depth of the postulated crack. *See id.* § G-2215.

⁷⁷ ASTM E 185-82, *Standard Practice for Conducting Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels* § 5.2, in *Annual Book of ASTM Standards*, vol. 12 (ASTM Int’l 1982) (emphasis added).

⁷⁸ *Id.* § 6.1 (emphasis added).

⁷⁹ Letter from Travis L. Tate, Acting Chief, Plant Licensing Branch III-1, Division of Operating Reactor Licensing, Office of Nuclear Reactor Regulation, NRC, to Mr. Michael Balduzzi, Senior Vice President, Regional Operations NE, Entergy Nuclear Operations, Inc. (Aug. 14, 2007) (ADAMS Accession No. ML071640310) [hereinafter “Staff’s 2007 Schedule Approval”].

⁸⁰ LAR at 1.

the schedule preceded the EMA by approximately 6 years, the Staff could not plausibly have considered at the time whether additional capsule testing might eventually be necessary to show equivalent margins of safety under Appendix G of 10 C.F.R. Part 50. There is no indication in the Staff's 2007 letter approving the schedule that it did so.⁸¹ But it is clear that the 2007 schedule provides for additional capsule removal and testing beyond that specifically called for in the schedule, if further testing is needed. The safety evaluation attached to the NRC's schedule approval letter, after summarizing the capsule withdrawal schedule, states that "[c]apsules W-280 and W-260 both remain available for subsequent removal and testing, if needed."⁸² The accompanying table identifies the withdrawal sequence and removal time for five capsules, and then identifies three other capsules as "[r]eserved for future use."⁸³ Thus, the Petitioners' demand for the withdrawal and testing of capsules that remain available for that purpose⁸⁴ is not a challenge to the 2007 withdrawal schedule,⁸⁵ because Entergy could remove and test the capsules that the schedule expressly reserved for future use.

Furthermore, the contention is not a challenge to Palisades' current licensing basis or outside the scope of the proceeding, as Entergy briefly suggests.⁸⁶ "Current licensing basis" is "a term of art comprehending the various Commission requirements applicable to a specific plant that are in effect at the time of [a] license renewal application."⁸⁷ The Petitioners are not challenging those requirements. Rather, they allege that the EMA is inadequate to support the LAR, an issue within the scope of this proceeding.⁸⁸ Such a challenge is not transformed into a challenge to the current licensing basis because the result of a ruling in the Petitioners' favor could be the withdrawal and testing of one or more capsules before 2019. As explained above, Appendix H, which governs the testing schedule, contemplates modifications of the schedule, so the Staff's 2007 approval of the current testing

⁸¹ Staff's 2007 Schedule Approval.

⁸² Staff's 2007 Schedule Approval, Safety Evaluation at 2.

⁸³ *Id.* at 3; *see also* Coupon Removal Supplement, encl. 1 at 2 (stating that two capsules not currently scheduled for testing "remain available for subsequent removal and testing should it be deemed necessary"); Letter from Paul A. Harden, Site Vice President, to Document Control Desk, NRC, encl. 1 at 2 (Sept. 19, 2006) (ADAMS Accession No. ML062630071) (asking to revise the surveillance program "to hold the remaining untested surveillance capsules in reserve to meet future needs" and identifying three capsules as "[r]eserved for future use").

⁸⁴ *See* Petition at 18 ("Entergy is proposing to operate [Palisades] well outside the norm by proposing to reanalyze the deteriorating metallurgical conditions without using the readily available physical samples that are designed specifically for this purpose." (quoting Gundersen Decl. ¶48)).

⁸⁵ *See* Dissent at p. 867.

⁸⁶ Entergy Answer at 14, 15 & n.88.

⁸⁷ *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9 (2001).

⁸⁸ 80 Fed. Reg. at 523.

schedule does not preclude additional testing that may be found necessary to provide for an approvable EMA. And the 2007 withdrawal schedule expressly reserved capsules for future use. Any additional testing that the Board might deem appropriate would be necessarily limited to those samples determined to be available and useful, on the basis of the evidence presented at the evidentiary hearing.

In sum, the Petitioners are not barred by 10 C.F.R. § 2.335(a) or the 2007 withdrawal schedule from contending that additional testing is necessary to show margins of safety “equivalent” to those of the ASME BPV Code, Section XI, Appendix G because the Petitioners allege noncompliance with 10 C.F.R. Part 50, Appendix G and not Appendix H; their argument comports with Appendix H’s expectation that plants modify capsule withdrawal schedules when necessary; and the 2007 withdrawal schedule for Palisades reserved capsules for future testing.

b. Appendix G to 10 C.F.R. Part 50

The Staff argues that because Appendix G permits, but does not expressly require, licensees to submit evidence of the fracture toughness of beltline materials from physical tests, the Petitioners’ argument that additional physical testing is required to support Entergy’s LAR amounts to a challenge to Appendix G, in violation of 10 C.F.R. § 2.335.⁸⁹ Entergy makes the same argument, noting that “[w]hen a Commission regulation permits the use of a particular analysis, a contention asserting that a different analysis or technique should be utilized is inadmissible because it indirectly attacks the Commission’s regulations.”⁹⁰

In the ruling Entergy quotes, however, the applicant used a specific formula required by regulation to develop a cost estimate.⁹¹ The licensing board in that case accordingly held that the Petitioners could not argue for an analysis different from that required by regulation.⁹² Here, by contrast, neither Appendix G of 10 C.F.R. Part 50,⁹³ nor ASME BPV Code, Section XI, Appendix G, the only part

⁸⁹ Staff Answer at 15-16 (citing 10 C.F.R. Part 50, App. G, § IV.A.1.b). Under the provision the Staff cites, “[a]dditional evidence of the fracture toughness of the beltline materials after exposure to neutron irradiation may be obtained from results of supplemental fracture toughness tests for use in the analysis specified in section IV.A.1.a.”

⁹⁰ Entergy Answer at 16 (quoting *Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 255 (2009) (citing *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), LBP-83-76, 18 NRC 1266, 1273 (1983)), *aff’d on other grounds*, CLI-09-22, 70 NRC 932, 933 (2009)).

⁹¹ *Fermi*, LBP-09-16, 70 NRC at 255.

⁹² *Id.*

⁹³ The rulemaking history of Appendix G does not provide any clarification regarding the regulation’s
(Continued)

of the ASME Code incorporated by the relevant NRC regulation,⁹⁴ establishes a comprehensive methodology for demonstrating equivalent safety margins. The Staff has at least implicitly acknowledged that Appendix G to the ASME BPV Code lacks criteria for demonstrating equivalent margins of safety.⁹⁵ For example, Appendix G to the ASME BPV Code does not describe all possible fracture scenarios that a licensee must examine in an EMA. Instead, the appendix states that “[t]he possible combinations of loadings, defect sizes, and material properties which may be encountered during [emergency and fault conditions] are too diverse to allow the application of definitive rules, and it is recommended that each situation be studied on an individual case basis.”⁹⁶ The Staff attempted to work with ASME to create a complete approach within the ASME BPV Code, but was unsuccessful.⁹⁷

The Staff recognized the lack of sufficient regulatory instruction by issuing Regulatory Guide 1.161, which provides guidance on how to conduct a successful EMA in several areas not covered by regulation, such as analyzing different fracture event sequences, calculating transients (e.g., pressure along the vessel wall and other physical changes in the vessel), and selecting appropriate material properties as inputs for the models.⁹⁸ Because of the gaps in the NRC Regulation and Appendix G to the ASME BPV Code, Entergy based its EMA on Regulatory Guide 1.161, and Appendix K to the ASME BPV Code,⁹⁹ a private standard that was not adopted into 10 C.F.R. Part 50, Appendix G. A challenge to the sufficiency of the methodologies described in those documents is not prohibited by 10 C.F.R. § 2.335. That section proscribes challenges to NRC regulations, not guidance documents or private standards that have not been incorporated in NRC regulations. The Petitioners may challenge a Staff guidance document such

meaning. The rule was first adopted in 1973. *See* 38 Fed. Reg. 19,012, 19,015 (July 17, 1973) (“Calculated stress intensity factors shall be lower than the reference stress intensity factors by the margins specified in the ASME BPV Code, Section XI, Appendix G, ‘Protection Against Non-Ductile Failure.’ The calculation procedures shall comply with the procedures specified in the ASME Code Appendix G, but additional and alternative procedures may be used if the Commission determines that they provide equivalent margins of safety against fracture, making appropriate allowance for all uncertainties in the data and analyses.”). The NRC changed the wording to its current form a decade later, but did not offer a reason for the change. *See* 48 Fed. Reg. 24,008, 24,010 (May 27, 1983).

⁹⁴ 10 C.F.R. Part 50, App. G, § VI.

⁹⁵ *See* Regulatory Guide 1.161, at 1 (Because of the lack of criteria for demonstrating equivalent margins of safety under Appendix G of the ASME BPV Code, “the NRC Staff asked Section XI of the ASME Boiler Pressure Vessel Code Committee to develop and suggest to the staff appropriate criteria.”).

⁹⁶ ASME BPV Code § XI, App. G, § G-2310.

⁹⁷ Regulatory Guide 1.161, at 1 (discussing the Staff’s difficulty in working with ASME to create a comprehensive methodology to meet the requirements of Appendix G to 10 C.F.R. Part 50).

⁹⁸ *Id.* at 1-4, 8-11; *see supra* text accompanying notes 15-18.

⁹⁹ LAR, Attach. 1, at 3.

as Regulatory Guide 1.161,¹⁰⁰ and they have effectively done so here by arguing that Entergy's EMA (conducted pursuant to Regulatory Guide 1.161) does not meet the regulatory standards.¹⁰¹ As Entergy notes, Staff guidance is entitled to "special weight" in a decision on the merits,¹⁰² but arguments about the weight of the evidence are inapposite at the contention admissibility stage, where we do not decide the merits. The Petitioners are also free to challenge reliance on private standards such as Appendix K to the ASME BPV Code that have not been explicitly adopted into the NRC's regulations, and which the Staff itself views as incomplete. Regulatory Guide 1.161 itself states that the analysis methods in ASME BPV Code, Section XI, Appendix K "are technically acceptable but are not complete, because Appendix K does not provide information on the selection of transients and gives very little detail on the selection of material properties."¹⁰³

When, as here, the applicable regulation does not resolve site-specific technical questions, the Petitioners' safety-related arguments concerning those unresolved questions are within the scope of the license amendment proceeding.¹⁰⁴

[I]t is not true that all valid safety contentions invariably involve alleged non-compliance with a specific safety rule. In some areas, there is no specific rule but only a Staff regulatory guide; such guides are open to challenge in litigation. Moreover, there are some "gaps" in the regulatory scheme which must be addressed case-by-case because of unique features in the facility or pending development of some generic solution. . . . A contention about a matter not covered by a specific rule need only allege that it poses a significant safety problem. That would be enough to raise an issue under the general requirement for operating licenses (10

¹⁰⁰ See *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-15-6, 81 NRC 340, 354-56 (2015) (affirming Board's decision to admit a contention that disagreed with NRC Staff's guidance on definitions of active and passive components); *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 320 (2012) ("The Board is correct that the applicability of a guidance document may be challenged in an individual proceeding."); *AREVA Enrichment Services, LLC* (Eagle Rock Enrichment Facility), CLI-11-4, 74 NRC 1, 8 n.35 (2011) ("NRC guidance documents are not legally binding, and compliance with them is not required."); *South Texas Project Nuclear Operating Co.* (South Texas Project, Units 3 and 4), CLI-10-24, 72 NRC 451, 467 (2010) ("[A] guidance document does not create binding legal requirements.").

¹⁰¹ See Petition at 12-15; Reply at 3-4.

¹⁰² Entergy Answer at 8 (citing *Indian Point*, CLI-15-6, 81 NRC at 356, 358 n.85, 359; *Seabrook*, CLI-12-5, 75 NRC at 315).

¹⁰³ Regulatory Guide 1.161, at 1; see also *id.* at 38 (stating that "Appendix K does not currently include (1) analysis procedures for Service Levels C and D, (2) guidance on selecting the transients for evaluation, or (3) details on temperature-dependent material properties").

¹⁰⁴ See *Prairie Island*, ALAB-455, 7 NRC at 44 ("Section 50.40 requires that the Commission be persuaded, *inter alia*, that the applicant will comply with all applicable regulations, that the health and safety of the public will not be endangered, [and] that the issuance of the amendment will not be inimical to the health and safety of the public . . .").

CFR 50.57(a)(3)) for a finding of “reasonable assurance” of operation “without endangering the health and safety of the public.”¹⁰⁵

Here, as the Petitioners note, the EMA is based on a generic analysis derived from Regulatory Guide 1.161 and the ASME BPV Code, Section XI, Appendix K, rather than a rule;¹⁰⁶ and the Petitioners’ expert alleges that site-specific factors render that approach inadequate to assure that Palisades’ continued operation in its embrittled condition does not jeopardize public health and safety.¹⁰⁷ The contention is therefore material to and within the scope of the proceeding.

This result is consistent with LBP-15-17, in which the board rejected a contention on a different but related issue, which also argued in part that Entergy should test capsules sooner than required under the current testing schedule. The board rejected this contention because the Petitioners were attempting to add a requirement to 10 C.F.R. § 50.61a, the regulation at issue in that proceeding. Section 50.61a provides a comprehensive, step-by-step methodology for demonstrating fracture toughness at low temperatures. The board concluded that the contention was not admissible because “[w]hen the Commission has determined that compliance with a regulation is sufficient to provide for reasonable assurance of public health and safety, a licensing board cannot impose requirements that exceed those in the regulation.”¹⁰⁸ But here Entergy’s EMA applied a generic approach set forth in Staff guidance and a private standard, not a regulation, and we have no Commission determination that compliance with the guidance or the private standard is necessarily sufficient to provide reasonable assurance that public health and safety will not be endangered. Thus, in this case, unlike LBP-15-17,¹⁰⁹ the Petitioners may argue without violating section 2.335(a) that

¹⁰⁵ *Catawba*, LBP-82-116, 16 NRC at 1946 (citing *North Anna*, ALAB-491, 8 NRC at 245); see also *U.S. Department of Energy* (High-Level Waste Repository), CLI-09-14, 69 NRC 580, 588 (2009) (explaining that a petitioner may not rely on general allegations, but must show “specific ties to NRC regulatory requirements, *or to safety in general*” to demonstrate a genuine dispute of fact or law (emphasis added)); *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 38 (2001) (Objectives of the NRC adjudicatory procedures and policies include producing “an informed adjudicatory record that supports agency decisionmaking on . . . *public health and safety*, the common defense and security, and the environment. (emphasis added)).

¹⁰⁶ Reply at 3.

¹⁰⁷ *Infra* notes 130-138 and accompanying text.

¹⁰⁸ *Palisades*, LBP-15-17, 81 NRC at 789 & n.237 (citing 75 Fed. Reg. 13, 22 (Jan. 4, 2010)); *Fermi*, LBP-09-16, 70 NRC at 255); see *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-19, 60 NRC 5, 12 (2004) (“As a general matter, compliance with applicable NRC regulations ensures that public health and safety are adequately protected in areas covered by the regulations.”) (footnote omitted).

¹⁰⁹ That separately constituted licensing board had the same membership as this Board. See *Palisades*, LBP-15-17, 81 NRC at 780 n.164.

additional capsule testing is necessary to provide reasonable assurance of safe operation.

2. *The Contention Satisfies the Requirements of 10 C.F.R. § 2.309(f)(1)*

The Board majority concludes that the Petitioners' contention satisfies the admissibility criteria.

a. Specific Statement of the Issue, Basis of the Contention

The Petitioners have supplied a specific statement of the contention.¹¹⁰ They have also explained its basis.¹¹¹ The requirement of 10 C.F.R. § 2.309(f)(1)(ii), that the petition include a "brief explanation of the basis" for the contention, merely requires an explanation of the rationale or theory of the contention. Challenges to the admissibility of a contention pursuant to section 2.309(f)(1)(ii) on the ground that it does not include an "adequate basis" because it does not include sufficient facts, evidence, or supporting factual information are thus misguided. If the petitioner provides a brief explanation of the rationale underlying the contention, it is sufficient to satisfy 10 C.F.R. § 2.309(f)(1)(ii).¹¹² The Petitioners have complied with that requirement.

b. Scope of the Proceeding

The scope of the proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board.¹¹³ Any contention that falls outside the specified scope of the proceeding is inadmissible.¹¹⁴ The *Federal Register* Notice for this proceeding explained that the proposed license amendment would approve the licensee's EMA.¹¹⁵ The Petitioners' contention challenges the sufficiency of the EMA to provide reasonable assurance of reactor safety and is therefore within the scope of the proceeding.¹¹⁶

¹¹⁰ 10 C.F.R. § 2.309(f)(1)(i); see Petition at 2.

¹¹¹ 10 C.F.R. § 2.309(f)(1)(ii); see Petition at 12-15.

¹¹² *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 99-100 (2009).

¹¹³ *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985).

¹¹⁴ See *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979).

¹¹⁵ 80 Fed. Reg. at 523.

¹¹⁶ Petition at 2, 6; see *Pa'ina Hawaii, LLC*, LBP-06-12, 63 NRC 403, 414 (2006); see also *Catawba*, LBP-82-116, 16 NRC at 1946 (citing *North Anna*, ALAB-491, 8 NRC at 245).

c. *Materiality*

To satisfy section 2.309(f)(1)(iv), a petitioner must demonstrate that a contention asserts an issue of law or fact that is “material to the findings the NRC must make to support the action that is involved in the proceeding.”¹¹⁷ The subject matter of the contention must impact the grant or denial of a pending license application.¹¹⁸ “Materiality” requires a petitioner to show why the alleged error or omission is of possible significance to the result of the proceeding.¹¹⁹ This means that there must be some significant link between the claimed deficiency and the agency’s ultimate determination whether the license applicant will adequately protect the health and safety of the public and the environment.¹²⁰

The Petitioners’ contention is material to the result of the proceeding because it concerns whether the LAR demonstrates equivalent margins of safety as required by regulation.¹²¹ The adequacy of the EMA is therefore material to the agency’s decision to approve or deny the license amendment request.¹²²

d. *Factual or Expert Support Necessary to Show a Genuine Dispute*

With respect to the requirement for petitioners to provide sufficient factual support to demonstrate a genuine dispute,¹²³ they are required to make “a minimal showing that material facts are in dispute, thereby demonstrating that an ‘inquiry in depth’ is appropriate.”¹²⁴ The petitioner must provide “factual evidence or supporting documents that produce some doubt about the adequacy of a specified portion of Applicant’s documents or that provide[] supporting reasons that tend to show that there is some specified omission from applicant’s documents.”¹²⁵ The Board examines the information, facts, and expert opinions provided by the petitioners to confirm that they do indeed provide adequate support for the

¹¹⁷ 10 C.F.R. § 2.309(f)(1)(iv).

¹¹⁸ *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80, *aff’d as to other matters*, CLI-98-13, 48 NRC 26 (1998).

¹¹⁹ *Id.* at 179.

¹²⁰ *Id.* at 180.

¹²¹ 10 C.F.R. § 2.309(f)(1)(iii); *see* Petition at 13.

¹²² 10 C.F.R. § 2.309(f)(1)(iv); *see* Petition at 13-14.

¹²³ 10 C.F.R. § 2.309(f)(1)(v)-(vi).

¹²⁴ *Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994) (citing Final Rule: “Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process,” 54 Fed. Reg. 33,168, 33,171 (Aug. 11, 1989), quoting *Connecticut Bankers Association v. Board of Governors*, 627 F.2d 245, 251 (D.C. Cir. 1980)).

¹²⁵ *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 NRC 509, 515, 521 & n.12 (1990) (citing 10 C.F.R. § 2.714(b)(2)(ii)-(iii) (now codified as amended at 10 C.F.R. § 2.309(f)(1)(v)-(vi))).

contention.¹²⁶ Nevertheless, at the contention admissibility stage, petitioners are not required to prove their case on the merits or even to provide expert or factual support as strong as that necessary to withstand a summary disposition motion.¹²⁷ It is sufficient at this stage that petitioners “[p]rovide 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.”¹²⁸ We find that the Gundersen Declaration and the Greenpeace Report on the microcracking issue provide sufficient support to show a material dispute with the sufficiency of the EMA. The remainder of the Petitioners’ arguments are inadequately supported or otherwise inadmissible.

(i) GUNDERSEN DECLARATION

The Petitioners’ first support comes from the proffered expert opinion of Arnold Gundersen.¹²⁹ In his declaration, Mr. Gundersen distinguishes Palisades from other power plants by noting that it is one of the oldest reactor vessels still operating in the United States; has welding materials with above-average variability in chemical composition and above-average concentrations of copper; and, unlike most other power plants of a similar type, lacks a thermal shield, leading to greater irradiation of the vessel materials.¹³⁰ He asserts that at Palisades “the metal used for welding the nuclear reactor pieces together contained metallic components, like copper, that are now considered unacceptable due to impurities that cause Neutron Embrittlement.”¹³¹ He adds that the Staff admits that Palisades is “one of the most embrittled plants” in the United States,¹³² which correlates

¹²⁶ *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).

¹²⁷ *Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4)*, CLI-11-8, 74 NRC 214, 221 (2011); *River Bend*, CLI-94-10, 40 NRC at 51; *USEC Inc. (American Centrifuge Plant)*, LBP-05-28, 62 NRC 585, 596-97 (2005).

¹²⁸ 10 C.F.R. 2.309(f)(1)(v).

¹²⁹ See Gundersen Decl. From Mr. Gundersen’s resume — which summarizes his education in nuclear engineering, work experience in the industry, and publications on nuclear power plants — we conclude that he has enough knowledge in the subject area to allow him to proffer an expert opinion for the purposes of determining contention admissibility. Curriculum Vitae of Arnold Gundersen (Dec. 1, 2014); see *Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2)*, CLI-10-2, 71 NRC 27, 40-41 (2010).

¹³⁰ Gundersen Decl. ¶¶ 9, 11, 44 n.21.

¹³¹ *Id.* ¶ 11.

¹³² *Id.* ¶ 15 n.6.

with a decrease in upper-shelf Charpy energy.¹³³ In light of these distinguishing factors, Mr. Gundersen concludes that “Entergy is proposing to operate its Palisades [Nuclear Power Plant] well outside the norm by proposing to reanalyze the deteriorating metallurgical conditions without using the readily available physical samples that are designed specifically for this purpose.”¹³⁴

Additionally, Mr. Gundersen asserts that Entergy has the material available in the form of test capsules placed within the reactor, but that Entergy has not performed any capsule tests since 2003 and is not scheduled to perform another test until 2019.¹³⁵ He maintains that these physical data are necessary to determine the actual toughness of the reactor vessel and declares that “[v]alidating the analytical models by testing additional samples gives Entergy and the NRC Regulators a methodology by which to assure the public that Palisades’ continued operation in its embrittled condition does not jeopardize public health and safety.”¹³⁶ As further factual support for why generic models do not accurately reflect the unique material properties of the Palisades reactor vessel, the Petitioners also note that the Palisades materials have lower fracture toughness due to the plate’s above-average sulfur content.¹³⁷

The Petitioners have pointed to site-specific factors, supported by an expert opinion, to justify their factual allegation that the Palisades reactor vessel requires additional physical testing to substantiate the applicant’s mathematical analysis.¹³⁸ Mr. Gundersen’s declaration offers enough factual support and explanation to dispute the adequacy of the inputs used in Entergy’s EMA. He has pointed to an alleged deficiency in the analysis (lack of recent capsule data) and he has provided a foundation for this opinion with a discussion of the characteristics of the Palisades reactor vessel that allegedly make these data significant.¹³⁹ His

¹³³ Petition at 13-14; *see also* Regulatory Guide 1.99, at 1.

¹³⁴ Gundersen Decl. ¶ 48.

¹³⁵ *Id.* ¶¶ 17-18.

¹³⁶ *Id.* ¶ 51. With respect to capsule testing, the Petitioners also raise issues that were the focus of a previous LAR that involved fracture toughness at low temperatures. Petition at 12-15. These concerns are addressed in LBP-15-17, 81 NRC at 761-69.

¹³⁷ Petition at 19 (citing LAR, Attach. 5, at 5-2).

¹³⁸ Gundersen Decl. ¶¶ 8-11, 45-48.

¹³⁹ *See Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 300-01 (2010) (holding that a licensing board failed to provide sufficient justification for rejecting a challenge to the applicant’s metrological model where the petitioners pointed to site-specific meteorological patterns to argue that the model and inputs were inaccurate and insufficiently conservative); *Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), LBP-09-26, 70 NRC 939, 33-34 (2009) (admitting a challenge where a fisheries biologist opined that TVA lacked adequate data on which to conclude that impacts on the aquatic environment were insignificant).

explanation is concrete and specific, and thus provides adequate support for disputing the lack of capsule data in the EMA.¹⁴⁰

Entergy argues that the Petition boils down to “requests for more testing, more methods of testing, and more information, all of which are sought without explaining why the current program is inadequate,” quoting from a licensing board decision in a *Davis-Besse* proceeding.¹⁴¹ The *Davis-Besse* decision reflects different circumstances, however. In *Davis-Besse*, the intervenors asserted that the applicant’s shield building monitoring program was insufficient to prevent the structure from cracking in cold weather.¹⁴² The intervenors, however, merely emphasized the dangers of this cracking phenomenon in their pleadings while not challenging the fix put forward by the applicant, other than to call it “statistically insignificant.”¹⁴³ The licensing board emphasized that the intervenors put forward “few alleged facts in support of their position” and no scientifically plausible theory for why the applicant’s monitoring program was inadequate.¹⁴⁴ The intervenors did not touch on the applicant’s scientific approach employed when developing its monitoring program.¹⁴⁵

In the current proceeding, however, the Petitioners do more than merely request additional testing. Instead, they provide an expert declaration that challenges the conservatism and usefulness of the Entergy EMA.¹⁴⁶ Mr. Gundersen has provided sufficient explanation of his opinion that the generic analysis that forms the basis of the EMA is inadequate without capsule testing to validate the analysis. He

¹⁴⁰ *Consolidated Edison Co. of New York* (Indian Point, Units 1 and 2), CLI-01-19, 54 NRC 109, 134 (2001) (“‘Mere ‘notice pleading’ is insufficient under these standards; however, our requirement for specificity and factual support rather than vague or conclusory statements is not intended to prevent intervention when material and concrete issues exist.” (citing *Power Authority of the State of New York* (James A. Fitzpatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 295 (2000))).

¹⁴¹ Entergy Answer at 13 (quoting *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), LBP-15-1, 81 NRC 15, 41 (2015) (internal quotation marks omitted)). The dissent makes a similar argument, claiming that “[p]etitioners did not provide a description of new information that could be provided by coupon removal that is not already available from the earlier coupon removal.” Dissent at p. 864.

¹⁴² *Davis-Besse*, LBP-15-1, 81 NRC at 28.

¹⁴³ *Id.* at 40. The licensing board concluded that their “allegations, while serious, do not refer to any deficiencies in the shield building [monitoring program the applicant] has proposed to address ice-wedging.” *Id.*

¹⁴⁴ *Id.* at 28-29 (the licensing board also noting that whatever few facts were put forward did “not ‘plausibly’ indicate that the shield building would lose its functionality under the proposed” monitoring program (quoting *Private Fuel Storage, LLC* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 138-39 (2004))).

¹⁴⁵ *Id.* at 40-41.

¹⁴⁶ Gundersen Decl. ¶¶ 8, 45-46.

describes the history and characteristics of Palisades that make embrittlement a particular concern.¹⁴⁷ He continues:

The current analysis cannot be substantiated because physical data is lacking to support any mathematical analysis. The last physical capsule coupon sample was withdrawn from within the reactor and analyzed more than 10 years ago. The reactor vessel at Palisades is the most important safety barrier to protect the public in the case of a design basis accident. It is impossible to ascertain the condition of the reactor vessel without analyzing the hard physical data by sampling the weld-based capsule coupon and doing a complete analysis.¹⁴⁸

Thus, he both explains the basis of his expert opinion and connects it to the regulatory standard that the NRC must satisfy in order to grant the LAR.¹⁴⁹

Therefore, the Petitioners may rely on Mr. Gundersen's expert opinion to allege that "absent the scientific information that would be provided by physical destruction testing of one or more metal coupons," the current LAR is inadequate to ensure that public health and safety is not endangered.¹⁵⁰ This is a material contention that genuinely disputes the LAR.¹⁵¹ In addition, the Petitioners' theory that capsule testing is required to provide reasonable assurance of public safety is supported by the industry standards referenced in the NRC's regulations that require physical testing of marginal materials.¹⁵²

The dissent argues that Mr. Gundersen's declaration is inadequate because he does not "cite to any rule requiring such testing or any Staff guidance document advising" testing of more capsules.¹⁵³ But, as we have explained, this is not a situation where the regulations resolve the specific issue raised by the

¹⁴⁷ See *id.* ¶¶ 9, 11, 15 n.6, 17-18, 44 n.21, 51.

¹⁴⁸ *Id.* ¶ 8.

¹⁴⁹ *Supra* notes 130-140 and accompanying text.

¹⁵⁰ Petition at 11.

¹⁵¹ In judicial review under the Administrative Procedure Act, 5 U.S.C. § 706(2), an agency's failure to adequately validate a quantitative model on which it relies may lead the reviewing court to conclude that the agency's decision is arbitrary, capricious, or contrary to law. See *Lands Council v. Powell*, 395 F.3d 1019, 1026, 1034 (9th Cir. 2005) ("We are asked to trust the Forest Service's internal conclusions of the reliability of the spreadsheet model when the Forest Service did not verify the predictions of the spreadsheet model. Under the circumstances of this case, the Forest Service's basic scientific methodology, to be reliable, required that the hypothesis and prediction of the model be verified with observation."). In substance the Petitioners raise this concern, arguing that the EMA's reliance on a generic model without validation through physical testing of available coupons constitutes an abuse of administrative discretion. Reply at 2-3; see Petition at 19. This further supports our conclusion that the issues raised by the Petitioners' contention are worthy of exploration at an evidentiary hearing.

¹⁵² See *supra* notes 75-78 and accompanying text.

¹⁵³ Dissent at p. 864; see also Entergy Answer at 11-13; Staff Answer at 15-17.

Petitioners.¹⁵⁴ On the contrary, the Staff's regulatory guidance acknowledges important regulatory gaps in the ASME BPV Code, Section XI, Appendix K, including that the guidance provides "very little detail on the selection of material properties."¹⁵⁵ Moreover, the Staff's guidance authorizes methods other than the generic analyses described in the guidance: "[Generic] analyses provide a method for determining the material's . . . fracture resistance that the NRC staff finds acceptable for use in the methods described in this guide. Other methods for determining the material property may be used on an individual-case basis if justified."¹⁵⁶

As we noted earlier, "[a] contention about a matter not covered by a specific rule need only allege that it poses a significant safety problem" in order to raise an issue under 10 C.F.R. § 50.57(a)(3), which requires reasonable assurance that the plant's operation will not endanger the health and safety of the public.¹⁵⁷ Because important issues such as the appropriate material properties for the EMA analysis are not covered by a specific regulation, the Petitioners, supported by Mr. Gundersen, may argue that the particular safety-related conditions of the Palisades reactor require the testing of additional capsules to show the equivalent margins of safety required by Appendix G of 10 C.F.R. Part 50.

Whether Mr. Gundersen is correct about the necessity of additional capsule testing is a merits question that we cannot resolve at this stage of the proceeding.¹⁵⁸ The Petitioners need not prove their case on the merits at this stage, but need only identify facts or expert opinions sufficient to raise a genuine dispute.¹⁵⁹ For the reasons stated above, we find the Petitioners have complied with that requirement and have put forward an admissible contention. Although the admissibility criteria are strict by design,¹⁶⁰ the Commission has also repeatedly warned against turning them into a "fortress to deny intervention."¹⁶¹

¹⁵⁴ *Supra* text accompanying notes 93-100.

¹⁵⁵ Regulatory Guide 1.161, at 1.

¹⁵⁶ *Id.* at 2; *see id.* at 3 ("Licensees may follow this regulatory guide to determine the equivalent safety margins, or they may use any other methods, procedures, or selection of materials data and transients to demonstrate compliance with Appendix G to 10 CFR Part 50.").

¹⁵⁷ *Catawba*, LBP-82-116, 16 NRC at 1946 (citing *North Anna*, ALAB-491, 8 NRC at 245).

¹⁵⁸ *See Vogtle*, CLI-11-8, 74 NRC at 221 ("[T]he evaluation of a contention that is performed at the contention admissibility stage should not be confused with the evaluation that is later conducted at the merits stage of a proceeding. At the contention admissibility stage, a Board evaluates whether a petitioner has provided sufficient support to justify admitting the contention for further litigation. The facts and issues raised in a contention are not 'in controversy' and subject to a full evidentiary hearing unless the proposed contention is admitted.").

¹⁵⁹ *Id.*; *River Bend*, CLI-94-10, 40 NRC at 51; *American Centrifuge*, LBP-05-28, 62 NRC at 596-97.

¹⁶⁰ *See Dissent* at p. 868.

¹⁶¹ *See, e.g., Consumers Energy Co.* (Palisades Nuclear Power Plant), CLI-07-18, 65 NRC 399, 414

(*Continued*)

(ii) MICROCRACKING

The Petitioners also put forward a separate factual foundation for the contention — the alleged potential for microcracking caused by operation in an environment containing hydrogen at high pressure.¹⁶² The Petitioners assert that these cracks can occur because “the plates of [the reactor vessel] are under stress from the pressure inside the vessel.”¹⁶³ The Petitioners attach a Greenpeace Report that summarizes research and technical expert opinions on this issue.¹⁶⁴ Among other sources, the report quotes the expert opinions of two material science professors, Digby Macdonald and Walter Bogaerts, who conclude that hydrogen atoms moving from pressurized water into steel materials could have caused the microcracking discovered at two Belgian reactors in 2012, rather than a manufacturing defect, as was previously suspected.¹⁶⁵ Of particular relevance to this case, the professors assert that microcracks could occur in any reactor pressure vessel.¹⁶⁶ The report indicates that microcracking may be worse at lower temperatures, but can affect material properties at high temperatures as well.¹⁶⁷

Additionally, the Greenpeace Report ties microcracking to fracture toughness by alleging that “[m]aterials susceptible to this process exhibit a marked decrease in their energy absorption ability before fracture in the presence of hydrogen. This phenomenon is also known as hydrogen-assisted cracking, [or] hydrogen-induced blister cracking.”¹⁶⁸ As support for this statement, the report cites a paper from a materials scientist at Savannah River National Laboratory. Like the

n.49 (2007) (quoting *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974)); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 335 (1999) (same).

¹⁶² Petition at 21-22.

¹⁶³ *Id.* at 22.

¹⁶⁴ *Id.* at 21-22 (citing Greenpeace Report).

¹⁶⁵ Greenpeace Report at 6-7. The Commission previously explored whether the microcracking condition discovered at the Belgian reactors was the result of a manufacturing defect that could affect U.S. reactors, and concluded that there was no such risk. See Electric Power Research Institute, Materials Reliability Program: Evaluation of the Reactor Vessel Beltline Shell Forgings of Operating U.S. PWRs for Quasi-Laminar Indications (MRP-367) at v-vi, 6-2 (Oct. 2013) (ADAMS Accession No. ML14064A411) [hereinafter “EPRI Report”]. However, neither Entergy nor the Staff provides any indication that the agency has examined this newly alleged embrittlement mechanism.

¹⁶⁶ Greenpeace Report at 6-7.

¹⁶⁷ *Id.* at 7 (noting that the microcracking phenomenon is “enhanced” at low temperatures).

¹⁶⁸ *Id.* (citing M. R. Louthan, Jr., Hydrogen Embrittlement of Metals: A Primer for the Failure Analyst, Savannah River Nat’l Lab., WSRC-STI-2008-00062, available at <http://sti.srs.gov/fulltext/WSRC-STI-2008-00062.pdf> [hereinafter “Louthan Paper”]). The Louthan Paper discusses potential implications of “Hydrogen-Induced Blistering,” and “Hydrogen Embrittlement,” two of the names given to the phenomenon discussed in the Greenpeace Report. See Louthan Paper at 4, 11; Greenpeace Report at 7.

professors' statements, that paper describes how hydrogen migrating into steel during operation can "lower[] the strength of various interfaces in metals and alloys."¹⁶⁹ The report also indicates that microcracking is dependent on material properties,¹⁷⁰ making the issue more relevant in an EMA scenario, where the metal is already at lower fracture toughness due to neutron-induced weakening of the metal.

These microcracking allegations imply that the Palisades RPV materials may be of lower fracture toughness than described by Entergy, and thus that Entergy's EMA fails to show that the Palisades reactor vessel demonstrates equivalent margins of safety under 10 C.F.R. Part 50, Appendix G. This alleged deficiency arises because the NRC Staff's regulatory guidance does not cover this type of cracking scenario at all.¹⁷¹

In addition, although the Staff's guidance states that generic analyses "provide a method for determining the material's . . . fracture resistance that the NRC staff finds acceptable for use in the methods described in this guide," it also states that "[o]ther methods for determining the material property may be used on an individual-case basis if justified."¹⁷² The Petitioners' position is that additional capsule testing is not only justified but necessary to support the Palisades EMA. Indeed, based on the professors' expert opinions concerning the risk of RPV microcracking, the Petitioners reemphasize their position, also supported by Mr. Gundersen, that "[a] mere projected equivalent margins analysis should not be allowed to stand against serious physical investigation into the status of the uniquely-embrittled Palisades RPV," and that "Palisades should be made a priority for destructive coupon testing."¹⁷³

With respect to this claim, Entergy responds that evidence of microcracking in Belgian beltline ring forgings is irrelevant here because the Palisades beltline is

¹⁶⁹ Louthan Paper at 12; *see also id.* at 15 ("Hydrogen in a service environment may also adversely alter the properties of metals and alloys."). Although the focus of the Louthan Paper is not on how hydrogen enters the steel, but more on potential implications, the paper works off the assumption that hydrogen enters the steel from a gaseous state. *See id.* at 3; *but see id.* at 16 (noting that hydrogen can be taken up "from in-service corrosion"). The scientists quoted in the Greenpeace Report implicitly challenge this assumption in arguing that hydrogen can enter a reactor during normal operation. Further exploration of the causes of hydrogen microcracking is best left, however, to a merits determination after evidence is presented at a hearing.

¹⁷⁰ *Id.* at 12 ("The time required for this event to occur will depend on the metallurgical condition of the material."), 14 ("The characteristics of hydrogen assisted fracture are dependent on the metallurgical condition of the material. . . .").

¹⁷¹ *See* Regulatory Guide 1.161, at 3-11 (advising license amendment applicants to test for four types of possible operating and emergency scenarios, which do not include microcracking).

¹⁷² *Id.* at 2.

¹⁷³ Petition at 22.

constructed of welded plates, not forgings.¹⁷⁴ But according to the statements of professors Macdonald and Bogaerts cited in the Greenpeace Report, hydrogen-induced microcracking is not limited to beltline forgings,¹⁷⁵ making Entergy's response a dispute on the merits. Without determining whether Entergy or the Petitioners are correct about this issue, the potential for hydrogen-induced microcracking provides additional support for the Petitioners' contention that Entergy's analysis fails to show "equivalent" margins of safety.¹⁷⁶ The Petitioners have appropriately raised a previously unconsidered materials phenomenon that may reduce reactor vessel material toughness,¹⁷⁷ as well as itself act as a crack creation mechanism,¹⁷⁸ both of which are relevant to determining the adequacy of the Palisades EMA.

For the same reasons, Entergy and the dissent are mistaken in claiming that, even if the microcracking phenomenon affects the Palisades plant, it is a dispute with the current licensing basis and outside the scope of this proceeding.¹⁷⁹ We have previously explained the concept of the current licensing basis.¹⁸⁰ No evidence has been put forward by the Staff or Entergy that the Palisades Safety Analysis Report, or any other part of the license, considers the Petitioners' hydrogen-assisted microcracking concern. Nor are the Petitioners challenging ongoing plant operations or the adequacy of the Staff's oversight of plant operations. Rather, as explained in the immediately preceding paragraph, the Petitioners' microcracking allegations provide additional support for their claim that the EMA fails to show "equivalent" margins of safety. The Petitioners have provided adequately supported allegations concerning whether the EMA ensures the required level of protection of public health and safety absent examination of the potential for microcracking caused by high-pressure hydrogen. These alleged

¹⁷⁴ Entergy Answer at 26; *see also* Staff Answer at 25 n.101; Dissent at p. 866. When the NRC conducted a study after discovery of the Belgian cracks, it focused on beltline ring forgings, so Palisades was not part of the study. *See* EPRI Report at vi.

¹⁷⁵ Greenpeace Report at 6-7.

¹⁷⁶ *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991) (recognizing that a licensing board may appropriately view a petitioner's supporting information in a light favorable to the petitioner, although it may not do so by ignoring other admissibility requirements); *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), LBP-11-25, 74 NRC 380, 397 (2011) ("At the contention admissibility stage of a proceeding, intervenors need not marshal their evidence as though preparing for an evidentiary hearing."); *U.S. Department of Energy* (High-Level Waste Repository), LBP-09-6, 69 NRC 367, 416 (2009) (noting that requiring petitioners to proffer conclusive support for the effect of their proposed contention "would improperly require . . . Boards to adjudicate the merits of contentions before admitting them").

¹⁷⁷ Petition at 21-22; Greenpeace Report at 7.

¹⁷⁸ *See supra* note 171 and accompanying text.

¹⁷⁹ Entergy Answer at 25; Dissent at 866.

¹⁸⁰ *See supra* notes 86-88 and accompanying text.

facts are adequate to demonstrate the existence of a genuine dispute on a material issue of fact concerning the sufficiency of the LAR.¹⁸¹ This does not empower the Petitioners to argue at the hearing that the entire Palisades RPV is at risk due to microcracking. The scope of the hearing relates to the EMA on the three materials projected to fall below the 50 ft-lb standard. The Board has ample authority to ensure that evidence offered concerning microcracking is limited to that specific material issue, and does not stray into issues outside the scope of the license amendment proceeding.¹⁸²

The dissent claims that the Greenpeace Report “apparently cherry-picked alarming statements from a variety of sources,” and characterizes the report as “an editorial with no probative value.”¹⁸³ The dissent’s document-specific evidentiary objections are not properly before the Board because they were not raised by either the Staff or Entergy.¹⁸⁴ Moreover, such evidentiary objections made for the first time after briefing has been completed unfairly deprive the Petitioners of the opportunity to file the response expressly provided in the NRC’s procedural rules.¹⁸⁵ This would deprive the Petitioners of a fair opportunity to present argument on the issues raised for the first time by the dissent.¹⁸⁶

In any event, although the Greenpeace Report is argumentative, the dissent mischaracterizes it as merely an “editorial” or a collection of “alarming statements.” The report in fact provides a summary of technical research and analysis relevant to the microcracking issue. The report includes thirty-five footnotes identifying the specific technical sources it discusses and provides links to many of those sources, thereby enabling the reader to verify the accuracy of the statements in the report based on those sources. Neither Entergy nor the Staff alleges

¹⁸¹ See *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 442-43 (2011) (admitting contention that applicant had failed to discuss a report on a recently identified seismic fault near the plant); see also *San Luis Obispo Mothers for Peace v. NRC*, 799 F.2d 1268, 1270 (9th Cir. 1986) (“The [NRC] regulations thus appropriately require a hearing before the proposed license amendment becomes effective whenever the amendment creates the possibility of a new or different kind of accident.”).

¹⁸² 10 C.F.R. § 2.319(d), (e), and (g).

¹⁸³ Dissent at pp. 866-67.

¹⁸⁴ While the Federal Rules of Evidence are not directly applicable to NRC proceedings, NRC adjudicatory boards often look to those rules for guidance. *Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-717, 17 NRC 346, 365 n.32 (1983). And “[i]t is a fundamental rule of evidence that an objection not timely made is waived.” *United States v. Jamerson*, 549 F.2d 1263, 1266-67 (9th Cir. 1977) (citing Fed. R. Evid. 103(a)(1); 1 J. Wigmore, *Evidence* 18 (3d ed. 1940)); see also *United States v. Carney*, 468 F.2d 354, 357 (8th Cir. 1972) (In absence of objection, hearsay evidence is treated as being properly admitted and may be given such probative effect and value as it is entitled to); *United States v. Alexander*, 326 F.2d 736, 741 (5th Cir. 1964) (same); *Moreland v. United States*, 270 F.2d 887, 890 (10th Cir. 1959) (same).

¹⁸⁵ 10 C.F.R. § 2.323(c).

¹⁸⁶ See *Levy County*, CLI-10-2, 71 at 45.

that the report misstates the conclusions or analysis of any of the cited sources.¹⁸⁷ At the contention admissibility stage, the Board may consider the Greenpeace Report insofar as it summarizes expert opinion and technical analysis supporting the Petitioners' contention:

At the contention filing stage the factual support necessary to show that a genuine dispute exists need not be in formal evidentiary form, nor be as strong as that necessary to withstand a summary disposition motion. What is required is "a minimal showing that material facts are in dispute, thereby demonstrating that an 'inquiry in depth' is appropriate."¹⁸⁸

The Board concludes that the report's summary and citations show that an inquiry in depth is appropriate here. Whether there is other data or expert opinion that counters the statements made by the professors in the Greenpeace Report is a question to be addressed at an evidentiary hearing or at summary disposition.

The dissent also complains that the Greenpeace Report comes from an "un-refereed" website and "provide[s] no indication that the Greenpeace personnel had any qualifications as experts in any relevant technical field."¹⁸⁹ But the Board majority has not assumed that the Greenpeace personnel who prepared the

¹⁸⁷ The dissent asserts that at least four of the citations are incorrect, *see* Dissent at pp. 866-67 n.13, but none of the examples suggests that the document mischaracterizes its sources. Two citations involve statements made in Dutch that the Greenpeace Report translated into English. We see no reason to doubt that "Dit is mogelijk een wereldwijd probleem voor de hele nucleaire sector" means "This may be a global [worldwide] problem for the entire nuclear industry [sector]." *See* Greenpeace Report at 7. The dissent was also unable to locate the original quotes from Professor Bogaerts in the cited video, presumably because these statements are also in Dutch ("Vrees ik dat de corrosie aspecten zijn onderbelicht." and "Als ik een inschatting moest maken, zou ik inderdaad verwonderd zijn als het zich nog nergens anders had voorgedaan."). *See* Greenpeace Report at 7 (citing De Redactie, Terzake (Feb. 13, 2015), <http://deredactie.be/cm/vrtnieuws/videozone/programmas/terzake/2.37612>). His complaint about Professor Macdonald's quote boils down to the fact that it should have included an ellipsis. And he notes that a quote of a final evaluation report did not state that it was in turn quoting the provisional evaluation report. Despite such minor nitpicks, our review of the information cited in the Greenpeace Report's footnotes finds that it fairly represents its sources. Our conclusion is consistent with the fact that neither the Staff nor Entergy has argued that report misstates the content of its sources. The minor issues noted by the dissent are nothing like the situation in *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-10-24, 72 NRC 720, 750-52 (2010), cited by the Dissent at p. 865. In that case, the licensing board concluded that information on a website cited by the Intervenors, "instead of supporting Intervenors' theory of an ongoing decline in peak load demand, contradicts that claim." *Id.* at 752. The dissent fails to come close to identifying any such contradiction between the Greenpeace Report's sources and the opinions of professors Macdonald and Bogaerts described in the report.

¹⁸⁸ *River Bend*, CLI-94-10, 40 NRC at 51 (citing 54 Fed. Reg. at 33,171 (quoting *Conn. Bankers Ass'n*, 627 F.2d at 251)).

¹⁸⁹ Dissent at p. 866.

report are themselves experts in any relevant field. Instead, the majority may properly consider the technical analyses summarized in the report as relevant expert opinion.

Those analyses include, most notably, the expert opinions of materials science professors Macdonald and Bogaerts. Neither the Staff, Entergy, nor the dissent maintains that the professors are not qualified experts in the field of materials science. In any event, the report describes the professors' areas of expertise and provides links to their faculty pages and videos of their statements regarding microcracking.¹⁹⁰ The report describes Digby Macdonald as a materials scientist and professor at the University of California at Berkeley.¹⁹¹ His faculty page identifies him as a "Professor in Residence" in the Department of Materials Science and Engineering and states that he has a PhD in Chemistry and studies corrosion effects in water-cooled nuclear power reactors.¹⁹² The web page provides detailed information on his areas of interest, current research activities, professional honors and awards, and professional activities.¹⁹³ Professor Bogaerts, also a materials scientist, teaches at Katholieke Universiteit Leuven in Belgium and is described as "a specialist in nuclear material corrosion."¹⁹⁴ A link in the report lists Professor Bogaerts as one of three instructors for a course on "Nuclear Materials" offered by the "Belgian Nuclear Higher Education Network."¹⁹⁵ Given this information, in the context of determining whether to admit the Petitioners' contention, the Board may consider the professors' expert opinions in the field of materials science.

The Petitioners' microcracking allegations are therefore adequately supported and are material to and within the scope of this license amendment proceeding.

e. References to Specific, Disputed Portions of the LAR

Under 10 C.F.R. § 2.309(f)(1)(vi), Petitioners must include references to specific portions of the application they dispute, in addition to the reasons for each dispute. The requirement that a contention refer to specific portions of the application ensures that the Board will be able to determine whether the contention is within the scope of the proceeding and that the applicant knows

¹⁹⁰ Greenpeace Report at 2, 6, & nn.26-28.

¹⁹¹ *Id.* at 2, 6.

¹⁹² *See id.* at 6 n.27 (citing University of California–Berkeley, Nuclear Engineering Department, Digby Macdonald's faculty page, <http://www.nuc.berkeley.edu/people/digby-macdonald> (last visited June 18, 2015)).

¹⁹³ *Id.*

¹⁹⁴ *Id.* at 2, 7, & n.28.

¹⁹⁵ *Id.* at 7 n.28 (citing Belgian Nuclear Higher Education Network, Nuclear Materials, http://bnen.sckcen.be/en/Courses/Nuclear_materials (last visited June 18, 2015)).

which portions of the application it must defend.¹⁹⁶ The requirement is satisfied when a “commonsense reading of [the] petition makes abundantly clear which sections of [the] application” the Petitioners are challenging, even though the Petitioners do not specifically cite particular sections.¹⁹⁷

Here, the Petitioners make clear that they are challenging the EMA, which is Attachment 5 to the LAR. In particular, they dispute Entergy’s failure to undertake additional coupon testing to support the EMA and to address the microcracking issue, which affects sections four and five of the EMA, “Equivalent Margins Analysis Inputs” and “Equivalent Margins Analysis Evaluations.”¹⁹⁸ Because the EMA does not discuss either of those issues, we cannot expect the Petitioners to do more than identify the reasons they believe it should have addressed them. On the sulfur content issue, which is discussed in the EMA, the Petitioners have identified the specific part of the EMA at issue.¹⁹⁹ Neither the Staff nor Entergy has argued with respect to any of those three issues that they are unable to understand the portions of the application in dispute. We therefore conclude that the Petitioners have adequately identified the portions of the LAR at issue.

3. *Inadmissible Issues*

The Petitioners’ remaining arguments raise inadmissible issues. Challenges based on 10 C.F.R. § 50.61a and the question of whether Entergy demonstrated “substantial advantage” under 10 C.F.R. Part 50, Appendix H as a reason to not test capsules are beyond the scope of this license amendment proceeding, which concerns compliance with Appendix G of 10 C.F.R. Part 50.²⁰⁰ Similarly, Mr. Gundersen does not offer any rationale for his assertion that Entergy manipulated the data in its analysis,²⁰¹ nor do the Petitioners articulate why Entergy should have considered “cleavage mode-conversion” in its analysis.²⁰² And the Petitioners have not adequately supported their allegation that “nickel impurities” will weaken the materials in the Palisades reactor because the support they cite, a response to a Request for Additional Information for the H.B. Robinson plant, does not

¹⁹⁶ *Crow Butte Resources, Inc.* (Marsland Expansion Area), LBP-13-6, 77 NRC 253, 292 (2013), *aff’d*, CLI-14-2, 79 NRC 11 (2014).

¹⁹⁷ *Id.* at 293.

¹⁹⁸ LAR, Attach. 5, §§ 4, 5 (emphasis and capitalization removed).

¹⁹⁹ Petition at 19 (quoting LAR, Attach. 5, at 24-25).

²⁰⁰ *Id.* at 12-15, 23-24; *see Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-22, 65 NRC 525, 529 (2007) (explaining that issues addressed in a separate proceeding are beyond the scope of a later proceeding). A board found that these issues were not admissible in a recent decision. LBP-15-17, 81 NRC at 782.

²⁰¹ Gundersen Decl. ¶ 46.

²⁰² *See* Petition at 21.

explain how high nickel content results in “nickel impurities” or otherwise leads to any undue risk to the Palisades RPV.²⁰³ Finally, the Petitioners’ argument that Palisades is being operated as a “test reactor” reflects a misreading of the regulations.²⁰⁴

IV. CONCLUSION

The Board concludes that the Petitioners have standing, *admits* the Petitioners’ contention, and accordingly *grants* their hearing request and *admits* them as parties to the proceeding. This Order is subject to appeal to the Commission to the extent permitted by 10 C.F.R. § 2.311. Any notice of appeal meeting applicable requirements set forth in that section must be filed within 25 days of service of this Memorandum and Order.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Dr. Thomas J. Hirons
ADMINISTRATIVE JUDGE

Rockville, Maryland
June 18, 2015

²⁰³ Petition at 20 (citing Response to Request for Additional Information Regarding Reactor Pressure Vessel Integrity from T. M. Wilkerson, Robinson Nuclear Plant, to Document Control Desk (July 23, 1998) (ADAMS Accession No. ML14178B146)).

²⁰⁴ *Id.* at 18; *see* 10 C.F.R. § 50.59. The board rejected this allegation in LBP-15-17, 81 NRC at 790-91.

Dissenting Opinion of Judge Arnold

A majority of this Board consider Petitioners' contention to be admissible. I must respectfully disagree. I believe that the information provided by Petitioners is inadequate to establish a material dispute with the application and thus Petitioners fail to meet the contention admissibility criteria.

Petitioners provide a clear and concise statement of their contention. They charge that analyses provided by the licensee "do not provide adequate assurance of margins of safety against fracture or rupture which are equivalent to those required by Appendix G of Section XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code."¹ But beyond this, their petition fails to express any clear argument concerning their contention.

Petitioners provide eight specific points of support for this contention. Petitioners first claim that "three areas of the Palisades RPV are predicted to fall below the 50 ft-lb ductility stress limit."² But this is simply information provided by the Licensee in the LAR. It is the reason for performing the equivalent margin analysis and the reason for the LAR. It in no way establishes a challenge to that application.

Petitioners follow this with their expert opinion in which Arnold Gunderson principally opines that the embrittlement of the RPV and Licensee's response to it is "disturbing." He asserts that Westinghouse manipulated data, but he fails to include specifics of that manipulation and does not provide any support for this assertion. He notes that many coupon samples remain installed in the reactor vessel and asserts that these should be removed and tested "to benchmark the analysis described in 10 CFR 50.61 and in 10 CFR 50.61(a)." But he fails to cite to any rule requiring such testing or any Staff guidance document advising such testing. Petitioners did not provide a description of new information that could be provided by coupon removal that is not already available from the earlier coupon removal. Thus Petitioners' reference to the Gunderson statement does not support admissibility of this contention.

Thirdly, the petition discusses the "above-normal sulfur content" in the RPV plating. Petitioners cite from Westinghouse documentation of the Palisades equivalent margin analysis.³ In this quotation Westinghouse noted the sulfur contents of two subject plates as 0.029 wt.% and 0.024 wt.%, and that these are considered high-sulfur content. Westinghouse refers to relevant material data, "the most data available for a high-sulfur A-302 B plate are for the V-50

¹ Petition at 12.

² *Id.* at 15.

³ Petition at 19 (citing LAR, Attach. 5, Palisades Nuclear Power Plant Reactor Vessel Equivalent Margins Analysis, at 5-2 (Feb. 2013) [hereinafter "Westinghouse WCAP-17651-NP"]).

plate in NUREG/CR-5265.”⁴ This citation goes on to qualitatively show that the toughness used in the equivalent margin analysis for plate A-302 B is lower than the toughness of the V-50 plate, which is itself “a very conservative lower bound of the available high-sulfur A-302 B plate.”⁵

Petitioners then assert that “Palisades takes credit for the nickel content of the RPV on the one hand (for increasing the toughness against Upper Shelf Energy loss in RPV upper shell).”⁶ But this is directly contradicted by the Westinghouse information cited by Petitioners that shows that the analysis did not take credit for the toughening effect of the nickel beyond a concentration of 0.23 wt.% of the V-50 plate.

Petitioners then claim that Palisades failed “to mention or account for in the EMA that nickel impurities worsen RPV neutron embrittlement and PTS risk.”⁷ Petitioners provide no support for the assertion that “nickel impurities worsen RPV neutron embrittlement”⁸ other than a vague reference to a response to a Request for Additional Information for a different nuclear plant. In general, “providing any material or document as a basis for a contention without setting forth an explanation of its significance, is inadequate to support admission of that contention.”⁹

As explained by the *Calvert Cliffs* board:

Although a licensing board does not decide the merits or resolve conflicting evidence at the contention admissibility stage, materials cited as the basis for a contention are subject to scrutiny by the board to determine whether they actually support the facts alleged. We may examine both the statements in the document that support the petitioner’s assertions and those that do not.¹⁰

In this case review of the cited response to the Request for Additional Information reveals that the response provides no information on the Palisade’s vessel material properties. It makes no attempt to relate vessel steel chemistry to any property related to vessel strength. This document does not support Petitioners’ assertion.

⁴ Westinghouse WCAP-17651-NP at 5-2.

⁵ *Id.*

⁶ Petition at 20.

⁷ *Id.*

⁸ It is unclear here if Petitioners mean nickel as an impurity, or other impurities within the nickel that weaken the steel. Since the title to this section is about sulfur impurities, one might infer the latter.

⁹ *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 265 (2004) (citing *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 205 (2003)).

¹⁰ *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-10-24, 72 NRC 720, 750 (2010).

Fourthly, Petitioners assert that “ductile tearing in low Charpy use materials is not well understood.”¹¹ But they do not even attempt to relate this assertion to their contention.

The fifth argument of Petitioners relates to microcracking found in the beltline forgings at the Doel 2 and Tihange 2 reactor vessels in Belgium. They base this assertion on an unrefereed statement posted on a Greenpeace web page that apparently cherry-picked alarming statements from a variety of sources. The statement provided no indication that the Greenpeace personnel had any qualifications as experts in any relevant technical field.

This Greenpeace reference states that investigations indicate that microcracks were likely due to the process used to manufacture the forgings but stated that other possible causes could not be definitively ruled out. But it remains a fact that these defects have only been found in forgings, and only those manufactured in one specific facility. Applicant points out that “the Palisades RPV beltline is constructed of welded plates, not forgings.”¹² And nowhere do Petitioners claim that Palisades vessel components were manufactured at the facility that produced the Doel 2 and Tihange 2 forgings. If the phenomenon affecting the two Belgian plants is an issue at all with the Palisades plant, then it is an issue with the current licensing basis of the plant and should be addressed by the NRC’s normal oversight processes. But Petitioners failed to relate the Belgian microcracking experience to the Palisades plant in any way other than as a speculative generic concern.

The Board majority states that Petitioners “point to safety concerns of two material science professors,” Digby Macdonald and Walter Bogaerts. But apparently Petitioners did not consider these professors important enough to mention. Neither of these individuals are named in the petition, they are only individuals referenced by the Greenpeace web page.

The Greenpeace briefing, while it may suggest that facts exist somewhere else to support the contention, may itself be characterized as an editorial with no probative value.¹³ The vague speculation by Greenpeace that this type of flaw

¹¹ Petition at 20.

¹² Entergy Answer at 26 (citing Westinghouse WCAP-17651-NP at 4-1).

¹³ Verifying the accuracy in the Greenpeace brief is problematical. The very first citation “This may be a global problem for the entire nuclear industry” is attributed to the Belgian Nuclear regulator Jan Bens. But checking out the citation one finds that what he really said was, “Dit is mogelijk een wereldwijd probleem voor de hele nucleaire sector. De oplossing is om bij alle 430 kerncentrales wereldwijd, nauwkeurige inspecties uit te voeren.” One citation attributed to Professor Digby Macdonald is “The importance of this could range from inconsequential to being so severe that it would shut down all the reactors . . . All of them.” This is taken from a television interview, and the extent to which that interview was edited cannot be determined. In fact the Greenpeace quotation is a concatenation of two Macdonald quotes from different points in the interview. On the fifth page

(Continued)

may exist in other reactor vessels is not sufficient to establish a material challenge to Applicant's equivalent margin analysis.

In their sixth argument, Petitioners complain that the regulatory "guidance for 10 CFR 50.61a alternative calculations is only in draft form."¹⁴ They claim that "the Palisades EMA, being predicated upon nonfinal guidance, should not be accepted."¹⁵ However, they failed to explain the significance of 10 C.F.R. § 50.61a to the equivalent margin analysis performed under Appendix G of Part 50, not under 10 C.F.R. § 50.61a.

In their seventh argument, Petitioners allege that "although the NRC admits the scarcity of embrittlement data, it declines to order destructive testing" of vessel coupons.¹⁶ Petitioners fail to explain why the coupons that have already been removed and evaluated do not provide adequate characterization of the state of embrittlement of the vessel. They cite to no requirement to test a coupon. They do not explain how additional testing would improve knowledge of the vessel embrittlement. In fact, they do not relate this concern to their contention in any way. They merely lament that the NRC has allowed "16 years to pass without actual physical testing."¹⁷

Petitioners' eighth and final argument is that "10 CFR Part 50, Appendix H requires 'substantial advantage' if coupons are not evaluated."¹⁸ They do not discuss the relevance of this to an alternative margins analysis performed under Appendix G to Part 50, not under Appendix H. Appendix H applies to the vessel surveillance program, and Licensee has an NRC approved surveillance program. Petitioners are essentially challenging the NRC approval of the coupon removal schedule, which is not within the scope of this proceeding.

The Commission has repeatedly stated that contention admissibility criteria are

of the Greenpeace piece they cite a final evaluation report as saying that "it is not possible to confirm the exact root cause of the hydrogen flaking." They failed to note that this statement was itself a quote from a "Provisional Evaluation Report" and it stated, "Meanwhile, the exact root cause of the hydrogen flaking could not be precisely defined *so far*." Greenpeace failed to mention that page 30 of the final evaluation report states, "Regarding structural integrity of the reactor pressure vessel . . . the presence of hydrogen-induced flaws in the Tihange 2 and Doel 3 RPV shells has not a significant impact." On their seventh page, Greenpeace attributes two sentences to the Belgian professor Walter Bogaerts. But Greenpeace does not reference where he made those statements so their accuracy and context cannot be determined. I have not attempted to verify all of the Greenpeace citations. But my spot check of five citations finds that four of them are of questionable value.

¹⁴ Petition at 22.

¹⁵ *Id.*

¹⁶ *Id.* at 23.

¹⁷ *Id.*

¹⁸ *Id.*

“strict by design.”¹⁹ Licensing boards have repeatedly cited this. In my opinion, no strict interpretation of admissibility standards could possibly find Petitioners’ arguments sufficient support for the admissibility of their contention.

¹⁹ *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003) (citing *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358-59 (2001); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334-35 (1999)).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

William M. Dean, Director

In the Matter of

Docket No. 50-285
(Renewed License No. DPR-40)

OMAHA PUBLIC POWER
DISTRICT
(Fort Calhoun Station, Unit 1)

June 3, 2015

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

I. INTRODUCTION

By letter dated June 21, 2012, Mr. Wallace Taylor filed a petition on behalf of the Iowa Chapter of the Sierra Club (the Petitioner) under Title 10 of the *Code of Federal Regulations* (10 C.F.R.) § 2.206, "Requests for action under this subpart," related to Fort Calhoun Station, Unit 1 (FCS) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12180A124). The petition requested enforcement action against FCS. Specifically, the petition requested that the U.S. Nuclear Regulatory Commission (NRC) revoke the license of Omaha Public Power District (OPPD, the Licensee) to operate FCS.

A. Action Requested for June 21, 2012 Petition

In the June 21, 2012 petition, the Petitioner stated that OPPD has been unable and unwilling to operate FCS properly and safely since 1992, has failed to correct problems identified years ago, and has resisted NRC directives to correct safety violations. The petition also asserted it is unlikely OPPD will ever be able or willing to operate FCS properly and safely.

The petition stated, in part, that

[t]he NRC's own guidelines regarding enforcement sanctions would categorize the events at Fort Calhoun over the past 20 years at Severity Level I, the highest level, because those events involve (1) "situations involving particularly poor licensee performance, or involving willfulness;" (2) "situations when the violation results in a substantial increase in risk, including cases in which the duration of the violation has contributed to the substantial increase;" and (3) "situations when the licensee made a conscious decision to be in noncompliance in order to obtain an economic benefit." 63 FR 26630-OI, 26642 (May 13, 1998).

The petition also stated that "[t]he NRC considers these violations to be of significant concern, and may apply its full enforcement action to remedy these violations, including issuing appropriate orders." *Id.*

The petition did not request immediate action.

The Petitioner provided supplemental material in support of the petition on August 22 and 27, November 19, and December 16, 17, and 20, 2012 (ADAMS Accession Nos. ML12240A099, ML12240A162, ML12250A714, ML12352A279, ML12352A221, and ML13109A240, respectively).

The NRC's acknowledgment letter to the Petitioner, dated May 23, 2013 (ADAMS Accession No. ML13092A248), accepted the petition in part and stated that the NRC review would focus on these issues raised in the petition: (1) licensee event report submitted September 10, 2012, showed a support beam was not within allowable limits for stress and loading (ADAMS Accession No. ML12255A038); (2) flood protection measures at FCS are inadequate and create an ongoing, high-risk danger to public safety; (3) the flood risks of the six dams upstream of FCS are either unevaluated or unresolved; and (4) the 614 primary reactor containment electrical penetration seals containing Teflon identified at FCS, a material that could degrade during design-basis-accident conditions.

Because of performance concerns at FCS, the NRC transitioned its normal oversight process at FCS from Inspection Manual Chapter (IMC) 0305, "Operator Reactor Assessment Program," to its enhanced oversight process contained in IMC 0350, "Oversight of Reactor Facilities in a Shutdown Condition Due to Significant Performance and/or Operational Concerns," as documented in its letter dated December 13, 2011 (ADAMS Accession No. ML113470721). In accordance with the IMC 0350 process, the NRC determined that FCS was safe to restart, as documented by letter dated December 17, 2013 (ADAMS Accession No. ML13351A423), and FCS returned to full power on December 26, 2013. Based on the NRC Staff's evaluation of station performance, NRC returned FCS to the normal reactor oversight program on April 1, 2015 (ADAMS Accession No. ML15089A085). NRC inspections will continue to monitor the Licensee's efforts to sustain improved plant performance and to comply with the commitments in the NRC's post-restart Confirmatory Action Letter (CAL) dated December 17, 2013

(ADAMS Accession No. ML13351A395). The NRC inspections will continue for the remaining open CAL items in coordination with their completion.

The NRC sent copies of the proposed director's decision to the Petitioner and the Licensee for comment on April 15, 2015 (ADAMS Accession Nos. ML15063A047 and ML15063A050, respectively). The proposed director's decision is available in ADAMS under Accession No. ML15063A066. The NRC Staff did not receive any comments on the proposed director's decision.

II. DISCUSSION

As part of the 10 C.F.R. 2.206(b) petition review process, the director of the NRC office with responsibility for the subject matter either accepts a petition and begins a proceeding or advises the petitioner in writing that no proceeding will be instituted, in whole or in part, with respect to the request. The NRC Staff will describe the reason for the decision. Accordingly, the decision of the Director of the Office of Nuclear Reactor Regulation is provided below.

The NRC Staff concluded no safety concern existed that warranted an immediate enforcement action by the NRC and that FCS could safely restart operations. The NRC will not issue an enforcement order based on the petition because, as explained below, each of the Petitioner's requests has been addressed through other actions.

FCS is undergoing a flooding hazard review, and the issues raised by the Petitioner in issues No. 2 (flood protection measures at FCS) and No. 3 (flood risks of the six dams upstream of FCS) above are addressed in the NRC's request for information per 10 C.F.R. § 50.54(f), dated March 12, 2012 (Fukushima 50.54(f) Letter; ADAMS Accession No. ML12056A046). The letter states, in relevant part, that

The current regulatory approach, and the resultant plant capabilities, gave the NTTF [Near-Term Task Force] and the NRC the confidence to conclude that an accident with consequences similar to the Fukushima accident is unlikely to occur in the United States (U.S.). The NRC concluded that continued plant operation and the continuation of licensing activities did not pose an imminent risk to public health and safety.

The NRC Staff is evaluating the Licensee's flooding hazard reviews in accordance with the schedule provided in the Fukushima 50.54(f) Letter. OPPD provided the results of its flooding walkdown report for FCS to the NRC on November 27, 2012 (ADAMS Accession No. ML12334A449), with supplements on March 29, 2013, August 15, 2013, December 13, 2013, and January 31, 2014 (ADAMS Accession Nos. ML13091A059, ML13228A098, ML13351A426, and

ML14031A344, respectively). The NRC Staff assessed the OPPD report on June 24, 2014 (ADAMS Accession No. ML14157A079) and concluded that

the licensee's implementation of flooding walkdown methodology meets the intent of the walkdown guidance. The staff concludes that the licensee, through the implementation of the walkdown guidance activities and, in accordance with plant processes and procedures, verified the plant configuration with the current flooding licensing basis; addressed degraded, nonconforming, or unanalyzed flooding conditions; and verified the adequacy of monitoring and maintenance programs for protective features. Furthermore, the licensee's walkdown results, which were verified by the staff's inspection, identified no immediate safety concerns. The NRC staff reviewed the information provided and determined that sufficient information was provided to be responsive to Enclosure 4 of the 50.54(f) letter.

OPPD provided its flooding hazard reevaluation report (FHRR) for FCS to the NRC on February 4, 2015 (ADAMS Accession No. ML15042A127; it contains security-related information, so a portion of the document is not publicly available in accordance with 10 C.F.R. § 2.390, "Public Inspections, Exemptions, Requests for Withholding"). NRC Staff is reviewing the FHRR. Because the Petitioner offered no information that shows an immediate threat to public health and safety, the Staff continues its reviews of FCS's FHRR as scheduled. The NRC issued a letter to all power reactor licensees and holders of construction permits in active or deferred status dated March 1, 2013 (ADAMS Accession No. ML13044A561). Recommendation 2.1 of the Fukushima 50.54(f) Letter is to "Order licensees to reevaluate the seismic and flooding hazards at their sites against current NRC requirements and guidance, and if necessary, update the design basis and SSCs [structures, systems, and components] important to safety to protect against the updated hazards." The NRC's March 1, 2013, Letter emphasized the Staff's expectations regarding any new information found that may impact SSC operability and states, in relevant part, that

The Staff considers the flood hazard reevaluations being performed pursuant to the 50.54(f) letter to be beyond the current design/licensing basis of operating plants. Consequently, the results of the analysis performed using present-day regulatory guidance, methodologies, and information would not generally be expected to call into question the operability or functionality of SSCs. . . . However, as with any new information that may arise at a plant, licensees are responsible for evaluating and making determinations related to operability and any associated reportability on a case-by-case basis.

. . . .

Notwithstanding the preceding discussion, and as noted in the 50.54(f) letter, based upon the results of the review of the responses and other available information, the staff may impose additional requirements to protect against the reevaluated flood

hazard. As always, the safety of the operating plants is of paramount importance. The NRC staff will follow established regulatory processes, including the backfit rule, in determining whether additional requirements are warranted.

The flooding concerns raised as issue Nos. 2 and 3 of the petition were also evaluated by the NRC in “Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events” (EA-12-049), dated March 12, 2012 (ADAMS Accession No. ML12054A736). Order EA-12-049 provides requirements that nuclear power reactor applicants and licensees must comply with to mitigate challenges to key safety functions following beyond-design-basis external events. The Order requires licensees to develop strategies to mitigate a simultaneous loss of all alternating current power and loss of normal access to the ultimate heat sink.

On August 21, 2012, the Nuclear Energy Institute (NEI) submitted Revision 0 to NEI 12-06, “Diverse and Flexible Coping Strategies (FLEX) Implementation Guide” (ADAMS Accession No. ML12242A378). On August 29, 2012, the NRC Staff issued the Japan Lessons-Learned Project Directorate Interim Staff Guidance JLD-ISG-2012-01, “Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events” (ADAMS Accession No. ML12229A174). The Interim Staff Guidance was published in the *Federal Register* on September 7, 2012 (77 Fed. Reg. 55,230). The Interim Staff Guidance endorses NEI 12-06, Revision 0, and finds the recommended strategies are an acceptable means of meeting the requirements of Order EA-12-049. JLD-ISG provides guidance and clarification to assist nuclear power reactor applicants and licensees with the identification of measures needed to comply with requirements to mitigate challenges to key safety functions. The Interim Staff Guidance and NEI 12-06, Revision 0, outline the process licensees use to define and deploy strategies to enhance their ability to cope with beyond-design-basis external events, including station blackout.

OPPD gave the NRC Staff its overall integrated plan for FCS in response to Order EA-12-049 on February 28, 2013 (ADAMS Accession No. ML13116A208), and confirmed that it has a plan developed in accordance with the guidance of NEI 12-06, Revision 0, for defining and deploying strategies that will enhance the ability to cope with conditions resulting from beyond-design-basis external events. The NRC Staff provided its interim staff evaluation and audit report of the Licensee’s overall integrated plan by letter dated February 27, 2014 (ADAMS Accession No. ML14007A693). The NRC found that the Licensee’s plan demonstrates reasonable assurance that the requirements of Order EA-12-049 at FCS will be met. The Staff expects that the Licensee will implement the plan as described, and will satisfactorily resolve the open and confirmatory items detailed in the interim staff evaluation and audit report.

Issue Nos. 2 and 3 raised by the Petitioner are subject to NRC Staff review and evaluation because of the NRC's response to the Fukushima Dai-ichi accident. The NRC is already making as much information as possible available to the public regarding its ongoing activities in response to the Fukushima Dai-ichi accident (e.g., see <http://www.nrc.gov/reactors/operating/ops-experience/japan-dashboard.html>).

In addition, the issues raised in the petition regarding flooding and station blackout are being addressed through rulemaking concerning mitigation of beyond-design-basis events. (See <http://www.regulations.gov>, Docket ID NRC-2011-0299.) The rulemaking is developing generic requirements for implementing the mitigation strategies in Order EA-12-049. The rulemaking also addresses the lessons learned and the feedback received following implementation of the Order.

Issue No. 1 raised by the Petitioner was based on a licensee event report submitted on September 10, 2012, which said that a support beam was not within allowable limits for stress and loading (LER 2012-014; ADAMS Accession No. ML12255A038). The NRC Staff inspected the Licensee's corrective actions as documented in NRC Integrated Inspection Report No. 05000285/2014007, dated May 14, 2014 (ADAMS Accession No. ML14134A410), section 4OA4.2(1), "Item 2.d: Containment Internal Structure." The NRC determined that OPPD appropriately evaluated the cause and extent-of-condition for this issue and independently verified that OPPD has actions in place via the corrective action process to restore the containment internal structure to its design criteria in a timely manner. Based on the NRC Enforcement Policy, however, the NRC issued noncited violations for the Licensee's failure (1) to correct conditions adverse to quality for the containment internal structure and auxiliary building design drawing and design calculation discrepancies, and (2) to ensure the design of the reactor vessel head stand met current licensing basis requirements. The NRC Staff also verified that the Licensee's determination was reasonable that the containment internal structure, auxiliary building, and reactor vessel head stand structure were nonconforming to the design basis, but were operable and fully capable of performing their function under all design-basis-accident loading conditions. In addition, as documented in the post-restart CAL dated December 17, 2013 (ADAMS Accession No. ML13351A395), the Licensee has committed to:

- Evaluate the structural design margin for the containment internal structures, and reactor cavity and compartments, and resolve any deficiencies in accordance with its corrective action program (CAP).
- Resolve any deficiencies in accordance with the CAP concerning Beam 22A and Beam 22B in the containment internal structures.
- Evaluate the structural design margin for the reactor head stand and resolve

any deficiencies in accordance with the CAP prior to the next use of the head stand.

As stipulated in the CAL, the CAL remains in effect until the NRC has verified that OPPD has effectively implemented the commitments. In the case of the containment internal structures, the Licensee's corrective actions are not expected to be complete until the 2016 refueling outage, because of the modifications necessary to restore the structures to the FCS design basis. The licensee event report that was the basis of Petitioner's issue No. 1 was closed by the NRC's Integrated Inspection Report No. 05000285/2014007. As part of the CAL process, the NRC continues to monitor the Licensee's corrective actions required as a result of the NRC's review of the extent of condition.

Issue No. 4 raised by the Petitioner maintained that the 614 primary reactor containment electrical penetration seals identified at FCS containing Teflon could degrade during design-basis-accident conditions. The issue was identified by the Licensee in a condition report and included in the NRC's Restart Checklist for FCS, enclosed in the CAL issued to the Licensee on June 11, 2012 (ADAMS Accession No. ML12163A287), and updated on February 26, 2013 (ADAMS Accession No. ML13057A287). Section 2 of the Restart Checklist contained those items necessary to ensure that important structures, systems, and components (SSCs) affected by the flood and safety SSCs at FCS are in an appropriate condition to support safe restart and continued safe plant operation. The NRC Staff inspected the Licensee's corrective actions for the condition report as documented in NRC Inspection Report No. 05000285/2013013, dated April 3, 2014 (ADAMS Accession No. ML14094A052), section 4OA4.2, "Item 2.c: Qualification of Containment Electrical Penetrations." To correct the issue, the Licensee, prior to plant startup, replaced or capped containment electrical penetrations that used Teflon as electrical insulation or sealant. The NRC reviewed the Licensee's causal analyses, corrective actions, and extent of condition and concludes this issue was adequately addressed by the Licensee. Therefore, the issue is closed.

III. CONCLUSION

The NRC has evaluated each of the Petitioner's requests. For the reasons stated above, the NRC will not issue orders requiring the enforcement actions specified in the Petitioner's requests.

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. This Decision will constitute the final action of the Commission 25 days after the date

of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR REGULATORY
COMMISSION

Michele G. Evans for
William M. Dean, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 3d day of June 2015.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

William M. Dean, Director

In the Matter of

OMAHA PUBLIC POWER
DISTRICT
(Fort Calhoun Station, Unit 1)

Docket No. 50-285
(Renewed License No. DPR-40)

NEBRASKA PUBLIC POWER
DISTRICT
(Cooper Nuclear Station)

Docket No. 50-298
(Renewed License No. DPR-46)
June 3, 2015

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

I. INTRODUCTION

By letter dated June 26, 2011, Mr. Thomas Saporito (the Petitioner) filed a petition under Title 10 of the *Code of Federal Regulations* (10 C.F.R.) § 2.206, "Requests for Action Under This Subpart," related to Fort Calhoun Station, Unit 1 (FCS) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML11182B029). The Petitioner also filed a separate petition concerning Cooper Nuclear Station (CNS) under 10 C.F.R. § 2.206 on July 3, 2011 (ADAMS Accession No. ML11192A285). The U.S. Nuclear Regulatory Commission (NRC) has consolidated the relevant portions of the June 26, 2011 petition with the July 3, 2011 petition. The Petitioner requested that the NRC take escalated enforcement action against FCS and CNS concerning flooding protection.

A. Action Requested for the June 26 and July 3, 2011 Petitions

In the June 26, 2011 petition, the Petitioner requested that the NRC issue a

confirmatory order against Omaha Public Power District (OPPD), the Licensee for FCS, prohibiting the Licensee from restarting FCS until: (1) the floodwaters subside to an appreciably lower level or to sea level, (2) the Licensee upgrades its flood protection plan, (3) the Licensee repairs and enhances its current flood protection berms, and (4) the Licensee upgrades its station blackout procedures to meet a challenging extended loss of offsite power because of floodwaters and other natural disasters or terrorist attacks.

Similarly, in the July 3, 2011 petition, the Petitioner requested that the NRC issue a confirmatory order to Nebraska Public Power District (NPPD), the Licensee for CNS, requiring the Licensee to bring CNS to a cold-shutdown mode of operation until: (1) the floodwaters subside to an appreciably lower level or to sea level, (2) the Licensee upgrades its flood protection plan, (3) the Licensee repairs and enhances its current flood protection berms, and (4) the Licensee upgrades its station blackout procedures to meet a challenging extended loss of offsite power because of floodwaters and other natural disasters or terrorist attacks.

By teleconference on August 29, 2011 (ADAMS Accession No. ML-11256A036), the Petitioner provided additional information in support of the petitions.

The NRC accepted the two petitions for review by letter dated January 13, 2012 (ADAMS Accession No. ML120030022). The NRC determined that no immediate safety concern existed that warranted an immediate enforcement action by the NRC. The NRC denied the request to prevent the restart of FCS or to bring CNS to cold shutdown. Therefore, the Petitioner's request for immediate action was denied. Because of performance concerns at FCS, the NRC transitioned its normal oversight process at FCS from Inspection Manual Chapter (IMC) 0305, "Operator Reactor Assessment Program," to its enhanced oversight process contained in IMC 0350, "Oversight of Reactor Facilities in a Shutdown Condition Due to Significant Performance and/or Operational Concerns," as documented in its letter dated December 13, 2011 (ADAMS Accession No. ML113470721). In accordance with the IMC 0350 process, the NRC determined that FCS was safe to restart, as documented by letter dated December 17, 2013 (ADAMS Accession No. ML13351A423), and FCS returned to full power on December 26, 2013. Based on the NRC Staff's evaluation of station performance, NRC returned FCS to the normal reactor oversight program on April 1, 2015 (ADAMS Accession No. ML15089A085). NRC inspections will continue to monitor the Licensee's efforts to sustain improved plant performance and to comply with the commitments in the NRC's post-restart Confirmatory Action Letter (CAL) dated December 17, 2013 (ADAMS Accession No. ML13351A395). The NRC inspections will continue for the remaining open CAL items in coordination with their completion.

The NRC sent copies of the proposed director's decision to the Petitioner, NPPD, and OPPD for comment on April 15, 2015 (ADAMS Accession Nos.

ML15062A354, ML15062A362, and ML15062A366, respectively). The proposed director's decision is available in ADAMS under Accession No. ML15062A373. The NRC Staff did not receive any comments on the proposed director's decision.

II. DISCUSSION

As part of the 10 C.F.R. § 2.206(b) petition review process, the director of the NRC office with responsibility for the subject matter either accepts a petition and begins a proceeding or advises the petitioner in writing that no proceeding will be instituted, in whole or in part, with respect to the request. The NRC Staff will describe the reason for the decision. Accordingly, the decision of the Director of the Office of Nuclear Reactor Regulation is provided below.

The NRC concluded no immediate safety concerns warranted an immediate enforcement action to prevent the restart of FCS or to bring CNS to cold shutdown. The NRC will not issue an enforcement order based on the petition because, as explained below, each of the Petitioner's requests was fully addressed through other agency actions.

FCS and CNS are undergoing flooding hazard reviews. The issues raised by the Petitioner in issues No. 1, 2, and 3, above, are addressed by the NRC's request for information per 10 C.F.R. § 50.54(f), dated March 12, 2012 (Fukushima 50.54(f) Letter; ADAMS Accession No. ML12056A046). The letter states, in relevant part, that

The current regulatory approach, and the resultant plant capabilities, gave the NTTF [Near-Term Task Force] and the NRC the confidence to conclude that an accident with consequences similar to the Fukushima accident is unlikely to occur in the United States (U.S.). The NRC concluded that continued plant operation and the continuation of licensing activities did not pose an imminent risk to public health and safety.

The NRC Staff is evaluating the Licensee's flooding hazard reviews in accordance with the schedule provided in the Fukushima 50.54(f) Letter. OPPD provided the results of its flooding walkdown report for FCS to the NRC on November 27, 2012 (ADAMS Accession No. ML12334A449), with supplements on March 29, 2013, August 15, 2013, December 13, 2013, and January 31, 2014 (ADAMS Accession Nos. ML13091A059, ML13228A098, ML13351A426, and ML14031A344, respectively). The NRC Staff assessed the OPPD report on June 24, 2014 (ADAMS Accession No. ML14157A079), and concluded that

the licensee's implementation of flooding walkdown methodology meets the intent of the walkdown guidance. The staff concludes that the . . . licensee, through the

implementation of the walkdown guidance activities and, in accordance with plant processes and procedures, verified the plant configuration with the current flooding licensing basis; addressed degraded, nonconforming, or unanalyzed flooding conditions; and verified the adequacy of monitoring and maintenance programs for protective features. Furthermore, the licensee's walkdown results, which were verified by the staff's inspection, identified no immediate safety concerns. The NRC staff reviewed the information provided and determined that sufficient information was provided to be responsive to Enclosure 4 of the 50.54(f) letter.

NPPD submitted the results of its flooding walkdown report for CNS to the NRC on November 27, 2012 (ADAMS Accession No. ML12333A319), with supplements on November 21, 2013, and January 31, 2014 (ADAMS Accession Nos. ML13330B276 and ML14035A220, respectively). The NRC Staff assessed the NPPD report on June 24, 2014 (ADAMS Accession No. ML14149A146), and concluded that

the licensee's implementation of flooding walkdown methodology meets the intent of the walkdown guidance. The staff concludes that the licensee, through the implementation of the walkdown guidance activities and, in accordance with plant processes and procedures, verified the plant configuration with the current flooding licensing basis; addressed degraded, nonconforming, or unanalyzed flooding conditions; and verified the adequacy of monitoring and maintenance programs for protective features . . . Furthermore, the staff notes that no immediate safety concerns were identified. The NRC staff reviewed the information provided and determined that sufficient information was provided to be responsive to Enclosure 4 of the 50.54(f) letter.

OPPD provided its flooding hazard reevaluation report (FHRR) for FCS to the NRC on February 4, 2015 (ADAMS Accession No. ML15042A127; it contains security-related information, so a portion of the document is not publicly available in accordance with 10 C.F.R. § 2.390, "Public Inspections, Exemptions, Requests for Withholding"). NPPD supplied its FHRR for CNS to the NRC on February 3, 2015 (ADAMS Accession No. ML15041A468; it contains security-related information, so a portion of the document is not publicly available in accordance with 10 C.F.R. § 2.390). NRC Staff is reviewing the FHRRs. Because the Petitioner offered no information that shows an immediate threat to public health and safety, the Staff continues its reviews of FCS's and CNS's FHRRs as scheduled. The NRC issued a letter to all power reactor licensees and holders of construction permits in active or deferred status dated March 1, 2013 (ADAMS Accession No. ML13044A561). Recommendation 2.1 of the Fukushima 50.54(f) Letter is to "Order licensees to reevaluate the seismic and flooding hazards at their sites against current NRC requirements and guidance, and if necessary, update the design basis and SSCs [structures, systems, and components] important to

safety to protect against the updated hazards.” The NRC’s March 1, 2013 letter emphasized the Staff’s expectations regarding any new information found that may impact SSC operability and states, in relevant part, that

The staff considers the flood hazard reevaluations being performed pursuant to the 50.54(f) letter to be beyond the current design/licensing basis of operating plants. Consequently, the results of the analysis performed using present-day regulatory guidance, methodologies, and information would not generally be expected to call into question the operability or functionality of SSCs. . . . However, as with any new information that may arise at a plant, licensees are responsible for evaluating and making determinations related to operability and any associated reportability on a case-by-case basis.

. . . .

Notwithstanding the preceding discussion, and as noted in the 50.54(f) letter, based upon the results of the review of the responses and other available information, the staff may impose additional requirements to protect against the reevaluated flood hazard. As always, the safety of the operating plants is of paramount importance. The NRC staff will follow established regulatory processes, including the backfit rule, in determining whether additional requirements are warranted.

The station blackout issue raised by the Petitioner in issue No. 4 was evaluated by the NRC in “Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events” (EA-12-049), dated March 12, 2012 (ADAMS Accession No. ML12054A736). The Order requires licensees to develop strategies to mitigate a simultaneous loss of all alternating current power and loss of normal access to the ultimate heat sink.

On August 21, 2012, the Nuclear Energy Institute (NEI) submitted Revision 0 to NEI 12-06, “Diverse and Flexible Coping Strategies (FLEX) Implementation Guide” (ADAMS Accession No. ML12242A378). On August 29, 2012, the NRC Staff issued the Japan Lessons-Learned Project Directorate Interim Staff Guidance JLD-ISG-2012-01, “Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events” (ADAMS Accession No. ML12229A174). The Interim staff guidance was published in the *Federal Register* on September 7, 2012 (77 Fed. Reg. 55,230). The interim staff guidance endorses NEI 12-06, Revision 0, and finds the recommended strategies are an acceptable means of meeting the requirements of Order EA-12-049. JLD-ISG provides guidance and clarification to assist nuclear power reactor applicants and licensees with the identification of measures needed to comply with requirements to mitigate challenges to key safety functions. The Interim Staff Guidance and NEI 12-06, Revision 0, outline

the process licensees use to define and deploy strategies to enhance their ability to cope with beyond-design-basis external events, including station blackout.

OPPD gave the NRC Staff its overall integrated plan for FCS in response to Order EA-12-049 on February 28, 2013 (ADAMS Accession No. ML13116A208), and confirmed that it has a plan developed in accordance with the guidance of NEI 12-06, Revision 0 for defining and deploying strategies that will enhance the ability to cope with conditions resulting from beyond-design-basis external events. The NRC Staff provided its interim staff evaluation and audit report of the Licensee's overall integrated plan by letter dated February 27, 2014 (ADAMS Accession No. ML14007A693). The NRC found that the Licensee's plan demonstrates reasonable assurance that the requirements of Order EA-12-049 at FCS will be met. The Staff expects that the Licensee will implement the plan as described, and will satisfactorily resolve the open and confirmatory items detailed in the interim staff evaluation and audit report.

NPPD gave the NRC Staff its overall integrated plan for CNS in response to Order EA-12-049 on February 28, 2013 (ADAMS Accession No. ML13070A009). The NRC Staff provided its interim staff evaluation and audit report of the Licensee's overall integrated plan on February 11, 2014 (ADAMS Accession No. ML14007A647). The NRC found that the Licensee's plan demonstrates reasonable assurance that the requirements of Order EA-12-049 at CNS will be met. The Staff expects that the Licensee will implement the plan as described, and will satisfactorily resolve the open and confirmatory items detailed in the interim staff evaluation and audit report.

The issues raised by the Petitioner are the subject of NRC Staff review and evaluation because of the NRC's response to the Fukushima Dai-ichi accident. The NRC is already making as much information as possible available to the public concerning its ongoing activities in response to the Fukushima Dai-ichi accident (e.g., see <http://www.nrc.gov/reactors/operating/ops-experience/japan-dashboard.html>). In addition, the issues raised in the petition regarding flooding and station blackout are being addressed through rulemaking concerning mitigation of beyond-design-basis events (see <http://www.regulations.gov>, docket ID NRC-2011-0299). The rulemaking is developing generic requirements for implementing the mitigation strategies in Order EA-12-049. The rulemaking also addresses the lessons learned and feedback received following implementation of the Order.

III. CONCLUSION

The NRC has evaluated each of the Petitioner's requests. For the reasons stated above, the NRC will not issue orders requiring the enforcement actions specified in the Petitioner's requests.

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. This decision will constitute the final action of the Commission 25 days after the date of the Decision unless the Commission, on its own motion, institutes a review of the Decision within that time.

FOR THE NUCLEAR REGULATORY
COMMISSION

Michele G. Evans for
William M. Dean, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 3d day of June 2015.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF NUCLEAR REACTOR REGULATION

William M. Dean, Director

In the Matter of

ALL OPERATING REACTOR
LICENSEES

June 17, 2015

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

I. INTRODUCTION

By letter dated March 12, 2011, Thomas Saporito, representing Saprodani Associates, filed a petition under Title 10 of the *Code of Federal Regulations* (10 C.F.R.) § 2.206, "Requests for Action Under This Subpart" (Agencywide Documents Access and Management System (ADAMS) Accession No. ML110740026). The Petitioner requested that the U.S. Nuclear Regulatory Commission (NRC or the Commission) take escalated enforcement action against the above-captioned licensees and suspend or revoke the NRC licenses granted to the licensees for operation of nuclear power reactors. In particular, the Petitioner requested that the "NRC ORDER [sic] the immediate shut-down of all nuclear power reactors in the USA which are known to be located on or near an earthquake fault-line." The Petitioner cited the Fukushima Dai-ichi accident in Japan as the rationale for and basis of the petition.

On March 21, 2011, the NRC acknowledged receipt of the petition (ADAMS Accession No. ML110840274). On April 4, 2011, the NRC's Petition Review Board (PRB) met internally to discuss Petitioner's request for immediate action. The PRB determined that the request for immediate action is a general assertion without supporting facts. Thus, the PRB did not identify a significant safety concern from the information provided which would warrant the NRC to order an immediate shutdown of nuclear power reactors located on or close to earthquake fault lines. On April 4, 2011, the NRC Staff informed the Petitioner of the

PRB's decision to deny his request for immediate action (ADAMS Accession No. ML110940603).

On April 14, 2011, the Petitioner addressed the PRB during a teleconference. A copy of the teleconference transcript is available at ADAMS Accession No. ML11109A014. During the teleconference, the Petitioner stated that the petition contains the following four specific requests:

1. Order the immediate shutdown of all nuclear power reactors located on or near an earthquake fault line in the United States.
2. Order the immediate shutdown of all power reactors employing GE Mark I containment design in the United States, characterizing such design as flawed from the nuclear safety standpoint.
3. Advise other countries employing the GE Mark I nuclear power reactors about the serious nuclear safety design flaws associated with that design, which is likely to result in a serious nuclear accident comparable to the Japanese nuclear disaster.
4. Immediately revoke all 20-year license extensions issued to NRC licensees, because the NRC "has improperly and illegally granted 20-year license extensions to the 40-year license that was initially granted by the agency for the 104 nuclear reactors throughout the United States."

During the teleconference, the Petitioner supplemented the second request by specifically naming NRC-licensed plants that employ the GE Mark I containment design and characterizing them as "flawed nuclear reactors" which pose an "unwarranted risk to the national security and common defense of the United States of America." He stated that "for these reasons standing alone, petitioners urge the NRC to order the immediate shutdown of all GE Mark I nuclear power reactors in the United States." Subsequently, on April 14 and 16, 2011, the Petitioner provided additional documents in support of his claim (ADAMS Accession Nos. ML11110A026, ML11110A027, ML11110A028, and ML11119A024, respectively).

The PRB met internally on April 28, 2011, to discuss the petition, as supplemented. In accordance with the criteria for review and rejection described in Management Directive (MD) 8.11, "Review Process for 10 CFR 2.206 Petitions," the PRB made its initial recommendation to accept the petition in part, insofar as the Petitioner requested additional regulatory action in response to the events at Fukushima. The supplemental information provided by the Petitioner was not sufficient to warrant further inquiry regarding the Petitioner's assertions that the original licensing bases of U.S. nuclear reactors were faulty and that immediate shutdown was warranted.

On May 12, 2011, the petition manager informed the Petitioner of the PRB's

initial recommendation to accept this petition in part (ADAMS Accession No. ML111320018). At that time, the Petitioner requested another opportunity to address the PRB to provide comments on its initial recommendation and additional information in support of the petition.

On May 25, 2011, the Petitioner addressed the PRB by teleconference to present supplemental information on the petition. Also, on May 25, 2011, he e-mailed additional information to the NRC (ADAMS Accession No. ML111450897), which the PRB considered. A copy of the transcript for the May 25, 2011 teleconference is available under ADAMS Accession No. ML11146A010.

The PRB considered the additional information provided during the teleconference on May 25, 2011, by the Petitioner and determined that it did not contain any new or relevant information that would change the PRB's initial recommendation. Consistent with its initial recommendation, the PRB declared its final recommendation to partially accept the petition for review, as modified and supplemented. The NRC partially accepted petition Requests 1 and 2 to the extent that the Petitioner sought regulatory action in light of the events at Fukushima. However, the NRC also partially rejected petition Requests 1 and 2 on the basis that the Petitioner did not provide sufficient facts to justify shutting down all nuclear power reactors located on or near fault lines, or those with the GE Mark I containment design. The NRC rejected petition Request 3 on the basis that the Petitioner requested an action that the NRC was already implementing. Finally, the NRC rejected petition Request 4 on the basis that the Petitioner's claim was general and insufficient to warrant further inquiry. In addition, the NRC Staff had already reviewed and evaluated the issue. The NRC Staff communicated these decisions to the Petitioner through a letter dated June 28, 2011 (ADAMS Accession No. ML11137A213).

The NRC treated transcripts of the teleconferences as supplements to the petition. These transcripts are available for inspection at the NRC's Public Document Room (PDR), located at O1F21, 11555 Rockville Pike (first floor), Rockville, MD 20852. Publicly available documents created or received at the NRC are accessible electronically through ADAMS in the NRC Library at <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC's PDR reference Staff by telephone at 1-800-397-4209, or 301-415-4737, or by e-mail to pdr.resource@nrc.gov.

The NRC sent a copy of the proposed director's decision to the Petitioner and to the affected licensees for comment on April 8, 2015 (ADAMS Accession Nos. ML13018A239 and ML13018A244, respectively). Two licensees responded on April 14, 2015 (ADAMS Accession No. ML15111A257). The comments and the NRC Staff's response to them are included as Attachment 1 to the Director's Decision.

II. DISCUSSION

The NRC's review of this petition took longer than the standard of 120 days for reaching a decision on the petition because the petition was related to Fukushima. At the time of the petition submittal, the NRC was conducting a Fukushima lessons-learned review, and it coordinated its decision on this petition with the Fukushima review. This section includes both the Petitioner's requests for orders to be issued and the NRC's actions and decisions.

Additional information regarding the implementation of Japan Lessons-Learned Activities, including plant-specific implementation status, is available on the NRC's Japan Lessons-Learned public Web site at <http://www.nrc.gov/reactors/operating/ops-experience/japan-dashboard.html>.

Request 1

Order the immediate shutdown of all nuclear power reactors located on or near an earthquake fault line in the United States.

NRC Decision

The NRC has determined that U.S. plants located at or near earthquake fault lines continue to operate safely and do not pose an immediate safety concern to the members of the public. Nuclear power plants in the U.S. have been designed, built, and operated to safely withstand earthquakes likely to occur in their region.

As part of the NRC post-Fukushima lessons-learned activities, the NRC established the Near-Term Task Force (NTTF). The NRC tasked the NTTF with conducting a systematic and methodical review of NRC processes and regulations and determining if the agency should make additional improvements to its regulatory system. Ultimately, the task force developed a comprehensive set of recommendations and presented these to the Commission in SECY-11-0093, "The Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated July 12, 2011 (ADAMS Accession No. ML111861807). In the report, the NTTF determined that the current regulatory approach, and the resultant plant capabilities, gave the NTTF and the NRC the confidence to conclude that a sequence of events similar to the Fukushima accident is unlikely to occur in the U.S.

On March 12, 2012, the NRC issued a request for information under 10 C.F.R. § 50.54(f) regarding recommendations 2.1, 2.3, and 9.3 of the NTTF Report (ADAMS Accession No. ML12056A046). The purpose of the 10 C.F.R. § 50.54(f) Letter was to gather information with respect to the NTTF recommendations for seismic hazards. The letter instructed all licensees to reevaluate seismic hazards at their sites using updated seismic hazard information, present-day guidance

and methodologies, and a risk evaluation. The NRC Staff is currently reviewing the licensees' submitted seismic hazard reports. In cases where a licensee's reevaluated hazard exceeds the design basis, the NRC will require more detailed site-specific evaluations, such as a seismic probabilistic risk assessment. NRC will review each step in the analysis process and take action to require plant changes as necessary.

In addition to the 10 C.F.R. § 50.54(f) letter, the Commission issued Order EA-12-049, "Issuance of Order to modify licenses with requirements for mitigation strategies for beyond-design-basis external events" on March 12, 2012 (ADAMS Accession No. ML12054A735). Order EA-12-049 requires mitigation strategies to protect against external events, including postulated seismic events. Licensees must comply with the order no later than December 31, 2016. To date, all licensees have submitted overall integrated plans (OIPs) to describe how they will comply with Order EA-12-049, and NRC Staff has evaluated the OIPs. In addition, the NRC Staff has performed onsite audits to ensure that full implementation will occur within the required time period. Licensees for nine nuclear power plant sites have requested, and have been granted, schedule relaxation to align the schedule requirements of Order EA-12-049 with those of Order EA-13-109, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions" (ADAMS Accession No. ML13130A067). These schedule relaxations extend the due date past December 31, 2016.

The NRC has concluded that the continued operation of nuclear plants on or near earthquake fault lines does not pose an imminent risk to public health and safety. The NRC is addressing the Petitioner's seismic hazard concerns through orders and requests for information resulting from NTTF recommendations, as described above. The NRC will take no further action on this request.

Request 2

Order the immediate shutdown of all power reactors employing GE Mark I containment design in the United States.

NRC Decision

The NRC has determined that GE boiling-water reactors (BWRs) with Mark I containments continue to operate safely and do not pose an immediate safety concern to the members of the public.

The NRC previously addressed the concern with GE Mark I containment design in NUREG-0661, "Safety Evaluation Report Mark I Containment Long-Term Program — Resolution of Generic Technical Activity A-7," dated July 1980 (ADAMS Accession No. ML072710452). In the report, NRC Staff concluded that

“the proposed structural acceptance criteria are consistent with the requirements of the applicable codes and standards and, in conjunction with the structural analysis techniques, will provide an adequate basis for establishing the margins of safety in the containment design.” All GE Mark I BWRs were evaluated for suppression pool hydrodynamic loads, and appropriate modifications were made to maintain the containment structural integrity.

The NRC issued Order EA-12-050, “Order to Modify Licenses with Regard to Reliable Hardened Containment Vents,” on March 12, 2012 (ADAMS Accession No. ML12054A694). This Order was superseded by a modified Order EA-13-109, “Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable for Operation Under Severe Accident Conditions,” on June 6, 2013 (ADAMS Accession No. ML13143A334). The Order requires all BWR licensees with Mark I and Mark II containments to design and install a venting system that provides venting capability during severe accident conditions. This Order further enhances the reliability of the containment vent system, thereby protecting the containment during severe accidents. To date, all affected licensees have submitted OIPs for upgrading containment venting capabilities from the pressure suppression wetwell to assist in preventing core damage; NRC Staff is currently reviewing these OIPs. Licensees must comply with Order EA-13-109 no later than June 30, 2019. OIPs for reliable ventilation from the drywell, or reliable venting strategies that eliminate the need for drywell venting, will be submitted by licensees by the end of 2015. The exception is Oyster Creek Nuclear Generating Station, which has submitted an extension request associated with the end of its operating life in 2019, along with plans to improve existing venting capabilities. The NRC Staff is currently reviewing this extension request, and has not yet made a decision to approve or deny the request.

The NRC has concluded that the continued operation of power reactors employing GE Mark I containment design does not pose an imminent risk to public health and safety. The NRC is addressing the Petitioner’s containment concerns through orders resulting from NTTF recommendations, as described above. The NRC will take no further action on this request.

Request 3

Advise other countries employing the GE Mark I nuclear power reactors about the serious nuclear safety design flaws associated with that design, which is likely to result in a serious nuclear accident comparable to the Japanese nuclear disaster.

NRC Decision

This is a general request for the NRC to ensure that policies exist to support the sharing of information related to the events involving Fukushima. The

NRC's current policies and practices support its openness goals with external, including international, stakeholders. Specifically, since the earthquake and tsunami in Japan, the NRC has participated in meetings at the International Atomic Energy Agency, at the Nuclear Energy Agency, with the G8 Nuclear Safety and Security Group, and with numerous other bilateral and multilateral groups to share information on this event with NRC's international counterparts. Because the Petitioner requested an action that the NRC is already implementing, the PRB determined that this request did not meet the criteria for review on the following basis: the request does not set forth sufficient facts to warrant further actions beyond the actions that the NRC has already undertaken.

Request 4

Immediately revoke all 20-year license extensions issued to NRC licensees, because the NRC "has improperly and illegally granted 20-year license extensions to the 40-year license that was initially granted by the agency for the 104 nuclear reactors throughout the United States."

NRC Decision

In accordance with MD 8.11, the PRB will review a petition under 10 C.F.R. § 2.206 only where the Petitioner specifies the bases for taking the requested action. Although the Petitioner asserted that the NRC lacked the legal authority to grant license extensions for numerous plants, he failed to set forth the basis for his assertion. He claimed that the NRC "improperly interpreted the amendment to section 104b under 42 U.S.C. § 2134 and under the Atomic Energy Act of 1954, as amended," and thus, "improperly and illegally granted 20-year license extensions to the 40-year license that was initially granted by the agency." This is a general claim, insufficient to warrant further inquiry.

The Petitioner also claimed that "the NRC has recklessly endangered public health and safety in these circumstances because in so extending these licenses by 20 years, the agency has significantly increased the likelihood of a loss-of-coolant accident" due to neutron embrittlement of the reactor vessel over time. All license renewals have been subjected to the NRC's license renewal review process, per 10 C.F.R. Parts 51 and 54, with several opportunities for public participation, including a hearing. A reactor vessel neutron embrittlement analysis is included in each license renewal application, and is evaluated in the resulting NRC Staff safety evaluation report in accordance with section 4.2 of NUREG-1800, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants." The NRC rejected Request 4 based on the criteria that the Petitioner raised issues that the NRC Staff has already reviewed, evaluated, and resolved.

III. CONCLUSION

As discussed above, the NRC found the petition, its supporting facts, and supplements insufficient to warrant that the agency accept the Petitioner's Requests 1 and 2 to immediately shut down U.S. nuclear power plants at or near earthquake faults or those employing the Mark I containment designs.

The NRC partially accepted Requests 1 and 2 of the petition to the extent that the Petitioner sought some type of regulatory action in light of the events at Fukushima. The above discussion demonstrates that the NRC has addressed the Petitioner's concerns related to the events at Fukushima through the issuance of orders and through a request for information under 10 C.F.R. § 50.54(f). Such actions significantly enhance the margins of safety to the effects of extreme natural phenomena at commercial operating reactors in the United States.

The NRC rejected Request 3 on the basis that the NRC was already implementing actions requested. The NRC rejected Request 4 on the basis that the Petitioner's claim was general and insufficient to warrant further inquiry. In addition, the NRC Staff had already reviewed, evaluated, and resolved the issue.

Based on the Staff responses to the Petitioner's four concerns, the NRC does not plan to take any additional enforcement actions as specified in the Petitioner's requests. Therefore, the NRC is closing this petition.

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

FOR THE NUCLEAR REGULATORY
COMMISSION

William M. Dean, Director
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland,
this 17th day of June 2015.

ATTACHMENT 1

COMMENTS RECEIVED FROM LICENSEES ON THE PROPOSED DIRECTOR'S DECISION DATED APRIL 8, 2015

The NRC sent a copy of the proposed director's decision to the affected licensees for comment on April 8, 2015 (ADAMS Accession No. ML13018A244). FirstEnergy Nuclear Operating Company and Exelon Corporation responded with comments on April 14, 2015 (ADAMS Accession No. ML15111A257). The NRC's responses to the comments received are provided below:

Comment 1 — Received from FirstEnergy Nuclear Operating Company

"The compliance with Order EA-12-049 for mitigation strategies 'no later than two refueling cycles after submittal of the overall integrated plan (OIP), or December 31, 2016, whichever comes first' is accurate; however, some plants have requested and received relaxation to allow completion after the second refueling cycle but still prior to December 31, 2016."

Response

The NRC has revised the Director's Decision to include discussion of licensees that have requested and have been granted an extension for compliance with Order EA-12-049.

Comment 2 — Received from Exelon Corporation

"The next to last paragraph on page 7 of the NRC letter states that all affected licensees have submitted OIPs for upgrading containment venting capabilities in response to NRC Order EA-13-109. Oyster Creek has not submitted an OIP for venting in response to NRC Order EA-13-109, but has submitted an extension request to the end of its operating life (12/31/19) for Order compliance, at which time a request for deferral from the Order is contemplated, or compliance to the Order will be required. NRC approval of the extension request is expected in 2015. As justification for the extension request, Oyster Creek committed to improve existing venting capabilities; however, an OIP in response to the Order has not been submitted for Oyster Creek."

Response

The NRC has revised the Director's Decision to state that Oyster Creek Nuclear Generating Station has submitted an extension request for compliance with Order EA-13-109. The NRC Staff is currently reviewing this extension request, and has not yet decided to approve or deny it.

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- Airport Neighbors Alliance v. United States*, 90 F.3d 426, 432 (10th Cir. 1996)
reasonable alternatives under NEPA do not include alternatives that are impractical, present unique problems, or cause extraordinary costs; LBP-15-3, 81 NRC 104 (2015)
- Akiak Native Community v. U.S. Postal Service*, 213 F.3d 1140, 1147 (9th Cir. 2000)
NEPA does not require that environmental assessments include a discussion of mitigation strategies; LBP-15-11, 81 NRC 431 (2015)
- Alabama Power Co.* (Joseph M. Farley Nuclear Plant, Units 1 and 2), CLI-81-27, 14 NRC 795, 797 (1981)
stay movant has the burden of persuasion on the four factors of 10 C.F.R. 2.1213(d); LBP-15-2, 81 NRC 53 (2015)
- Alaska v. Andrus*, 580 F.2d 465, 473-74 (D.C. Cir. 1978)
one cost that must be weighed by decisionmakers is the cost of uncertainty; LBP-15-3, 81 NRC 119-20 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-13, 67 NRC 396, 400 (2008)
even if a party moving for a stay fails to show irreparable injury, a board may still grant a stay if movant has made an overwhelming showing or a demonstration of virtual certainty that it will prevail on the merits; LBP-15-2, 81 NRC 54, 58 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 674 (2008)
NRC rules impose a deliberately heavy burden on intervenor who seeks to supplement the evidentiary record after it has been closed; LBP-15-14, 81 NRC 594-95 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235 (2009),
petition for review denied sub nom. New Jersey Environmental Federation v. NRC, 645 F.3d 220 (3d Cir. 2011)
attempts by petitioners to challenge aspects of an aging management plan that they could have challenged earlier were rejected; LBP-15-1, 81 NRC 31 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 259 (2009)
grant of discretionary review must show that a board's ruling was a departure from, or contrary to, established law; CLI-15-7, 81 NRC 496 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260-61 (2009)
intervenors carry the burden of showing that any late-filed contentions are admissible; LBP-15-16, 81 NRC 703 n.567 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 263 (2009)
licensee must show with reasonable assurance that its proposed methodology for material control and accounting will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public; CLI-15-9, 81 NRC 517 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 268-70 (2009)
petitioners have the burden of going forward, which requires them to provide factual allegations or expert testimony to show a potential deficiency in applicant's aging management plan; LBP-15-5, 81 NRC 295 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 270-71 (2009)
current licensing basis issues cannot be challenged in license renewal proceedings; LBP-15-5, 81 NRC 291 (2015)

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- enforcement orders are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 292 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 274 (2009), *petition for review denied sub nom. New Jersey Environmental Federation v. NRC*, 645 F.3d 220 (3d Cir. 2011)
- if, as intervenors allege, applicant's enhanced monitoring program is inadequate, then applicant's unenhanced monitoring program embodied in its license renewal application was *a fortiori* inadequate, and intervenors had a regulatory obligation to challenge it in their original petition to intervene; LBP-15-1, 81 NRC 32 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 276 (2009)
- party may not provide support for a contention in its reply; LBP-15-5, 81 NRC 289 (2015)
- support for a contention must be provided when the contention is filed, not at some later date; LBP-15-5, 81 NRC 312, 313 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-06-22, 64 NRC 229, 231-32, 245-46 (2007), *aff'd*, CLI-09-7, 69 NRC 235 (2009)
- intervenors opposed renewal of the nuclear power plant license, and proposed new contentions for increased ultrasonic testing of sand bed epoxy coating integrity; LBP-15-1, 81 NRC 32 (2015)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-06-22, 64 NRC 229, 246 (2007), *aff'd*, CLI-09-7, 69 NRC 235 (2009)
- as a matter of policy, applicant's decision to improve an existing program to promote health and safety or to boost public support and confidence ought not ordinarily be viewed as conferring petitioners with an automatic opportunity to advance a new contention; LBP-15-1, 81 NRC 32 (2015)
- American Petroleum Institute v. Environmental Protection Agency*, 683 F.3d 382, 387 (D.C. Cir. 2012)
- debating compliance with another agency's proposed policies before they have been finalized would subject administrative agencies to needless and repetitive litigation; LBP-15-15, 81 NRC 614 (2015)
- precedence requires a licensing board to let EPA's rulemaking run its course, allowing intelligent resolution of any remaining claims instead of piecemeal and repetitive litigation; LBP-15-15, 81 NRC 610 (2015)
- proposed rules are not binding upon administrative agencies and are not ripe for review by NRC boards; LBP-15-15, 81 NRC 610 n.83 (2015)
- Anderson v. Bessemer City*, 470 U.S. 564, 573-76 (1985)
- Commission gives substantial deference to licensing board findings of fact, and will not overturn a board's factual findings unless they are not even plausible in light of the record viewed in its entirety; CLI-15-9, 81 NRC 522 (2015)
- Anderson Brothers Ford v. Valencia*, 452 U.S. 205, 212-13 (1981)
- courts have relied on language accompanying proposed rulemakings to determine agency intent; LBP-15-15, 81 NRC 610 (2015)
- AREVA Enrichment Services, LLC* (Eagle Rock Enrichment Facility), CLI-11-4, 74 NRC 1, 8 n.35 (2011)
- NRC guidance documents are not legally binding, and compliance with them is not required; LBP-15-20, 81 NRC 847 n.100 (2015)
- Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991)
- board may appropriately view petitioner's support for its contention in a light favorable to petitioner, but the board cannot do so by ignoring the requirements set forth in 10 C.F.R. 2.309(f)(1); LBP-15-5, 81 NRC 288 n.248 (2015); LBP-15-17, 81 NRC 789 n.234 (2015); LBP-15-19, 81 NRC 827 (2015); LBP-15-20, 81 NRC 858 n.155 (2015)
- licensing board 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-15-1, 81 NRC 38 (2015); LBP-15-11, 81 NRC 426 n.156, 438 n.232 (2015)
- when 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-15-1, 81 NRC 39 (2015)

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- Babcock & Wilcox* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-92-31, 36 NRC 255, 263 (1992)
in addressing the stay criteria in a Subpart L proceeding, litigant must come forth with more than
general or conclusory assertions in order to demonstrate its entitlement to relief; LBP-15-2, 81 NRC
54 (2015)
- Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 98 (1983)
NRC's use of rulemaking to address generic issues has been approved by the Supreme Court;
CLI-15-6, 81 NRC 379 n.204 (2015)
- Baltimore Gas & Electric Co. v. Natural Resources Defense Council, Inc.*, 462 U.S. 87, 100, 103 (1983)
generic analyses of the environmental impacts of continued storage and disposal in the context of
NRC reactor licensing proceedings are acceptable; CLI-15-4, 81 NRC 238 (2015)
- Batterton v. Marshall*, 648 F.2d 694, 700 (D.C. Cir. 1980)
Administrative Procedure Act broadly defines "rule" to include nearly every statement an agency may
make; LBP-15-15, 81 NRC 612 n.100 (2015)
- Batterton v. Marshall*, 648 F.2d 694, 701 (D.C. Cir. 1980)
many agency statements, including statements sometimes called "rules," do not have force and effect,
and advance notice and public participation are required for rules that carry the force of law;
LBP-15-15, 81 NRC 612 n.100 (2015)
- Bennett v. Spear*, 520 U.S. 154, 178 (1997)
agency action is final at the consummation of the agency's decisionmaking process, and when rights
or obligations have been determined; LBP-15-2, 81 NRC 57 n.66 (2015)
- Bulova Watch Co. v. United States*, 365 U.S. 753, 758 (1961)
specific regulations control over general regulations; CLI-15-10, 81 NRC 540 (2015)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911
(2009)
Commission affirmed board ruling on standing and upheld the validity of the proximity presumption;
CLI-15-13, 81 NRC 561 n.22 (2015)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC
911, 915-16 (2009)
to demonstrate organizational standing, petitioner must show injury-in-fact to the interests of the
organization itself; LBP-15-17, 81 NRC 771 (2015)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC
911, 915-17 (2009)
proximity presumption allows petitioner living within 50 miles of the reactor to establish standing
without the need to make an individualized showing of injury, causation, and redressability;
LBP-15-5, 81 NRC 256 (2015)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC
911, 916-17 (2009)
organization members living within 50 miles of a reactor are presumed to have standing under the
Commission's 50-mile proximity presumption; LBP-15-5, 81 NRC 257 (2015)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63
(2012)
final licensing decisions were suspended until the Commission addressed the court's remand on the
Waste Confidence Decision and Temporary Storage Rule and boards were instructed to hold relevant
contentions in abeyance pending further order; CLI-15-11, 81 NRC 547 (2015); CLI-15-12, 81 NRC
552 (2015)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63,
66-67 (2011)
all final decisions for licenses that relied on the Waste Confidence Decision and Temporary Storage
Rule were suspended; CLI-15-4, 81 NRC 230 (2015)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63,
67 (2012)
in light of the vacatur and remand of the Waste Confidence Decision and Temporary Storage Rule
and in response to suspension petitions filed on multiple dockets, issuance of final licensing
decisions for affected matters were held in abeyance while the Commission addressed the court's
remand; CLI-15-13, 81 NRC 562-63 (2015)

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members of the public had the opportunity to fully participate in the Continued Storage rulemaking proceeding; CLI-15-10, 81 NRC 541-42 (2015)

to the extent NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in the adjudicatory process; CLI-15-11, 81 NRC 547 n.5 (2015); CLI-15-12, 81 NRC 552 n.5 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 67 & n.7 (2012)

decision to suspend final licensing decisions is highly dependent upon the facts and requires a judgment that the significance of the matter raised is so substantial as to warrant suspension; CLI-15-14, 81 NRC 736 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-12-16, 76 NRC 63, 68-69 (2012)

Commission directed that all spent fuel storage contentions be held in abeyance; CLI-15-6, 81 NRC 344 n.11 (2015); LBP-15-1, 81 NRC 21 (2015); LBP-15-12, 81 NRC 453 n.2 (2015)

motion for leave to file a new contention concerning storage and disposal of spent nuclear fuel was held in abeyance pending further order of the Commission; LBP-15-14, 81 NRC 592 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-13-4, 77 NRC 101, 104 n.9 (2013)

it is within Commission discretion to grant leave for participation as amicus curiae; CLI-15-1, 81 NRC 5 n.19 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71 (2014)

Continued Storage Rule makes generic safety findings concerning feasibility and capacity of spent fuel disposal; LBP-15-9, 81 NRC 397 (2015)

decision to suspend final licensing decisions is highly dependent upon the facts and requires a judgment that the significance of the matter raised is so substantial as to warrant suspension; CLI-15-14, 81 NRC 736-37 (2015)

NRC adopted a generic environmental impact statement identifying and analyzing environmental impacts of continued storage of spent nuclear fuel and associated revisions to the Temporary Storage Rule in 10 C.F.R. 51.23; LBP-15-1, 81 NRC 21-22 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 75 (2014)

Commission adopted a generic environmental impact statement to identify and analyze the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-5, 81 NRC 267 (2015); LBP-15-12, 81 NRC 453 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 77 (2014)

Commission lifted its suspension on final licensing decisions after adopting a generic environmental impact statement to identify and analyze environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-5, 81 NRC 267 (2015)

NRC Staff must account for the environmental impacts of continued storage before finalizing individual licensing decisions, and, when appropriate circumstances exist, the question of whether to prepare a supplemental final environmental impact statement is to be part of that analysis; CLI-15-10, 81 NRC 543, 544 (2015)

results of the continued storage proceeding must be accounted for before finalizing individual license decisions; CLI-15-10, 81 NRC 542 (2015)

to address the court's remand and provide a comprehensive analysis of the environmental impacts of continued storage, the Commission issued a final Continued Storage Rule and supporting Generic Environmental Impact Statement; CLI-15-13, 81 NRC 563 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 77-79 (2014)

concurrent with approval of the Continued Storage Rule and Generic Environmental Impact Statement, the Commission lifted the suspension on final licensing decisions and directed that proposed spent fuel storage contentions be dismissed; CLI-15-11, 81 NRC 548 n.6 (2015); CLI-15-12, 81 NRC 552 (2015)

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Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 78 (2014)

assumptions used in the analysis of impacts of continued storage of spent fuel are sufficiently conservative to bound the impacts such that variances that may occur between sites are unlikely to result in environmental impact determinations greater than those presented in the continued storage generic environmental impact statement; CLI-15-11, 81 NRC 548 n.7 (2015)

impacts of continued storage will not vary significantly across sites and can be analyzed generically; CLI-15-11, 81 NRC 548 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 79 (2014)

assumptions used in the analysis of impacts of continued storage of spent fuel are sufficiently conservative to bound the impacts such that variances that may occur between sites are unlikely to result in environmental impact determinations greater than those presented in the continued storage generic environmental impact statement; CLI-15-12, 81 NRC 552 n.7 (2015)

Commission directed all licensing boards to reject pending waste confidence contentions that had been held in abeyance, because the generic impact determinations have been the subject of extensive public participation in the rulemaking process and therefore are excluded from litigation in individual proceedings; LBP-15-1, 81 NRC 22 (2015); LBP-15-5, 81 NRC 267 (2015); LBP-15-8, 81 NRC 394 (2015)

contention that impermissibly challenges an agency regulation is outside the scope of an individual licensing proceeding and is therefore inadmissible; CLI-15-11, 81 NRC 549 (2015)

generic determinations are appropriately excluded from litigation in individual proceedings; CLI-15-11, 81 NRC 548 (2015); CLI-15-12, 81 NRC 552 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 79 n.27 (2014)

contentions that are the subject of general rulemaking by NRC may not be litigated in individual licensing proceedings; LBP-15-4, 81 NRC 167 n.64 (2015); LBP-15-17, 81 NRC 778 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 79-80 (2014)

concurrent with issuance of a Continued Storage Rule and Generic Environmental Impact Statement, the Commission lifted the licensing suspension and dismissed, or directed licensing boards to dismiss, proposed contentions that had been filed with the multidocket suspension petitions and held in abeyance; CLI-15-13, 81 NRC 563 (2015)

following adoption of a revised Continued Storage Rule, boards were ordered to reject continued storage contentions pending before them, except contentions unresolved by the Continued Storage Rule; CLI-15-6, 81 NRC 344-45 n.11 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 80 (2014)

Commission directed all affected licensing boards to reject proffered contentions on environmental impacts of spent nuclear fuel storage; LBP-15-14, 81 NRC 592 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 184, *aff'd*, CLI-09-20, 70 NRC 911 (2009)

it is for the Commission, not licensing boards, to revise its rulings; LBP-15-18, 81 NRC 797 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 190 (2009), *aff'd*, CLI-09-20, 70 NRC 911 (2009)

pleading requirements of 10 C.F.R. 2.309(f)(1)(v), calling for a recitation of facts or expert opinion supporting the issue raised, are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-15-11, 81 NRC 437-38 n.241 (2015)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 228 (2009), *aff'd*, CLI-09-20, 70 NRC 911 (2009)

environmental contentions are expected in response to applicant's or NRC Staff's environmental reviews, and contentions regarding their adequacy cannot be expected to be proffered at an earlier stage of the proceeding before the documents are available; LBP-15-11, 81 NRC 423 n.132 (2015)

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- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-10-24, 72 NRC 720, 750 (2010)
although boards do not decide the merits or resolve conflicting evidence at the contention admissibility stage, materials cited as the basis for a contention are subject to scrutiny by the board to determine whether they actually support the facts alleged; LBP-15-20, 81 NRC 865 (2015)
boards may examine both the statements in the document that support petitioner's assertions and those that do not; LBP-15-20, 81 NRC 865 (2015)
- Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-10-24, 72 NRC 720, 750-52 (2010)
licensing board concluded that information on a website cited by the intervenors, instead of supporting intervenors' claim, contradicted it; LBP-15-20, 81 NRC 860 n.187 (2015)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 383 (2001)
arguments not raised before the board or not clearly articulated in the petition for review are deemed waived; LBP-15-5, 81 NRC 290 n.263 (2015)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), ALAB-577, 11 NRC 18, 23-25 (1980), *modified*, CLI-80-12, 11 NRC 514 (1980)
although contention ultimately was resolved in NRC Staff's favor, Commission takes review as a matter of discretion because the board's ruling raises substantial questions of precedential importance; CLI-15-6, 81 NRC 369 (2015)
- Center for Auto Safety v. National Highway Traffic Safety Administration*, 710 F.2d 842, 844-45 (D.C. Cir. 1983)
advance notice of proposed rulemaking was withdrawn due to changes in market demand; LBP-15-15, 81 NRC 612 (2015)
- Center for Auto Safety v. National Highway Traffic Safety Administration*, 710 F.2d 842, 846 (D.C. Cir. 1983)
nonfinal rulemaking action can be ripe for review; LBP-15-15, 81 NRC 612 (2015)
where the basis behind the determination not to proceed with a rulemaking was a final agency ruling allowing for judicial review, the earlier advance notice of proposed rulemaking itself was not held to have any binding effect on the public; LBP-15-15, 81 NRC 612 (2015)
- Ciba-Geigy Corp. v. Environmental Protection Agency*, 801 F.2d 430, 436 (D.C. Cir. 1986)
reviewing proposed actions improperly intrudes into NRC's decisionmaking process; LBP-15-15, 81 NRC 610 (2015)
- Citizens Awareness Network, Inc. v. NRC*, 59 F.3d 284, 295 (1st Cir. 1995)
NRC expressly altered the policy and application of 10 C.F.R. 50.59 as it related to decommissioning activities, permitting licensee to dismantle major structural components without prior NRC approval of a final decommissioning plan; CLI-15-14, 81 NRC 734 n.21 (2015)
- Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985)
NEPA-required alternatives discussion need not include every possible alternative, but rather every reasonable alternative; LBP-15-3, 81 NRC 104 (2015)
- Citizens for Safe Power, Inc. v. NRC*, 524 F.2d 1291, 1294 n.5 (D.C. Cir. 1975)
appeal board's ruling that the environmental impact statement was deemed modified by the parties' stipulations at hearing did not violate the letter or spirit of NEPA; CLI-15-6, 81 NRC 388 n.255 (2015)
- City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990)
agency violates NEPA by failing to rigorously explore and objectively evaluate all reasonable alternatives to the proposed action; LBP-15-15, 81 NRC 607 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 89 (1993)
pressurized water reactor pressure vessel surveillance program relies on physical material samples, also known as specimens, capsules, or coupons; LBP-15-17, 81 NRC 761 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 89, 90 (1993)
proximity presumption applied where petitioners' contention concerned a license amendment to move the schedule for withdrawal of reactor vessel material specimens from the technical specifications to the updated safety analysis report; LBP-15-17, 81 NRC 773 (2015)

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- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 91 (1993)
if a license were amended, the public only means to participate in future schedule changes would be through a request for action under 10 C.F.R. 2.206; LBP-15-17, 81 NRC 773 n.124 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993)
contemporaneous judicial concepts of standing are applied in NRC proceedings; LBP-15-17, 81 NRC 770 (2015); LBP-15-19, 81 NRC 819 (2015)
under judicial concepts of standing, petitioner must allege a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-15-5, 81 NRC 255-56 (2015); LBP-15-13, 81 NRC 463(2015); LBP-15-17, 81 NRC 770 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 95 (1993)
petitioners had proximity-based standing even though they did not provide a reactor vessel failure scenario; LBP-15-17, 81 NRC 774 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 95-96 (1993)
license amendments related to reactor pressure vessel embrittlement present an obvious potential for offsite public health and safety consequences; LBP-15-17, 81 NRC 773 (2015)
material condition of a plant's reactor vessel obviously bears on the health and safety of those members of the public who reside in the plant's vicinity; LBP-15-20, 81 NRC 837 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 317 (1996)
long-term exposure to neutron radiation and elevated temperatures in a reactor vessel decrease the vessel materials' fracture toughness; LBP-15-20, 81 NRC 832-33 (2015)
Part 50, Appendix H directs licensees to attach a particular number of surveillance capsules to specified areas within the reactor vessel; LBP-15-20, 81 NRC 838 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 321 (1996)
license amendment is not required to change the reactor vessel surveillance capsule testing schedule; LBP-15-20, 81 NRC 842 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 322 (1996)
nature of a reactor vessel surveillance capsule withdrawal schedule is such that modifications may need to be made; LBP-15-20, 81 NRC 842 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 326 (1996)
agency actions not formally labeled as license amendments nevertheless can constitute de facto license amendments and accordingly trigger hearing rights for the public under Atomic Energy Act § 189a; CLI-15-5, 81 NRC 334 (2015); CLI-15-14, 81 NRC 741 (2015)
key factors to consider when determining whether agency action constitutes a de facto license amendment are whether the agency action granted licensee any greater authority or otherwise altered the original terms of the license; CLI-15-5, 81 NRC 334 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 326-28 (1996)
scope of the referral is limited to whether NRC granted licensee greater authority than that provided by its existing licenses or otherwise altered the terms of its existing licenses, thereby entitling petitioner to an opportunity to request a hearing; CLI-15-14, 81 NRC 734 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 327 (1996)
any changes to the material specimen withdrawal schedule that conform to the ASTM standard referenced in Appendix H will not alter the plant's license; LBP-15-20, 81 NRC 842 (2015)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-96-13, 44 NRC 315, 328 (1996)
ASTM Standard E 185 anticipates that during the course of a nuclear power plant's life the surveillance capsule withdrawal schedule may need to be revised and allows and provides for such changes; LBP-15-20, 81 NRC 842 (2015)

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- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1 and 2), ALAB-820, 22 NRC 743, 746 n.8 (1985)
upon a strong showing of irreparable injury, stay movant need not always establish a high probability of success on the merits; LBP-15-2, 81 NRC 54 (2015)
- Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162, 1174 (10th Cir. 1999)
NEPA requires that an actual range of alternatives be considered, so that the Act will preclude agencies from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only applicant's proposed project; LBP-15-15, 81 NRC 607 n.57 (2015)
- Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 191 (1999)
proximity presumption applies in more limited license amendment proceedings only if the proposed amendment obviously entails an increased potential for offsite consequences; LBP-15-17, 81 NRC 770-71 (2015)
- Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-00-5, 51 NRC 90, 94-98 (2000)
Congress intentionally limited the opportunity for a hearing to certain designated agency actions which do not include exemptions; LBP-15-18, 81 NRC 797 n.20 (2015)
- Communities, Inc. v. Busey*, 956 F.2d 619, 627 (6th Cir. 1992)
discussion of alternatives that present severe engineering requirements or are imprudent for reasons including their high cost, safety hazards, and operational difficulties are excluded under NEPA; LBP-15-3, 81 NRC 104-05 (2015)
reasonable alternatives under NEPA do not include alternatives that are impractical, that present unique problems, or that cause extraordinary costs; LBP-15-3, 81 NRC 104 (2015)
- Connecticut Bankers Association v. Board of Governors*, 627 F.2d 245, 251 (D.C. Cir. 1980)
petitioners are required to make a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate; LBP-15-20, 81 NRC 850, 860 (2015)
- Connecticut Light & Power Co. v. NRC*, 673 F.2d 525, 530-31 (D.C. Cir.), *cert. denied*, 459 U.S. 835 (1982)
preamble to notice of proposed rulemaking addresses agency's duty to identify and make available technical studies and data that it has employed in reaching the decisions to propose particular rules; LBP-15-15, 81 NRC 612-13 (2015)
- Consolidated Edison Co. of New York* (Indian Point, Units 1 and 2), CLI-01-19, 54 NRC 109, 134 (2001)
mere notice pleading is insufficient, but requirement for contention specificity and factual support rather than vague or conclusory statements is not intended to prevent intervention when material and concrete issues exist; LBP-15-20, 81 NRC 852-53 & n.140 (2015)
- Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409 (2007)
interests that representative organization seeks to protect must be germane to its own purpose, and neither the asserted claim nor the required relief must require an individual member to participate in the organization's legal action; LBP-15-5, 81 NRC 256, 257 (2015); LBP-15-17, 81 NRC 771 (2015)
- Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 411-12 (2007)
organization that seeks representational standing must show that at least one of its members would be affected by the proceeding, identify that member by name and address, show that the member would have standing to intervene in his/her own right, and that identified member has authorized the organization to request a hearing on his/her behalf; LBP-15-5, 81 NRC 256 (2015)
to demonstrate organizational standing, petitioner must show a discrete injury to the organization itself; LBP-15-5, 81 NRC 256 (2015)
- Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 414 n.49 (2007)
contention admissibility criteria are strict by design but should not be turned into a fortress to deny intervention; LBP-15-20, 81 NRC 855-56 (2015)
- Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-22, 65 NRC 525, 529 (2007)
challenges based on 10 C.F.R. 50.61a and the question of whether applicant demonstrated substantial advantage under 10 C.F.R. Part 50, Appendix H as a reason to not test capsules are beyond the scope of a license amendment proceeding, which concerns compliance with Appendix G of 10 C.F.R. Part 50; LBP-15-20, 81 NRC 862 (2015)

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- issues addressed in a separate proceeding are beyond the scope of a later proceeding; LBP-15-20, 81 NRC 862 n.200 (2015)
- Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 350-51 (2009)
- issue of alleged failure to consult with a tribe is material and within the scope of materials license proceeding; LBP-15-16, 81 NRC 643 n.143 (2015)
- Crow Butte Resources, Inc.* (Marsland Expansion Area), CLI-14-2, 79 NRC 11, 20 n.49 (2014)
- contention claiming that NRC Staff's consultation was inadequate does not ripen until issuance of Staff's draft environmental impact statement; LBP-15-5, 81 NRC 280 n.178 (2015)
- Crow Butte Resources, Inc.* (Marsland Expansion Area), CLI-14-2, 79 NRC 11, 26 (2014)
- Commission affords substantial deference to licensing boards' contention admission decisions; CLI-15-6, 81 NRC 355 (2015)
- Crow Butte Resources, Inc.* (Marsland Expansion Area), LBP-13-6, 77 NRC 253, 292 (2013), *aff'd*, CLI-14-2, 79 NRC 11 (2014)
- requirement that a contention refer to specific portions of the application ensures that the board will be able to determine whether the contention is within the scope of the proceeding and that applicant knows which portions of the application it must defend; LBP-15-20, 81 NRC 861-62 (2015)
- Crow Butte Resources, Inc.* (Marsland Expansion Area), LBP-13-6, 77 NRC 253, 293 (2013), *aff'd*, CLI-14-2, 79 NRC 11 (2014)
- requirement that a contention refer to specific portions of the application is satisfied when a commonsense reading of the petition makes abundantly clear which sections of the application petitioners are challenging, even though petitioners do not specifically cite particular sections; LBP-15-20, 81 NRC 862 (2015)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 549-50 (2009)
- lack of prejudice, standing alone, does not excuse an untimely filing, but it is a factor the Commission has considered in determining whether good cause exists; LBP-15-4, 81 NRC 164 n.40 (2015)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552 (2009)
- boards have the authority to reformulate contentions to consolidate issues for a more efficient proceeding; LBP-15-17, 81 NRC 780 n.165 (2015)
- boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-15-5, 81 NRC 262, 270 n.116, 273 (2015); LBP-15-13, 81 NRC 468 n.66 (2015)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552-53 (2009)
- to eliminate the inadmissible issue of tribal notification and to clarify the scope of the subsistence consumption issue, board narrows and reformulates a contention; LBP-15-5, 81 NRC 281 n.194 (2015)
- Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009)
- when 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-15-1, 81 NRC 39 (2015)
- 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 environmental impact statement, or mistakenly asserts the application does not address a relevant issue, will be dismissed; LBP-15-1, 81 NRC 37 (2015)
- Cuomo v. NRC*, 772 F.2d 972, 974 (D.C. Cir. 1985)
- upon a strong showing of irreparable injury, stay movant need not always establish a high probability of success on the merits; LBP-15-2, 81 NRC 54 (2015)
- Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 150 (1995)
- NRC Staff guidance documents do not have the force of law and boards are not bound to follow them; CLI-15-6, 81 NRC 358 (2015)
- where NRC guidance document is not directly applicable to the issue at hand, the presiding officer is afforded greater leeway in its application; CLI-15-6, 81 NRC 358 n.86 (2015)

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- Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 170 (1995)
contention that regulatory provisions are themselves insufficient to protect the public health and safety constitutes an improper collateral attack on NRC regulations; LBP-15-4, 81 NRC 167 n.64 (2015)
- Curators of the University of Missouri* (TRUMP-S Project), CLI-95-8, 41 NRC 386, 395-96 (1995)
adequacy of NRC Staff's review is not a litigable issue in a licensing case; CLI-15-9, 81 NRC 531 (2015)
- David Geisen*, CLI-09-23, 70 NRC 935, 936 & n.4 (2009)
irreparable injury is the most important of the factors for grant or denial of a stay; LBP-15-2, 81 NRC 53-54 (2015)
- David Geisen*, CLI-10-23, 72 NRC 210 (2010)
oversight activities at times involve enforcement actions, including orders and civil penalties, to which a hearing right or opportunity attaches; CLI-15-5, 81 NRC 338 n.52 (2015)
- David Geisen*, CLI-10-23, 72 NRC 210, 220 (2010)
Commission gives substantial deference to licensing board findings of fact and will not overturn a board's factual findings unless they are not even plausible in light of the record viewed in its entirety; CLI-15-9, 81 NRC 522 (2015)
- David Geisen*, CLI-10-23, 72 NRC 210, 224-25 (2010)
Commission reviews questions of law de novo, but defers to a board's findings with respect to the underlying facts unless they are clearly erroneous; CLI-15-7, 81 NRC 493 (2015); CLI-15-9, 81 NRC 519 (2015)
to show clear error, petitioner must show that the board's determination is not even plausible in light of the record as a whole; CLI-15-7, 81 NRC 493 (2015); CLI-15-9, 81 NRC 519 (2015)
- David Geisen*, CLI-10-23, 72 NRC 210, 225 (2010)
mere presence of evidence supporting both sides does not call for Commission review, where it appears that the board considered all the evidence and arguments before it; CLI-15-7, 81 NRC 497 n.96 (2015)
- Detroit Edison Co.* (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-470, 7 NRC 473, 474 n.1 (1978)
mother was denied standing based on her son's residence within 50 miles of a power plant, because she herself lived more than 50 miles away; LBP-15-17, 81 NRC 775 n.135 (2015)
parent could attain proximity-based standing through reference to her child if the child was a minor or otherwise under a legal disability and thus unable to participate; LBP-15-17, 81 NRC 775 n.139 (2015)
- Detroit Edison Co.* (Enrico Fermi Atomic Power Plant, Unit 2), LBP-78-37, 8 NRC 575, 584-85 (1978)
special circumstances required to obtain a rule waiver have been described as a prima facie showing that application of a rule in a particular way would not serve the purposes for which the rule was adopted; LBP-15-5, 81 NRC 272 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 255 (2009)
petitioners cannot argue for an analysis different from that required by regulation; LBP-15-20, 81 NRC 845 (2015)
when an NRC regulation permits use of a particular analysis, a contention asserting that a different analysis or technique should be used is inadmissible because it indirectly attacks NRC's regulations; LBP-15-20, 81 NRC 845 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 262, *aff'd*, CLI-09-22, 70 NRC 932 (2009)
environmental considerations that the environmental report must discuss are equivalent to, and in most instances verbatim restatements of, environmental considerations that NEPA requires the agency to describe in detail in the environmental impact statement; LBP-15-5, 81 NRC 265 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 267, *aff'd*, CLI-09-22, 70 NRC 932 (2009)
contention quotes text from a notice of proposed rulemaking, but it never ties the statements from the NOPR to any specific section of the environmental assessment, and thus fails to raise a genuine dispute with the EA; LBP-15-15, 81 NRC 614 n.111 (2015)
when an application is alleged to be deficient, petitioner must identify the deficiencies and provide supporting reasons for its position that such information is required; LBP-15-1, 81 NRC 37 (2015)

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- when an NRC regulation permits use of a particular analysis, a contention asserting that a different analysis or technique should be used is inadmissible because it indirectly attacks the Commission's regulations; LBP-15-17, 81 NRC 782 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 279-80 (2009)
contention that environmental report failed to explain whether a discharge pipe with phosphoric acid as a corrosion inhibitor would increase algae production and potential for toxic algal blooms is admissible; LBP-15-5, 81 NRC 305 n.393 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-10-9, 71 NRC 493, 510-11 (2010)
contention that raised two distinct issues is best divided into separate contentions; LBP-15-5, 81 NRC 268 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-12-23, 76 NRC 445, 454-55 (2012)
harmful algae blooms from *Lyngbya wollei* are unlikely to form in unsheltered areas; LBP-15-5, 81 NRC 305 n.393 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-12-23, 76 NRC 445, 469 (2012)
agency preparing the NEPA document must explain the statutory or regulatory requirements it is relying on and its reasons for concluding that the application of those requirements will actually result in the mitigation and monitoring it assumes will occur; LBP-15-11, 81 NRC 432 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-12-23, 76 NRC 445, 470-71 (2012)
board may construe an admitted contention contesting applicant's environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the necessity for intervenors to file a new or amended contention; LBP-15-11, 81 NRC 410 n.38 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-12-23, 76 NRC 445, 486 n.259 (2012)
environmental impact statement must discuss any adverse environmental effects that cannot be avoided should the proposal be implemented and must provide a reasonably complete discussion of possible mitigation measures; LBP-15-11, 81 NRC 431 n.189 (2015)
- Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), LBP-14-9, 80 NRC 15, 41 (2014)
action lacks independent utility when it would be irrational or unwise to pursue the action without the presence of the EIS-generating central action; LBP-15-16, 81 NRC 697 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003)
contention admissibility requirements seek to ensure that NRC hearings serve to adjudicate genuine, substantive safety and environmental issues placed in contention by qualified intervenors; CLI-15-8, 81 NRC 504 (2015)
contention admission standards are strict by design and exist to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-15-5, 81 NRC 258 (2015); LBP-15-11, 81 NRC 407 (2015); LBP-15-15, 81 NRC 601 (2015); LBP-15-17, 81 NRC 777 (2015); LBP-15-20, 81 NRC 867-68 (2015)
contentions need to have some reasonably specific factual or legal basis; CLI-15-8, 81 NRC 504 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 219 (2003)
NRC deliberately raised the admission standards for contentions to obviate serious hearing delays caused in the past by poorly defined or poorly supported contentions; LBP-15-1, 81 NRC 38 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-08-17, 68 NRC 231, 233 (2008)
board declines to entertain contentions based on little more than speculation, which represent negligible knowledge of the issues being challenged; LBP-15-1, 81 NRC 43 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 123 n.39 (2009)
contention fails because it contests NRC Staff's safety review rather than the license renewal application; LBP-15-15, 81 NRC 614 n.111 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 125-26 (2009)
most important among the late-filing factors is that intervenors demonstrate good cause; LBP-15-1, 81 NRC 30 n.73 (2015)

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- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001)
contention admissibility standards are strict by design; CLI-15-8, 81 NRC 504 (2015); LBP-15-19, 81 NRC 820 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358-59 (2001)
admissible contention must meet six pleading requirements; LBP-15-17, 81 NRC 777 (2015)
board declines to entertain contentions based on little more than speculation, which represent negligible knowledge of the issues being challenged; LBP-15-1, 81 NRC 43 (2015)
rules on contention admissibility are strict by design; LBP-15-5, 81 NRC 258 (2015); LBP-15-20, 81 NRC 867-68 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 359 (2001)
petitioners must articulate at the outset the specific issues they wish to litigate as a prerequisite to gaining formal admission as parties; CLI-15-9, 81 NRC 529 n.110 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551 (2005)
rule waiver may be granted only upon a showing that all four factors of 10 C.F.R. 2.335 have been satisfied; LBP-15-6, 81 NRC 325-26 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005)
petition for waiver of a specific NRC regulation must satisfy a four-factor test; LBP-15-17, 81 NRC 778 n.156 (2015)
special circumstances required to obtain a rule waiver have been described as a prima facie showing that application of a rule in a particular way would not serve the purposes for which the rule was adopted; LBP-15-5, 81 NRC 272 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 560-61 (2005)
challenges to emergency planning fall outside the scope of a license renewal proceeding; LBP-15-5, 81 NRC 296, 299 n.340 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 561 (2005)
it makes no sense to spend the parties' and NRC's own valuable resources litigating allegations of current deficiencies in a proceeding that is directed to future-oriented issues of aging; LBP-15-6, 81 NRC 326 (2015)
NRC regulations provide two other procedural mechanisms under 10 C.F.R. 2.206 and 2.802 by which petitioner may pursue its concerns about current deficiencies; LBP-15-6, 81 NRC 326 (2015)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 565 & n.60 (2005)
publication in the Federal Register is legally sufficient notice to all affected people; LBP-15-5, 81 NRC 280 n.181 (2015)
- Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 222 n.21 (2007)
Council on Environmental Quality regulations provide guidance on agency compliance with NEPA and not binding on NRC when the agency has not expressly adopted them, but are entitled to considerable deference; LBP-15-16, 81 NRC 636 (2015)
- Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 265 (2004)
providing any material or document as a basis for a contention without setting forth an explanation of its significance, is inadequate to support admission of that contention; LBP-15-20, 81 NRC 865 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2), CLI-15-4, 81 NRC 221 (2015)
motion to reopen regarding spent nuclear fuel was denied; LBP-15-14, 81 NRC 592 (2015)

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- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2), LBP-15-5, 81 NRC 249, 286 (2015)
pleadings submitted by pro se petitioners are afforded greater leniency than petitions drafted with the assistance of counsel; LBP-15-13, 81 NRC 468 n.65 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-7, 80 NRC 1, 5 & n.11, 10 (2014)
suspension request that would have halted final licensing decisions pending action on a petition for rulemaking regarding the Staff's review of the potential expedited transfer of spent fuel from pools to dry casks was denied; CLI-15-13, 81 NRC 564 n.42 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-7, 80 NRC 1, 7 n.22 (2014)
where petition fails on the merits, the Commission need not address procedural issues; CLI-15-10, 81 NRC 539 n.8 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-9, 80 NRC 147, 149-50 (2014)
Commission exercised its supervisory authority and dismissed proposed waste confidence safety contention and denied suspension petitions; CLI-15-13, 81 NRC 563-64 (2015); LBP-15-1, 81 NRC 22 (2015); LBP-15-8, 81 NRC 394 (2015); LBP-15-9, 81 NRC 397 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-10, 80 NRC 157, 164 n.38 (2014)
boards are given broad discretion in the conduct of NRC adjudicatory proceedings, and the Commission generally defers to board case-management decisions; LBP-15-15, 81 NRC 615 n.114 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-14-10, 80 NRC 157, 164 n.39 (2014)
NRC Rules of Practice provide the board with substantial authority to regulate hearing procedures; LBP-15-15, 81 NRC 615 n.114 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221 (2015)
waste confidence issues are addressed; CLI-15-7, 81 NRC 484 n.9 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221, 223-24 (2015)
Commission declined to admit new safety-related waste confidence contentions and denied suspension petitions; LBP-15-8, 81 NRC 394 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221, 223-24, 225 (2015)
Commission exercised its supervisory authority and dismissed proposed waste confidence safety contention and denied suspension petitions; CLI-15-13, 81 NRC 563-64 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221, 223-24, 242 (2015)
Commission denied suspension petitions and intervenors' motion to admit new continued storage safety findings contentions; LBP-15-9, 81 NRC 397 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221, 239 n.100 (2015)
where petition fails on the merits, the Commission need not address procedural issues; CLI-15-10, 81 NRC 539 n.8 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-4, 81 NRC 221, 242 (2015)
Commission denied motions for leave to file new contentions concerning the Continued Storage Rule; LBP-15-7, 81 NRC 392 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-10, 81 NRC 535 (2015)
Commission denied petition to supplement and declined to admit "placeholder" contention; CLI-15-13, 81 NRC 564 (2015)
- DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-15-12, 81 NRC 551 (2015)
contention that supplementation of the environmental impact statement is necessary to allow members of the public to lodge placeholder contentions challenging Commission reliance, in individual licensing proceedings, on the Continued Storage GEIS and Continued Storage Rule is inadmissible; CLI-15-10, 81 NRC 538 n.7 (2015); CLI-15-13, 81 NRC 564 (2015); CLI-15-15, 81 NRC 805 (2015)
- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 67 (2004)
licensing boards cannot superintend the conduct of NRC Staff's technical reviews; LBP-15-2, 81 NRC 52 (2015)

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- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-19, 60 NRC 5, 12 (2004)
when the Commission has determined that compliance with a regulation is sufficient to provide for reasonable assurance of public health and safety, a licensing board cannot impose requirements that exceed those in the regulation; LBP-15-20, 81 NRC 848 n.108 (2015)
- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-21, 60 NRC 21, 27 (2004)
boards have considerable discretion in their evidentiary rulings; CLI-15-6, 81 NRC 383 (2015)
- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), LBP-04-10, 59 NRC 296, 309 (2004)
contention presenting a genuine dispute on a material issue should either reference specific portions of the application in dispute or identify omissions in the application, as well as provide supporting reasons; LBP-15-1, 81 NRC 37 n.117 (2015)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-01-20, 54 NRC 211, 212 (2001)
scope of a license renewal safety review is limited to plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited aging analyses; LBP-15-6, 81 NRC 321 (2015)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 3-7 (2002)
inadequacy in the severe accident mitigation alternatives analysis is material if license renewal applicant failed to consider complete information without justifying why particular information was omitted; LBP-15-5, 81 NRC 298 (2015)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 5 (2002)
severe accident mitigation alternatives review identifies and assesses possible changes, such as improvements in hardware, training, or procedures, that could cost-effectively mitigate the environmental impacts that would otherwise flow from a potential severe accident; LBP-15-5, 81 NRC 260 (2015)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 7 (2002)
hard look under NEPA is subject to a rule of reason, and consideration of environmental impacts need not address all theoretical possibilities, but only those that have some reasonable possibility of occurring; LBP-15-16, 81 NRC 638 (2015)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 363 (2002)
license renewal safety review is limited to licensee's management of aging for certain systems, structures, and components, and review of time-limited aging analyses; LBP-15-5, 81 NRC 259 (2015)
- 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)
contentions of omission and contentions of inadequacy are defined; LBP-15-5, 81 NRC 284 n.213 (2015)
- 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)
facts relied on to support a contention of omission need not show that the facility cannot be safely operated, but only that the application is incomplete; LBP-15-5, 81 NRC 258 (2015)
if applicant cures the omission cited in a contention, the contention will become moot unless revised by intervenors; LBP-15-5, 81 NRC 258 (2015)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 431-32 (2003)
in judging whether NRC Staff took the NEPA-mandated hard look, the Board reviewed the proposed mitigation programs to ensure that sufficient detail was provided on mitigation measures to show a fair agency evaluation of mitigation and environmental consequences, and that NRC Staff did not ignore or minimize pertinent environmental effects; LBP-15-16, 81 NRC 688 (2015)

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- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)
although an admissible contention requires no more than some minimal factual and legal foundation in support, the Commission expects that in almost all instances a petitioner must go beyond merely quoting a request for additional information to justify admission; LBP-15-1, 81 NRC 42 (2015)
contention admissibility requirements seek to ensure that NRC hearings serve to adjudicate genuine, substantive safety and environmental issues placed in contention by qualified intervenors; CLI-15-8, 81 NRC 504 (2015)
contention rule reflects a deliberate effort to prevent the major adjudicatory delays caused in the past by ill-defined or poorly supported contentions that were admitted for hearing although based on little more than speculation; CLI-15-8, 81 NRC 504 (2015)
intervention petitioner may not attack generic NRC requirements or regulations or express generalized grievances about NRC policies; CLI-15-9, 81 NRC 527-28 n.98 (2015)
to meet the section 2.309(f)(1)(v) requirement for providing factual and expert support, petitioners must proffer at least some minimal factual and legal foundation in support of their contentions; LBP-15-1, 81 NRC 38 (2015)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334-35 (1999)
admissible contention must meet six pleading requirements; LBP-15-17, 81 NRC 777 (2015)
contention admissibility criteria are strict by design; LBP-15-5, 81 NRC 258 (2015); LBP-15-20, 81 NRC 867-68 (2015)
NRC deliberately raised the admission standards for contentions to obviate serious hearing delays caused in the past by poorly defined or poorly supported contentions; LBP-15-1, 81 NRC 38 (2015)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 335 (1999)
contention admissibility criteria are strict by design but should not be turned into a fortress to deny intervention; LBP-15-20, 81 NRC 855-56 (2015)
contentions shall not be admitted if at the outset they are not described with reasonable specificity or are not supported by some alleged fact demonstrating a genuine material dispute; LBP-15-1, 81 NRC 38 (2015)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336 (1999)
issuance of a request for additional information does not alone establish deficiencies in an application or that NRC Staff will go on to find any of applicant's clarifications, justifications, or other responses to be unsatisfactory; CLI-15-8, 81 NRC 506 n.47 (2015)
petitioners must do more than rest on the mere existence of requests for additional information as a basis for their contention; CLI-15-8, 81 NRC 506 n.47 (2015)
requests for additional information are a routine means for NRC Staff to ask for clarification or additional corroborating information from an applicant; CLI-15-8, 81 NRC 506 (2015)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 337 (1999)
contention must explain what specific deficiencies exist and why they materially impact the license renewal application or environmental impact statement; LBP-15-1, 81 NRC 37 (2015)
contention quotes text from a notice of proposed rulemaking, but it never ties the statements from the NOPR to any specific section of the environmental assessment, and thus fails to raise a genuine dispute with the EA; LBP-15-15, 81 NRC 614 n.111, 617 (2015)
requests for additional information reflect followup questions, an ongoing dialogue between NRC Staff and applicant; CLI-15-8, 81 NRC 506 (2015)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 341 (1999)
intervenor must do more than point to issues with the shield building, but must also indicate what is wrong with applicant's response and its amended inspection program and why intervenor believes the particular inspection program makes the license renewal application unacceptable; LBP-15-1, 81 NRC 40 (2015)
intervenors must develop a fact-based argument that actually and specifically challenges the application; LBP-15-1, 81 NRC 42 (2015)
intervenors' requests for more testing, more methods of testing, and more information, without an explanation of why the current program is inadequate, are not sufficient to create a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 41 n.150 (2015)

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- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999)
 contention that impermissibly challenges an agency regulation is outside the scope of an individual licensing proceeding and is therefore inadmissible; CLI-15-11, 81 NRC 549 (2015)
 contentions that are the subject of general rulemaking by NRC may not be litigated in individual licensing proceedings; LBP-15-17, 81 NRC 778 (2015)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985)
 scope of the proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-15-20, 81 NRC 849 (2015)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1048-49 (1983)
 NRC Staff's safety analysis and environmental analysis occur separately, and intervenors are expected to raise safety challenges in response to the safety reports and environmental challenges in response to the environmental statements; LBP-15-11, 81 NRC 423 n.132 (2015)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983)
 burden of NEPA compliance lies with NRC Staff; LBP-15-2, 81 NRC 57 n.63 (2015); LBP-15-3, 81 NRC 84 (2015); LBP-15-16, 81 NRC 641 (2015)
 environmental contentions are expected in response to applicant's or NRC Staff's environmental reviews, and contentions regarding their adequacy cannot be expected to be proffered at an earlier stage of the proceeding before the documents are available; LBP-15-11, 81 NRC 423 n.132 (2015)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), LBP-82-116, 16 NRC 1937, 1946 (1982)
 Commission must find that activities authorized by a license amendment can be conducted without endangering the health and safety of the public and will be in compliance with Commission regulations; LBP-15-20, 81 NRC 841 (2015)
 contention about a matter not covered by a specific rule need only allege that it poses a significant safety problem; LBP-15-20, 81 NRC 847-48, 854 n.151 (2015); LBP-15-17, 81 NRC 787 (2015)
 petitioners' contention challenges the sufficiency of the equivalent margins analysis to provide reasonable assurance of reactor safety and is therefore within the scope of the proceeding; LBP-15-20, 81 NRC 849 (2015)
 petitioners may raise issues not addressed by a specific regulation when unique features in the facility or ongoing development of a generic solution mean that there are some gaps in the regulatory scheme that must be addressed on a case-by-case basis; LBP-15-20, 81 NRC 840 (2015)
- Ecology Action v. AEC*, 492 F.2d 998, 1001-02 (2d Cir. 1974)
 deficiency in a final environmental impact statement is not automatic ground for reversal of an order granting a permit although the issue has been opened for full consideration in an agency hearing; CLI-15-6, 81 NRC 388 n.255 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 300-01 (2010)
 licensing board failed to provide sufficient justification for rejecting a challenge to applicant's meteorological model where the petitioners pointed to site-specific meteorological patterns to argue that the model and inputs were inaccurate and insufficiently conservative; LBP-15-20, 81 NRC 852 n.139 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 308-09 (2010)
 in interpreting the scope of an admitted contention, boards look back to the bases set forth in support of the contention; CLI-15-9, 81 NRC 529 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 309 (2010)
 NRC adjudications are limited to the scope of admitted contentions; CLI-15-9, 81 NRC 529 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 311 & n.121 (2010)
 failure to offer factual support for the proposition that applicant's inputs for evacuation times are flawed or unreasonable or that its sensitivity analysis of these inputs was incorrect renders a contention inadmissible; LBP-15-5, 81 NRC 299 n.339 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 313-14 (2010)
 failure to offer factual support for the proposition that applicant's inputs for evacuation times are flawed or unreasonable or that its sensitivity analysis of these inputs was incorrect renders a contention inadmissible; LBP-15-5, 81 NRC 299 n.338 (2015)

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- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 315 (2010)
NEPA does not require the adoption of best practices, particularly in the face of a potentially significant resource commitment; LBP-15-3, 81 NRC 93 (2015)
NRC Staff must have some discretion to draw the line and move forward with decisionmaking; LBP-15-16, 81 NRC 638 n.100 (2015)
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-15-3, 81 NRC 82 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 316 (2010)
generic environmental impact statement findings with respect to severe accident consequences are not subject to challenge in individual license renewal proceedings; CLI-15-6, 81 NRC 380 n.214 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 453-56 (2010)
safety issue that does not involve aging management issues is outside the scope of a license renewal proceeding; LBP-15-5, 81 NRC 264 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 459-60 (2010)
because petitioner has not shown how a proposed plan would fail to ensure that buried pipes continue to fulfill their intended safety purposes, the contention is inadmissible; LBP-15-5, 81 NRC 295 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 463 (2010)
regulatory process continuously reassesses whether there is a need for additional oversight or regulations to protect public health and safety; LBP-15-4, 81 NRC 175 n.105 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 465-67 (2010)
with respect to the definition of “reasonable assurance,” applicant is required to show that safety features will fulfill their intended function, not that every structure will maintain its current licensing basis throughout the renewal period; LBP-15-5, 81 NRC 295 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 471 (2010)
license renewal applicants need not provide site-specific analyses of environmental impacts of subjects identified as Category 1 issues; LBP-15-5, 81 NRC 266 n.92 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 473-76 (2010)
generic environmental impact statement for spent fuel pools is not limited to discussing only normal operations, but also discusses potential accidents and other nonroutine events, and thus need not be included in the severe accident mitigation alternatives analysis for license renewal; LBP-15-5, 81 NRC 307 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010)
environmental impact statement is not intended to be a research document; LBP-15-3, 81 NRC 82 (2015); LBP-15-16, 81 NRC 638 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-1, 75 NRC 39, 61 (2012)
section 51.102(c) has been consistently interpreted to provide that environmental impact statements are modified by any subsequent board or Commission decision; CLI-15-6, 81 NRC 388 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 139 n.41 (2012)
Commission discourages incorporating pleadings or arguments by reference; LBP-15-5, 81 NRC 290 n.263 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-3, 75 NRC 132, 140-41 (2012)
heavy barrier to reopening applies whenever an adjudication has been closed and not merely after a case has been terminated following a full evidentiary hearing on the merits; LBP-15-14, 81 NRC 595 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-6, 75 NRC 352, 372-76 (2012)
admission of a “placeholder” contention is not necessary to ensure that petitioner’s challenges to the Continued Storage Rule and GEIS receive a full and fair airing; CLI-15-11, 81 NRC 550 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 488-89 (2012)
material difference must exist between information on which a contention is based and information that was previously available, e.g., a difference between the environmental report and the draft EIS or the draft EIS and the final EIS; CLI-15-1, 81 NRC 7 (2015)

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- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-10, 75 NRC 479, 492-94 (2012)
petitioners who choose to wait to raise contentions that could have been raised earlier risk the possibility that there will not be a material difference between the application and NRC Staff's review documents, thus rendering any newly proposed contention on previously available information impermissibly late; CLI-15-1, 81 NRC 7 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 706 (2012)
severe accident mitigation alternatives analysis is conducted pursuant to NEPA, and thus is an environmental issue, not a safety one; LBP-15-1, 81 NRC 28 n.67 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 714-15 (2012)
petitioners must offer more than speculation at the contention admission stage; LBP-15-5, 81 NRC 305 n.391 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 280-300 (2006)
contention that environmental report is inadequate insofar as it does not consider the risk of spent fuel pool fires is inadmissible; LBP-15-5, 81 NRC 306-07 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 356 (2006)
admissibility requirement generally is fulfilled when the sponsor of an otherwise acceptable contention provides a brief recitation of the factors underlying the contention or references to documents and texts that provide such reasons; LBP-15-1, 81 NRC 36-37 (2015)
intervenor do not point to any recitation of the factors underlying the contention or references to documents and texts that give the board reason to believe applicant's inspection program may lead to a material negative impact on public safety, or that an improved program will lead to any positive impact; LBP-15-1, 81 NRC 40 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-07-13, 66 NRC 131, 149 (2007)
petitioner's failure to address applicant's supplemental economic analyses, demonstrate specific knowledge of the analysis, and not indicate, even broadly, that the SAMA economic cost-benefit conclusions are not sufficiently conservative renders a contention inadmissible; LBP-15-5, 81 NRC 299 n.339 (2015)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-12-16, 76 NRC 44, 59-60 (2012)
licensing board lacks authority to hold a hearing on the adequacy of a different agency's regulations; LBP-15-5, 81 NRC 306 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-11-14, 74 NRC 801, 809-10 (2011)
issues raised in an intervention petition or answer are within the appropriate scope of a reply brief; LBP-15-5, 81 NRC 304 n.386 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-15-6, 81 NRC 340, 354-56 (2015)
petitioners may challenge a Staff guidance document such as a Regulatory Guide; LBP-15-20, 81 NRC 846-47 & n.100 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-15-6, 81 NRC 340, 356, 358 n.85, 359 (2015)
NRC Staff guidance is entitled to special weight in a decision on the merits; LBP-15-20, 81 NRC 847 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-15-6, 81 NRC 340, 359 (2015)
boards should accord special weight to NRC Staff guidance; LBP-15-16, 81 NRC 659 n.242 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 112 (2008)
contention that population used for analysis might underestimate the exposed population in a severe accident and, in turn, underestimate the benefit achieved in implementing a severe accident mitigation alternatives analysis is admissible; LBP-15-5, 81 NRC 298 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 86, *aff'd*, CLI-08-28, 68 NRC 655 (2008)
commitment to develop a program by the time the 20-year extension begins does not demonstrate that the effects of aging will be adequately managed; LBP-15-1, 81 NRC 36 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 196 (2008)
to challenge a Category 1 issue such as public health, petitioner must request a waiver and show that unique circumstances warrant a site-specific determination; LBP-15-5, 81 NRC 302 n.365 (2015)

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- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-10-13, 71 NRC 673, 686-87 (2010)
contention that applicant's severe accident mitigation alternatives analysis is significantly flawed
because of the use of inaccurate factual assumptions about population is admissible; LBP-15-5, 81
NRC 297 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-11-17, 74 NRC 11, 20-22,
interlocutory review denied, CLI-11-14, 74 NRC 801, 803 (2011)
NEPA review in license renewal proceedings is not limited to aging management-related issues;
LBP-15-5, 81 NRC 260 (2015)
to evaluate a power reactor license renewal application, NRC reviews management of aging effects
and time-limited aging analysis of particular safety-related functions of the plant's systems,
structures, and components and environmental impacts and alternatives to the proposed action;
LBP-15-5, 81 NRC 259 (2015)
- Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-11-17, 74 NRC 11, 21 (2011)
severe accident mitigation alternatives analysis must be considered as part of the environmental report
and, ultimately, as part of NRC Staff's supplemental environmental impact statement for a power
reactor license renewal; LBP-15-5, 81 NRC 260 (2015)
severe accident mitigation alternatives fall within Category 2 and must therefore be addressed on a
site-specific basis; LBP-15-5, 81 NRC 260 (2015)
severe accident mitigation alternatives review identifies and assesses possible changes, such as
improvements in hardware, training, or procedures, that could cost-effectively mitigate the
environmental impacts that would otherwise flow from a potential severe accident; LBP-15-5, 81
NRC 260 (2015)
- Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-08-19, 68 NRC 251, 254 (2008)
radius for the proximity presumption has to be at least as large as the range where obvious offsite
consequences can occur; LBP-15-17, 81 NRC 773 (2015)
- Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-08-19, 68 NRC 251, 262 (2008)
contention filing deadlines support the Commission's interest in promoting efficient adjudication;
LBP-15-11, 81 NRC 409 n.32 (2015)
- Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), LBP-15-17, 81 NRC 753, 789 & n.237 (2015)
when the Commission has determined that compliance with a regulation is sufficient to provide for
reasonable assurance of public health and safety, a licensing board cannot impose requirements that
exceed those in the regulation; LBP-15-20, 81 NRC 848 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235,
237 (2006)
for a potential injury to be irreparable, it must be shown to be imminent, certain, and great;
LBP-15-2, 81 NRC 54 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235,
238 (2008)
if a board determines after full adjudication that the license amendment should not have been granted,
it may be revoked or conditioned; LBP-15-16, 81 NRC 658 n.235 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13,
17-18 (2007)
generic environmental analysis is incorporated into NRC regulations, and thus Category 1 generic
findings may not be challenged in individual licensing proceedings unless accompanied by a petition
for rule waiver; CLI-15-6, 81 NRC 350-51 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 20
(2007)
in theory, Commission approval of a rule waiver could allow a contention on a Category 1 issue to
proceed where special circumstances exist; CLI-15-6, 81 NRC 379 n.204 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 21
(2007)
because the probability of a spent fuel pool accident causing significant harm is remote, there is no
need for applicants to assess spent fuel pool accident mitigation alternatives as part of license
renewal; LBP-15-5, 81 NRC 266, 307 (2015)

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- no discussion of mitigation alternatives for Category 1 issues is necessary because NRC has already generically concluded that additional site-specific mitigation alternatives are unlikely to be beneficial; LBP-15-5, 81 NRC 266 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 11, 35 (2010)
- Commission reviews board's legal rulings de novo and will reverse them if they are contrary to established law; CLI-15-6, 81 NRC 351 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 45 n.246 (2010)
- pleadings submitted by pro se petitioners are afforded greater leniency than petitions drafted with the assistance of counsel; LBP-15-5, 81 NRC 286 n.234 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-11-2, 73 NRC 333, 338 (2011)
- given the need for finality in adjudications, reopening the record is an extraordinary action imposing a deliberately heavy burden on intervenor; LBP-15-14, 81 NRC 594 (2015)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), DD-06-2, 63 NRC 425 (2006)
- concerns about a facility's emergency plans may be raised at any time pursuant to 10 C.F.R. 2.206; CLI-15-6, 81 NRC 386 n.248 (2015)
- Entergy Nuclear Vermont Yankee* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 560-61 (2004)
- no significant hazards consideration determination is a procedural decision barred from litigation; LBP-15-17, 81 NRC 790 (2015)
- Exelon Generation Co., LLC* (Byron Nuclear Power Station, Units 1 and 2; Braidwood Nuclear Power Station, Units 1 and 2), CLI-14-6, 79 NRC 445, 449 (2014)
- once all contentions have been decided, the contested proceeding is terminated; LBP-15-9, 81 NRC 397 n.10 (2015)
- when there are no proffered or admitted contentions remaining in the adjudicatory proceeding, the board's jurisdiction terminates; LBP-15-12, 81 NRC 454 (2015)
- Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 807 (2005)
- hard look under NEPA is subject to a rule of reason, and consideration of environmental impacts need not address all theoretical possibilities, but only those that have some reasonable possibility of occurring; LBP-15-16, 81 NRC 638 (2015)
- Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-12-19, 76 NRC 377, 385-86 (2012)
- interpretation of statutes at issue and the regulations governing their implementation falls within the Commission's province; LBP-15-5, 81 NRC 302 n.363 (2015)
- pointing to alleged new and significant information is not enough to allow boards to adjudicate an issue resolved generically by regulation; LBP-15-5, 81 NRC 302 (2015)
- Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-12-19, 76 NRC 377, 385-88 (2012)
- it is a well-established principle that a petitioner in an adjudicatory proceeding cannot use one regulation to challenge another without first obtaining a waiver by showing special circumstances; LBP-15-4, 81 NRC 173 (2015)
- Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-12-19, 76 NRC 377, 387 (2012)
- to challenge a Category 1 issue such as public health, petitioner must request a waiver and show that unique circumstances warrant a site-specific determination; LBP-15-5, 81 NRC 302 n.365 (2015)
- Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-13-7, 78 NRC 199, 206-07 (2013)
- to obtain waiver of a rule, the allegation of special circumstances must be set forth with particularity and supported by an affidavit or other proof; LBP-15-5, 81 NRC 272 n.129 (2015)

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Exelon Generation Co., LLC (Limerick Generating Station, Units 1 and 2), CLI-13-7, 78 NRC 199, 207-09 (2013)

special circumstances required to obtain a rule waiver have been described as a prima facie showing that application of a rule in a particular way would not serve the purposes for which the rule was adopted; LBP-15-5, 81 NRC 272 (2015)

Exelon Nuclear Texas Holdings, LLC (Victoria County Station Site), LBP-11-16, 73 NRC 645, 667 (2011)

to be admissible, a contention must provide more than a bare assertion, but must explain the supporting reasons for the dispute raised in that contention; LBP-15-1, 81 NRC 42 (2015)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003)

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-15-1, 81 NRC 38-39, 42 (2015)

to be admissible, a contention must provide more than a bare assertion, and must explain the supporting reasons for the dispute raised; LBP-15-1, 81 NRC 42 (2015)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 204-05 (2003)

simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention; LBP-15-1, 81 NRC 39 (2015)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 205 (2003)

providing any material or document as a basis for a contention without setting forth an explanation of its significance, is inadequate to support admission of that contention; LBP-15-20, 81 NRC 865 (2015)

FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 395-96 (2012)

admissible contention must satisfy all six criteria of 10 C.F.R. 2.309(f)(1); LBP-15-4, 81 NRC 164 (2015); LBP-15-18, 81 NRC 798 (2015); LBP-15-20, 81 NRC 840 (2015)

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; LBP-15-1, 81 NRC 38 (2015)

FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 400-02 (2012)

it is not enough to demonstrate a theoretical possibility that wind farms spread across a wide area could provide consistent power, but rather petitioners must show concretely that wind could be a reliable, commercially viable source of baseload power during the license renewal period; LBP-15-5, 81 NRC 279 (2015)

FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 402, 405 (2012)

failure to reference specific sources showing that wind or other renewables are viable sources of baseload power within the service area renders a contention inadmissible; LBP-15-5, 81 NRC 279 (2015)

FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 404-05 (2012)

petitioner that fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v), also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi); LBP-15-1, 81 NRC 38 n.124 (2015)

FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 405 (2012)

failure to provide a direct critique of the analysis in the environmental report discussing the potential for offshore power and interconnected wind farms is a failure to identify a genuine dispute with the applicant; LBP-15-5, 81 NRC 279 (2015)

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- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 407 (2012)
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; LBP-15-5, 81 NRC 293 (2015)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 410-11 (2012)
petitioners must provide site-specific support to show that the severe accident mitigation alternatives analysis is unreasonable; LBP-15-5, 81 NRC 294 (2015)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 416 (2012)
to the extent petitioner is challenging the adequacy of computer modeling of plume variability, petitioner bears the burden of providing evidence specific to the license renewal applicant; LBP-15-5, 81 NRC 296-97, 299 (2015)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), LBP-15-1, 81 NRC 15, 30 n.72 (2015)
contentions proposed after the filing deadline, which would have been allowable under the previous 10 C.F.R. 2.309(f)(2) requirements, will also be allowable under the current section 2.309(c)(1) requirements; LBP-15-11, 81 NRC 408 n.30 (2015)
- FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), LBP-15-1, 81 NRC 15, 41 (2015)
contentions that request more testing, more methods of testing, and more information, without explaining why the current program is inadequate, are inadmissible; LBP-15-20, 81 NRC 853 (2015)
- Florida Power & Light Co. v. Lorion*, 470 U.S. 729, 743-44 (1985)
fact-finding administrative body, such as a licensing board, with authority to develop an evidentiary record, is distinguished from reviewing adjudicatory and judicial bodies, generally with a more limited record-creating authority; LBP-15-3, 81 NRC 122 n.49 (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), ALAB-335, 3 NRC 830, 842 n.26 (1976)
board considered evidence submitted with petitioner's reply to which opposing parties didn't object; LBP-15-5, 81 NRC 289 n.252 (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), CLI-14-11, 80 NRC 167, 173 (2014)
agency approval or authorization is a necessary component of Commission action that affords a hearing opportunity under AEA § 189a, but not all agency approvals granted to licensees constitute de facto licensee amendments; CLI-15-14, 81 NRC 734-35 (2015)
licensee action without NRC approval of an increase in authority or alteration of the terms of the license does not constitute a de facto amendment; CLI-15-14, 81 NRC 735 n.23 (2015)
licensee cannot amend the terms of its license unilaterally, but rather must request and obtain agency approval; CLI-15-5, 81 NRC 334 (2015); CLI-15-14, 81 NRC 734 n.21, 741 (2015)
petitioners' premise that a series of NRC Staff communications relating to plant oversight should be considered as an element of a single, overarching de facto license amendment is rejected; CLI-15-14, 81 NRC 735 n.24 (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), CLI-14-11, 80 NRC 167, 173 & n.31 (2014)
licensee action, as opposed to agency action, is insufficient to trigger a de facto license amendment proceeding; CLI-15-14, 81 NRC (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), CLI-14-11, 80 NRC 167, 174 n.33 (2014)
licensee actions made in response to NRC Staff oversight activities do not constitute de facto license amendments; CLI-15-5, 81 NRC 335 (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), CLI-14-11, 80 NRC 167, 175 (2014)
if a hearing could be invoked each time NRC engaged in oversight over or inquiry into plant conditions, NRC's administrative process could be brought to a virtual standstill; CLI-15-14, 81 NRC 745-46 (2015)

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- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), CLI-14-11, 80 NRC 167, 179 (2014)
 assertion that the section 2.206 process does not provide a viable forum for relief is rejected;
 CLI-15-14, 81 NRC 736 n.32 (2015)
 challenges to licensee actions taken under 10 C.F.R. 50.59 may only be taken by means of a petition
 for enforcement action under 10 C.F.R. 2.206; CLI-15-5, 81 NRC 337 (2015)
 section 2.206 provides a process for stakeholders to advance concerns and obtain full or partial relief,
 or written reasons why the requested relief is not warranted; LBP-15-4, 81 NRC 175 (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 2), CLI-14-11, 80 NRC 167, 179 n.60
 (2014)
 intervention as a matter of discretion is permitted only where at least one petitioner has established
 standing and at least one contention has been admitted, and petitioner is required to address six
 factors in its initial petition; CLI-15-14, 81 NRC 738 n.41 (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325
 (1989)
 proximity presumption was applied in a license amendment proceeding where management's lack of
 character and competence was alleged; LBP-15-17, 81 NRC 773 n.121 (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329
 (1989)
 living within 50 miles of a nuclear power reactor is enough to confer standing on an individual or
 group in proceedings for construction permits, operating licenses, or significant amendments thereto;
 LBP-15-17, 81 NRC 770 n.96 (2015); LBP-15-20, 81 NRC 836-37 & n.30 (2015)
 petitioner who lives, has frequent contacts, or has significant property interest within 50 miles of a
 nuclear power reactor has standing without the need to make an individualized showing of injury,
 causation, and redressability; LBP-15-17, 81 NRC 770 (2015)
 petitioners cannot gain standing from the interests of third parties except in very limited
 circumstances; LBP-15-17, 81 NRC 775 n.139 (2015)
 proximity presumption applies when there are clear implications for the offsite environment or major
 alterations to the facility with a clear potential for offsite consequences; LBP-15-17, 81 NRC 770
 (2015)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325,
 329-30 (1989)
 in situations involving obvious potential for offsite consequences, Commission has routinely granted
 standing to petitioners who live within a certain distance of the facility at issue under the proximity
 presumption, effectively dispensing with the need to make an affirmative showing of injury,
 causation, and redressability; LBP-15-13, 81 NRC 463 (2015)
 proximity presumption applies in more limited license amendment proceedings only if the proposed
 amendment obviously entails an increased potential for offsite consequences; LBP-15-17, 81 NRC
 770-71 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-91-13, 34 NRC
 185, 188 (1991)
 licensing boards can refer potentially significant safety issues that cannot be addressed through the
 adjudicatory process to NRC Staff for review; LBP-15-1, 81 NRC 45 n.181 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3,
 6-13 (2001)
 safety issue that does not involve aging management issues is outside the scope of a license renewal
 proceeding; LBP-15-5, 81 NRC 264 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3,
 7-8 (2001)
 license renewal safety review is limited to licensee's management of aging for certain systems,
 structures, and components, and review of time-limited aging analyses; LBP-15-5, 81 NRC 259
 (2015)

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- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8 (2001)
license renewal applicants must demonstrate how their programs will be effective in managing the effects of aging during the proposed period of extended operation, at a detailed component and structure level, rather than at a more generalized system level; LBP-15-5, 81 NRC 259 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8-9 (2001)
compliance with orders issued as part of NRC's ongoing oversight program are enforcement issues that are not within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 291, 292 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8-10 (2001)
license renewal review is not intended to duplicate NRC's ongoing oversight of operating reactors; CLI-15-6, 81 NRC 347 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9 (2001)
"current licensing basis" is a term of art comprehending the various NRC requirements applicable to a specific plant that are in effect at the time of a license renewal application; LBP-15-20, 81 NRC 844 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 10 (2001)
adjudicatory hearings in individual license renewal proceedings will share the same scope of issues as NRC Staff review, for NRC's hearing process, like NRC Staff's review, necessarily examines only the questions NRC safety rules make pertinent; LBP-15-5, 81 NRC 259 n.43 (2015)
Commission distinguishes between aging management issues, reviewed at the time of license renewal, and operational issues, reviewed at all times as part of the current licensing basis; LBP-15-5, 81 NRC 259 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 11 (2001)
Category 1 issues are not subject to challenge in a relicensing proceeding, absent a waiver under 10 C.F.R. 2.335, because they involve environmental effects that are essentially similar for all plants and need not be assessed repeatedly on a site-specific basis; LBP-15-5, 81 NRC 260 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 13 (2001)
NRC's AEA safety review under Part 54 does not compromise or limit NEPA; LBP-15-5, 81 NRC 260 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 15 (2001)
pleadings submitted by pro se petitioners are afforded greater leniency than petitions drafted with the assistance of counsel; LBP-15-5, 81 NRC 286 n.234 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 21-22 (2001)
no discussion of mitigation alternatives for Category 1 issues is necessary because NRC has already generically concluded that additional site-specific mitigation alternatives are unlikely to be beneficial; LBP-15-5, 81 NRC 266 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 21-23 (2001)
generic environmental analysis is incorporated into NRC regulations, and thus Category 1 generic findings may not be challenged in individual licensing proceedings unless accompanied by a petition for rule waiver; CLI-15-6, 81 NRC 351 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 23 (2001)
license renewal provisions cover environmental issues relating to onsite spent fuel storage generically, and all such issues, including accident risk, fall outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 266 n.92 (2015)

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- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-81-16, 13 NRC 1115, 1120 (1981)
prior to license issuance NRC must find reasonable assurance that activities authorized by the amendment can be conducted without endangering the health and safety of the public, and in compliance with Commission regulations; LBP-15-17, 81 NRC 778 n.154 (2015); LBP-15-20, 81 NRC 841 n.65 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 NRC 509, 515, 521 & n.12 (1990)
petitioner must provide factual evidence or supporting documents that produce some doubt about the adequacy of a specified portion of applicant's documents or that provide supporting reasons that tend to show that there is some specified omission from applicant's documents; LBP-15-20, 81 NRC 850 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 148 (2001)
proximity presumption applies across the board to all proceedings regardless of type because the rationale underlying it is not based on the type of proceeding per se but on whether the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-15-17, 81 NRC 770-71 n.102 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 149-50 (2001)
licensing actions that could increase reactor vessel embrittlement, such as license renewals, hold the potential for offsite consequences that are obvious; LBP-15-17, 81 NRC 774 n.127 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-08-18, 68 NRC 533, 539 (2008)
proximity presumption applies in more limited license amendment proceedings only if the proposed amendment obviously entails an increased potential for offsite consequences; LBP-15-17, 81 NRC 770-71 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-11-6, 73 NRC 149, 247 (2002)
good cause doesn't exist where petitioner's late-filed contention is due to careless inadvertence and not, as petitioner claimed, attributable to technical difficulties with the E-Filing system; LBP-15-4, 81 NRC 163 n.39 (2015)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-11-6, 73 NRC 149, 253 (2011)
to be admissible, a contention must provide more than a bare assertion, and must explain the supporting reasons for the dispute raised in that contention; LBP-15-1, 81 NRC 42 n.154 (2015)
- Friends of Sierra Railroad, Inc. v. Interstate Commerce Commission*, 881 F.2d 663, 667-68 (9th Cir. 1989)
publication in the Federal Register is legally sufficient notice to all interested or affected persons regardless of actual knowledge or hardship resulting from ignorance; LBP-15-5, 81 NRC 280 n.181 (2015)
- Frizelle v. Slater*, 111 F.3d 172, 177 (D.C. Cir. 1997)
agencies must adhere to their own regulations; LBP-15-17, 81 NRC 789 n.237 (2015)
- General Electric Co.* (Southwest Experimental Fast Oxide Reactor), 3 AEC 99, 101 (1966)
foreign ownership, control, or domination analysis should be given an orientation toward safeguarding the national defense and security; CLI-15-7, 81 NRC 489 (2015)
"owned, controlled, or dominated" refers to relationships in which the will of one party is subjugated to the will of another; CLI-15-7, 81 NRC 489-90, 498 (2015)
whether a foreign entity has the ability to restrict or inhibit compliance with security or other regulations of the Commission is of greatest significance to a foreign ownership, control, or domination review; CLI-15-7, 81 NRC 494 (2015)
- General Electric Co.* (Southwest Experimental Fast Oxide Reactor), 3 AEC 99, 101-02 (1966)
in determining foreign ownership issues, boards may consider aspects of control that do not affect nuclear safety or security; CLI-15-7, 81 NRC 497-98 (2015)

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- General Public Utilities Nuclear Corp.* (Three Mile Island Nuclear Station, Unit 2), LBP-89-7, 29 NRC 138, 190-91 (1989)
Commission must find that activities authorized by a license amendment can be conducted without endangering the health and safety of the public and will be in compliance with NRC regulations; LBP-15-20, 81 NRC 841 (2015)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995)
although petitioner bears the burden of establishing standing, licensing boards should construe the petition in favor of petitioner; LBP-15-13, 81 NRC 463 (2015)
contemporaneous judicial concepts of standing are applied in NRC proceedings; LBP-15-19, 81 NRC 819 (2015)
petitioner must allege a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-15-13, 81 NRC 463 (2015); LBP-15-17, 81 NRC 770 (2015)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995)
proximity presumption applies across the board to all proceedings regardless of type because the rationale underlying it is not based on the type of proceeding per se but on whether the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-15-17, 81 NRC 770-71 n.102 (2015)
- Georgia Power Co.* (Alvin W. Vogtle Nuclear Plant, Units 1 and 2, ALAB-291, 2 NRC 404, 408 (1975)
parties' duty to report material significant developments in a matter under adjudication arises immediately upon discovery of that information; CLI-15-16, 81 NRC 813 n.11 (2015)
- Ginsberg & Sons v. Popkin*, 285 U.S. 204, 208 (1932)
specific regulations control over general regulations; CLI-15-10, 81 NRC 540 (2015)
- GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000)
contention attempting to impose a requirement more stringent than the one imposed by the regulations will be rejected; LBP-15-4, 81 NRC 167 n.64, 172-73 n.94 (2015)
- GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000)
boards cannot assume that applicants will not comply with its regulatory responsibilities, including its license conditions; LBP-15-3, 81 NRC 132, 140-41 (2015)
there is nothing in the record to suggest that applicant or NRC Staff will not act in good faith to ensure that applicant's regulatory responsibilities, including its license conditions, are honored, and the Board cannot assume noncompliance; LBP-15-11, 81 NRC 439 n.252 (2015)
- Grannis v. Ordean*, 234 U.S. 385, 394 (1914)
so far as fairness is concerned, each side must be heard; LBP-15-5, 81 NRC 289 (2015)
- Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 48 (1994)
Atomic Energy Act authorizes NRC to accord protection from radiological injury to both health and property interests, and thus a genuine property interest is sufficient to accord petitioner proximity-based standing; LBP-15-17, 81 NRC 776 (2015)
- Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994)
petitioners are not required at the contention admission stage to prove their case on the merits or even to provide expert or factual support as strong as that necessary to withstand a summary disposition motion; LBP-15-20, 81 NRC 851, 855 (2015)
petitioners are required to make a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate; LBP-15-20, 81 NRC 850, 860 (2015)
- Honeywell International, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 10 (2013)
when licensee requests an exemption in a related license amendment application, hearing rights on the amendment application are considered to encompass the exemption request as well; LBP-15-18, 81 NRC 797 n.22 (2015)

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- Honeywell International, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 18-19 (2013)
Commission reviews questions of law de novo, but defers to a board's findings with respect to the underlying facts unless they are clearly erroneous; CLI-15-7, 81 NRC 493 (2015); CLI-15-9, 81 NRC 519 (2015)
to show clear error, petitioner must show that the board's determination is not even plausible in light of the record as a whole; CLI-15-7, 81 NRC 493 (2015); CLI-15-9, 81 NRC 519 (2015)
- Honeywell International, Inc.* (Metropolis Works Uranium Conversion Facility), CLI-13-1, 77 NRC 1, 19 (2013)
presence of evidence in petitioner's favor does not, without more, warrant reversal of a board's decision; CLI-15-7, 81 NRC 497 n.96 (2015)
- Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-535, 9 NRC 377, 389-400 (1979)
organization seeking representational standing on behalf of its members may meet the injury-in-fact requirement by demonstrating that at least one of its members, who has authorized the organization to represent his/her interest, will be injured by the possible outcome of the proceeding; LBP-15-5, 81 NRC 256 n.18, 257 (2015); LBP-15-17, 81 NRC 771 n.104 (2015)
- Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-565, 10 NRC 521, 524 (1979)
so far as fairness is concerned, each side must be heard; LBP-15-5, 81 NRC 289 (2015)
- Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644 (1979)
board may appropriately view petitioner's support for its contention in a light favorable to petitioner but may not do so by ignoring other admissibility requirements; LBP-15-17, 81 NRC 789 n.234 (2015)
- Hughes River Watershed Conservancy v. Johnson*, 165 F.3d 283, 288 (4th Cir. 1999)
NEPA hard look must emerge from an engagement in informed and reasoned decisionmaking, as the agency obtains opinions from its own experts and experts outside the agency and gives careful scientific scrutiny and responds to all legitimate concerns that are raised; LBP-15-16, 81 NRC 637 n.98 (2015)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 4 (1999)
supplementation of the final environmental impact statement is required when new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-15-10, 81 NRC 543 (2015)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 8 (1999)
although 10 C.F.R. Part 40 applies to ISL mining, some of the specific requirements in Part 40, such as many of those found in Appendix A, address hazards posed only by conventional uranium milling operations, and do not carry over to ISL mining; LBP-15-16, 81 NRC 659 n.239 (2015)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 8-9 (1999)
although the Part 40, Appendix A criteria were developed for conventional uranium milling facilities, they have since been applied in limited fashion to ISR facilities; LBP-15-3, 81 NRC 89-90 n.15 (2015)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 9 (1999)
requirements in Part 40, such as many of the provisions in Appendix A, that, by their own terms, apply only to conventional uranium milling activities, cannot sensibly govern in situ leach mining; LBP-15-16, 81 NRC 637 (2015)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999)
Commission approved NRC Staff completion of some National Historic Preservation Act documents after the environmental impact statement process was complete, but before the license was issued; LBP-15-16, 81 NRC 694 (2015)

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- overall record for the licensing action includes a complete analysis of cultural resources; LBP-15-16, 81 NRC 694 n.489 (2015)
- supplementation of the final environmental impact statements is not necessary every time new information comes to light after the environmental impact statement is finalized; CLI-15-10, 81 NRC 543 (2015)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 18-19 (1999)
- waiting until after licensing (although before mining operations begin) to establish definitively the groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology, given the sequential development of in situ leach well fields; LBP-15-3, 81 NRC 91 (2015)
- Hydro Resources, Inc.* (Crownpoint Uranium Project), CLI-04-33, 60 NRC 581, 659 (2004)
- with respect to the need to supplement an issued final EIS, the party offering the new contention has the burden of presenting information sufficient to show that there is a genuine issue regarding whether the NRC Staff should supplement its document; LBP-15-16, 81 NRC 704 (2015)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 38 (2001)
- board's findings and the adjudicatory record are, in effect, part of the final supplemental environmental impact statement; LBP-15-16, 81 NRC 694 n.490, 707 (2015)
- objectives of the NRC adjudicatory procedures and policies include producing an informed adjudicatory record that supports agency decisionmaking on public health and safety, the common defense and security, and the environment; LBP-15-20, 81 NRC 848 n.105 (2015)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 53 (2001)
- board's ultimate NEPA judgments can be made on the basis of the entire adjudicatory record in addition to NRC Staff's final environmental impact statement; LBP-15-3, 81 NRC 82 (2015)
- decision of the board or Commission becomes the record of decision, which may also incorporate the final environmental impact statement; CLI-15-6, 81 NRC 376, 388 n.255 (2015)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 71 (2001)
- boards do not sit to "flyspeck" environmental documents or to add details or nuances, but the environmental report or environmental impact statement must come to grips with all important considerations; LBP-15-5, 81 NRC 283 (2015)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-39, 60 NRC 657, 659 (2004)
- supplementation of the final environmental impact statement is not necessary every time new information comes to light after the EIS is finalized; CLI-15-10, 81 NRC 543 (2015)
- supplementation of the final environmental impact statement is required when new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; CLI-15-10, 81 NRC 543 (2015)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 4 (2006)
- post-hearing resolution of licensing issues must not be employed to obviate the basic findings prerequisite to a license; LBP-15-3, 81 NRC 141 n.66 (2015)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 5 (2006)
- intervenor litigated whether the performance-based licensing complies with the Atomic Energy Act and National Environmental Policy Act, and whether undue discretion was accorded to licensee; LBP-15-16, 81 NRC 665 (2015)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 5-6 (2006)
- in NEPA context, path that licensee and NRC Staff must follow relative to a license condition is sufficiently clear that continuing to hold the hearing open while it is completed would be an unnecessary extension of the adjudicatory process; LBP-15-3, 81 NRC 141 n.66 (2015)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-1, 63 NRC 1, 6 (2006)
- site-specific data to confirm proper baseline quality values, and confirm whether existing rock units provide adequate confinement cannot be collected until an in situ leach wellfield has been installed; LBP-15-3, 81 NRC 91 (2015)
- waiting until after licensing, although before mining operations begin, to establish definitively the groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology, given the sequential development of in situ leach wellfields; LBP-15-16, 81 NRC 665 (2015)

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- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-29, 64 NRC 417, 427 (2006)
mitigation plan in final supplemental environmental impact statement need not be in final form to comply with NEPA's procedural requirements; LBP-15-16, 81 NRC 694 (2015)
NEPA does not demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act; LBP-15-16, 81 NRC 688 (2015)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), CLI-06-29, 64 NRC 417, 429 (2006)
though mitigation measures must be discussed in an environmental impact statement, NEPA does not guarantee that federally approved projects will have no adverse impacts; LBP-15-16, 81 NRC 687-88 (2015)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), LBP-04-23, 60 NRC 441, 448 (2004)
new information on the need to supplement an issued final EIS must point to impacts that affect the quality of the human environment in a significant manner or to a significant extent not already considered; LBP-15-16, 81 NRC 704 (2015)
- Hydro Resources, Inc.* (P.O. Box 777, Crownpoint, New Mexico 87313), LBP-05-26, 62 NRC 442, 472 (2005)
although an agency may coordinate and, where practicable, integrate its National Environmental Policy Act and National Historic Preservation Act review efforts, the two statutes impose separate and distinct obligations; LBP-15-16, 81 NRC 654 n.214 (2015)
- Immigration and Naturalization Service v. National Center for Immigrants' Rights, Inc.*, 502 U.S. 183, 189-90 (1991)
regulation's title can aid in construing regulatory text; LBP-15-4, 81 NRC 170 n.82 (2015)
- In re Three Mile Island Alert, Inc.*, 771 F.2d 720 (3d Cir. 1985)
NRC approvals of plant restart and lifting suspension did not trigger AEA § 189a hearing rights; CLI-15-14, 81 NRC 734 n.21 (2015)
- International Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 632 n.51 (D.C. Cir. 1973)
contrary rule on notice of proposed rulemaking would lead to the absurdity that the agency can learn from the comments on its proposed rules only at the peril of starting a new procedural round of commentary; LBP-15-15, 81 NRC 611 n.95 (2015)
- International Union, United Mine Workers of America v. Mine Safety and Health Administration*, 407 F.3d 1250, 1259 (D.C. Cir. 2005)
agency is generally not required to issue a new notice of proposed rulemaking if it changes its position, as long as the final rule is a logical outgrowth of the proposed rule; LBP-15-15, 81 NRC 611 n.95 (2015)
- International Uranium (USA) Corp.* (Request for Materials License Amendment), CLI-00-1, 51 NRC 9, 19 (2000)
NRC Staff guidance documents do not have the force of law and boards are not bound to follow them; CLI-15-6, 81 NRC 358 (2015)
- Iowa Utilities Board v. Federal Communications Commission*, 109 F.3d 418, 425 (8th Cir. 1996)
for injunctive relief, party must show that the harm is certain and great and of such imminence that there is a clear and present need for equitable relief; LBP-15-2, 81 NRC 56 (2015)
- Justice v. Town of Cicero, Illinois*, 682 F.3d 662, 665 (7th Cir. 2012)
when a filing deadline is approaching, notwithstanding that an attorney is engaged in good-faith settlement discussions, prudence should compel the attorney to take all actions that are necessary to ensure the deadline will be met in the event that settlement discussions are unsuccessful; LBP-15-4, 81 NRC 164 (2015)
- Kansas Gas and Electric Co.* (Wolf Creek Generating Station, Unit 1), ALAB-279, 1 NRC 559, 576-77 (1975)
pro se petitioners are not required to provide the same level of specificity as those with counsel; LBP-15-5, 81 NRC 294-95 (2015)

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- Kelley v. Selin*, 42 F.3d 1501, 1515 (6th Cir. 1995)
NRC Staff inspections and confirmatory action letters are oversight activities normally conducted to ensure that licensees comply with existing NRC requirements and license conditions and therefore do not typically trigger the opportunity for a hearing; CLI-15-5, 81 NRC 334 (2015)
- Kelley v. Selin*, 42 F.3d 1501, 1521 (6th Cir. 1995)
consideration of alternatives under NEPA that are technologically unproven is unnecessary; LBP-15-3, 81 NRC 104 (2015)
- Lands Council v. Powell*, 395 F.3d 1019, 1026, 1034 (9th Cir. 2005)
agency's failure to adequately validate a quantitative model on which it relies may lead the reviewing court to conclude that the agency's decision is arbitrary, capricious, or contrary to law; LBP-15-20, 81 NRC 854 n.151 (2015)
- Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 725, 743 (3d Cir. 1989)
Advisory Council on Historic Preservation regulations provide guidance on agency compliance with NEPA and are not binding on NRC when the agency has not expressly adopted them, but are entitled to considerable deference
NRC has not expressly adopted Council on Environmental Quality regulations, but they are entitled to considerable deference; LBP-15-3, 81 NRC 81 (2015); LBP-15-16, 81 NRC 636 (2015)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973)
hard look under NEPA is subject to a rule of reason, and consideration of environmental impacts need not address all theoretical possibilities, but only those that have some reasonable possibility of occurring; LBP-15-3, 81 NRC 81-82 (2015); LBP-15-16, 81 NRC 638 (2015)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 290 (1988)
guidance documents set neither minimum nor maximum regulatory requirements, although they are entitled to special weight; CLI-15-6, 81 NRC 356, 358 n.85 (2015)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 71 (1991)
NEPA-required alternatives discussion need not include every possible alternative, but rather every reasonable alternative; LBP-15-3, 81 NRC 104 (2015)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-91-7, 33 NRC 179, 183 (1991)
final no significant hazards consideration determination does not either prevent the adjudication from proceeding or restrict the licensing board's substantive determination on public health and safety issues; LBP-15-17, 81 NRC 790 n.238 (2015)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 84 (1998)
admitted contentions challenging applicant's environmental report may function as challenges to similar portions of NRC Staff's NEPA document; LBP-15-11, 81 NRC 409-10 (2015)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87 (1998)
environmental impact statement or environmental assessment must describe the potential environmental impact of a proposed action and discuss any reasonable alternatives; LBP-15-11, 81 NRC 437 n.238 (2015)
principal goals of a final environmental impact statement are to force agencies to take a hard look at the environmental consequences of a proposed project and to permit the public a role in the agency's decisionmaking process; LBP-15-16, 81 NRC 697 n.511 (2015)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998)
NEPA requires federal agencies to take a hard look at the environmental impacts of a proposed action, as well as reasonable alternatives to that action; LBP-15-3, 81 NRC 81 (2015)
while reviewing any adverse effects, federal agencies must take a hard look at the environmental impacts of a proposed action; LBP-15-16, 81 NRC 637 (2015)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 88 (1998)
court may not substitute its own judgment for that of an agency, and agencies are not constrained by NEPA to select only the most environmentally benign option; LBP-15-16, 81 NRC 688 (2015)
hard look under NEPA is intended to foster both informed agency decisionmaking and informed public participation so as to ensure that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct; LBP-15-3, 81 NRC 81 (2015)
when the adequacy of an EIS mitigation strategy is challenged, the determining issue is whether the agency took a sufficiently hard look at environmental consequences and ensured that its decision was supported by a completely informed record; LBP-15-16, 81 NRC 688 (2015)

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- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 89 (1998)
board's findings and the adjudicatory record are, in effect, part of the final supplemental environmental impact statement; CLI-15-6, 81 NRC 376 (2015); LBP-15-16, 81 NRC 638, 694 n.490, 707 (2015)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 102-03 (1998)
NEPA does not require NRC Staff to examine every conceivable aspect of federally licensed projects in preparing its environmental impact statement; LBP-15-3, 81 NRC 82 (2015)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 103 (1998)
agencies are given broad discretion to keep their NEPA inquiries within appropriate and manageable boundaries; LBP-15-3, 81 NRC 82 (2015)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-96-25, 44 NRC 331, 339 (1996)
because NRC Staff relies heavily on the applicant's environmental report in preparing the environmental impact statement, should the applicant become a proponent of a particular challenged position set forth in the EIS, the applicant, as such a proponent, also has the burden on that matter; LBP-15-3, 81 NRC 85 (2015); LBP-15-16, 81 NRC 642 (2015)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224 (2004)
reply brief may not be used to present entirely new arguments in support of an existing contention or to propose a new contention; LBP-15-5, 81 NRC 284, 285, 304 (2015)
right to reply is intended to provide an opportunity to legitimately amplify arguments made in the intervention petition in response to applicant and NRC Staff answers; LBP-15-5, 81 NRC 284, 285, 304 (2015); LBP-15-13, 81 NRC 461 (2015)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224-25 (2004)
petitioners cannot rely on a late attempt to reinvigorate thinly supported contentions by presenting entirely new arguments in reply briefs; LBP-15-4, 81 NRC 174 n.103 (2015)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004)
new arguments may not be raised for the first time in reply briefs; LBP-15-13, 81 NRC 461 (2015); LBP-15-17, 81 NRC 792 (2015)
- 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-15-3, 81 NRC 82 (2015); LBP-15-16, 81 NRC 637 n.99 (2015)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-28, 62 NRC 721, 731 (2005)
board may incorporate material from another agency's environmental impact statement, which was submitted in the hearing record, as part of the record of decision; CLI-15-6, 81 NRC 388 n.255 (2015)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-06-15, 63 NRC 687, 697 (2006)
Commission defers to board's factual findings unless they are clearly erroneous and generally steps in only to correct factual findings not even plausible in light of the record reviewed in its entirety, e.g., where it appears that the board has overlooked or misunderstood important evidence; CLI-15-6, 81 NRC 351 (2015)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-06-15, 63 NRC 687, 700 (2006)
final environmental impact statement as amplified by both board and Commission decisions provides adequate consideration of environmental impacts of near-surface waste disposal; CLI-15-6, 81 NRC 388 n.255 (2015)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-05-13, 61 NRC 385, 404 (2005), *aff'd*, CLI-06-22, 64 NRC 37 (2006)
board's ultimate NEPA judgments are made on the basis of the entire adjudicatory record in addition to NRC Staff's final supplemental environmental impact statement; LBP-15-3, 81 NRC 82 (2015); LBP-15-16, 81 NRC 638, 708 (2015)
- Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992)
contemporaneous judicial concepts of standing are applied in NRC proceedings; LBP-15-13, 81 NRC 463 (2015); LBP-15-19, 81 NRC 819 (2015)
under judicial concepts of standing, petitioner must allege a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-15-5, 81 NRC 256 (2015); LBP-15-13, 81 NRC 463 (2015); LBP-15-17, 81 NRC 770 (2015)

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- Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-11-9, 74 NRC 233, 236 (2011)
heavy barrier to reopening applies whenever an adjudication has been closed and not merely after a case has been terminated following a full evidentiary hearing on the merits; LBP-15-14, 81 NRC 595 (2015)
- Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 388-89 (2012)
to warrant supplementation of the final environmental impact statement, new information must paint a seriously different picture of the environmental landscape; CLI-15-10, 81 NRC 543 n.32 (2015)
- Luminant Generation Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4), CLI-12-7, 75 NRC 379, 391-92 (2012)
final supplemental environmental impact statement is a snapshot in time of expected environmental consequences; CLI-15-6, 81 NRC 378 (2015)
- Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), ALAB-161, 6 AEC 1003, 1007 (1973)
unless the safety findings prescribed by the Atomic Energy Act and the regulations can be made, the reactor does not obtain a license, no matter how badly it is needed; CLI-15-4, 81 NRC 232 (2015)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989)
hard look under NEPA is intended to foster both informed agency decisionmaking and informed public participation so as to ensure that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct; LBP-15-3, 81 NRC 81 (2015)
it would be incongruous with NEPA's approach to environmental protection, and with the Act's manifest concern with preventing uninformed action, for the blinders to adverse environmental effects, once unequivocally removed, to be restored prior to the completion of agency action simply because the relevant proposal has received initial approval; LBP-15-13, 81 NRC 471 (2015)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 374 (1989)
NEPA requires that agencies take a hard look at the environmental effects of actions even after a proposal has received initial approval; LBP-15-16, 81 NRC 657 (2015)
new information on the need to supplement an issued final EIS must point to impacts that affect the quality of the human environment in a significant manner or to a significant extent not already considered; LBP-15-16, 81 NRC 704 (2015)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378-85 (1989)
NEPA hard look must emerge from an engagement in informed and reasoned decisionmaking, as the agency obtains opinions from its own experts and experts outside the agency and gives careful scientific scrutiny and responds to all legitimate concerns that are raised; LBP-15-16, 81 NRC 637 n.98 (2015)
- Massachusetts v. NRC*, 878 F.2d 1516 (1st Cir. 1989)
Congress intentionally limited the opportunity for a hearing to certain designated agency actions which do not include exemptions; LBP-15-18, 81 NRC 797 n.20 (2015)
NRC approvals of plant restart and lifting suspensions did not trigger AEA § 189a hearing rights; CLI-15-14, 81 NRC 734 n.21 (2015)
- Massachusetts v. U.S. Environmental Protection Agency*, 549 U.S. 497, 526 (2007)
remedy that makes even a small contribution to resolving a larger, more complex injury can still support a standing claim; LBP-15-13, 81 NRC 466 (2015)
- Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), ALAB-697, 16 NRC 1265, 1271 (1982)
applicant has the burden of providing reasonable assurance that the current licensing basis will be maintained throughout the renewal period; LBP-15-5, 81 NRC 294 (2015)
licensee generally bears the ultimate burden of proof, but intervenors must give some basis for further inquiry; LBP-15-5, 81 NRC 295 n.308 (2015)
- Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), CLI-85-9, 21 NRC 1118, 1122 (1985)
even if a site would not be totally evacuated, a fission product release from one unit would likely contaminate the entire site, with the result that both units could be out of operation for years; LBP-15-5, 81 NRC 276 (2015)

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- Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), LBP-83-76, 18 NRC 1266, 1273 (1983)), *aff'd on other grounds*, CLI-09-22, 70 NRC 932, 933 (2009)
when an NRC regulation permits use of a particular analysis, a contention asserting that a different analysis or technique should be used is inadmissible because it indirectly attacks NRC's regulations; LBP-15-17, 81 NRC 782 (2015); LBP-15-20, 81 NRC 845 (2015)
- Minnesota v. NRC*, 602 F.2d 412, 412 (D.C. Cir. 1979)
petitioners challenged NRC's approval of operating license amendments to allow for the use of higher-density spent fuel storage racks in the reactors' spent fuel pools; CLI-15-4, 81 NRC 228 (2015)
- Minnesota v. NRC*, 602 F.2d 412, 413 (D.C. Cir. 1979)
court expressly declined to set aside or stay challenged license amendments, thus confirming that the court did not view the amendments to be contingent upon any additional safety determination under the Atomic Energy Act; CLI-15-4, 81 NRC 236-37 (2015)
- Minnesota v. NRC*, 602 F.2d 412, 416-17 (D.C. Cir. 1979)
generic analyses of the environmental impacts of continued storage and disposal in the context of NRC reactor licensing proceedings are acceptable; CLI-15-4, 81 NRC 238 (2015)
- Minnesota v. NRC*, 602 F.2d 412, 417 (D.C. Cir. 1979)
Congress did not intend in enacting the Atomic Energy Act to require a demonstration that nuclear wastes could be safely disposed of before licensing of nuclear plants was permitted; CLI-15-4, 81 NRC 228-29 (2015)
- Minnesota v. NRC*, 602 F.2d 412, 418 (D.C. Cir. 1979)
court directed NRC to determine whether there is reasonable assurance that an offsite storage solution will be available by the end of a reactor's license term, and if not, whether there is reasonable assurance that the fuel can be stored safely at the sites beyond those dates; CLI-15-4, 81 NRC 229, 236 (2015)
court recognized the long-term nature of the concerns associated with spent fuel storage and disposal when it declined to vacate the license amendments that were the subject of the case, noting that doing so would effectively shut down the plants; CLI-15-4, 81 NRC 229 n.34 (2015)
- Montana Wilderness Association v. U.S. Department of Interior*, 725 F.3d 988, 1005-06 (2013)
Class III archeological survey involves a professionally conducted, pedestrian survey of an entire target area to identify properties that may be eligible for inclusion on the National Register of Historic Places; LBP-15-16, 81 NRC 653 (2015)
- Moreland v. United States*, 270 F.2d 887, 890 (10th Cir. 1959)
in absence of objection, hearsay evidence is treated as being properly admitted and may be given such probative effect and value to which it is entitled; LBP-15-20, 81 NRC 859 n.184 (2015)
- Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 805 (9th Cir. 1999)
federal agency must confer with a State Historic Preservation Officer and seek the approval of the ACHP; LBP-15-16, 81 NRC 639 n.110 (2015)
- National Association of Clean Water Agencies v. Environmental Protection Agency*, 734 F.3d 1115, 1138 (D.C. Cir. 2013)
Environmental Protection Agency is recognized as an expert in environmental protection, and its final policy determinations deserve consideration; LBP-15-15, 81 NRC 613-14 (2015)
- National Committee for the New River, Inc. v. Federal Energy Regulatory Commission*, 373 F.3d 1323, 1330 (D.C. Cir. 2004)
to warrant supplementation of the final environmental impact statement, new information must paint a seriously different picture of the environmental landscape; CLI-15-10, 81 NRC 543 (2015)
- National Football League v. McBee & Bruno's, Inc.*, 792 F.2d 726, 733 (8th Cir. 1986)
injury that has never been the focus of a lawsuit cannot constitute irreparable harm; LBP-15-2, 81 NRC 55 n.53 (2015)
- National Labor Relations Board v. Bell Aerospace Co. Division of Textron, Inc.*, 416 U.S. 267, 294 (1974)
agency has discretion to choose between rulemaking and adjudication; CLI-15-11, 81 NRC 549 n.19 (2015)

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- National Mining Association v. Mine Safety and Health Administration*, 512 F.3d 696, 699 (D.C. Cir. 2008)
agency is generally not required to issue a new notice of proposed rulemaking if it changes its position, as long as the final rule is a logical outgrowth of the proposed rule; LBP-15-15, 81 NRC 611 (2015)
- Natural Resources Defense Council, Inc. v. Hodel*, 865 F.2d 288, 294 (D.C. Cir. 1988)
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-15-3, 81 NRC 82 (2015)
- Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 837 (D.C. Cir. 1972)
alternative energy sources that will be dependent on future environmental safeguards and technological developments may be excluded from the NEPA alternatives discussion; LBP-15-3, 81 NRC 104 (2015)
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-15-3, 81 NRC 82 (2015)
- Natural Resources Defense Council, Inc. v. NRC*, 582 F.2d 166 (2d Cir. 1978)
Atomic Energy Act does not require NRC, as a precondition to issuing or renewing operating licenses for nuclear power plants, to make definitive findings concerning the technical feasibility of a repository for the disposal of spent nuclear fuel; CLI-15-4, 81 NRC 224 (2015)
- Natural Resources Defense Council, Inc. v. NRC*, 582 F.2d 166, 170 (2d Cir. 1978)
NRC's long-continued regulatory practice of issuing operating licenses, with an implied finding of reasonable assurance that safe permanent disposal of spent nuclear fuel can be available when needed, is in accord with the intent of Congress underlying the Atomic Energy Act and Energy Reorganization Act; CLI-15-4, 81 NRC 236 (2015)
- Natural Resources Defense Council, Inc. v. NRC*, 582 F.2d 166, 170-71 (2d Cir. 1978)
Atomic Energy Act § 103 does not contemplate consideration of spent fuel disposal in NRC's licensing decisions, and the Commission declines to infer from Congress's silence an affirmative obligation to the contrary; CLI-15-4, 81 NRC 233 (2015)
- Natural Resources Defense Council, Inc. v. NRC*, 582 F.2d 166, 171 (2d Cir. 1978)
Atomic Energy Act does not, as a prerequisite to licensing, require a finding of reasonable assurance that highly hazardous and long-lived radioactive materials can be disposed of safely; CLI-15-4, 81 NRC 227 (2015)
- Natural Resources Defense Council, Inc. v. NRC*, 582 F.2d 166, 172 (2d Cir. 1978)
it is fair to read the AEC and NRC history as a de facto acquiescence in and ratification of the Commission's licensing procedure by Congress; CLI-15-4, 81 NRC 227 (2015)
- Natural Resources Defense Council, Inc. v. NRC*, 582 F.2d 166, 174 (2d Cir. 1978)
Congress expressly recognized and impliedly approved NRC's regulatory scheme and practice under which the safety of interim storage of high-level wastes at commercial nuclear power reactor sites has been determined separately from the safety of government-owned permanent storage facilities that have not yet been established; CLI-15-4, 81 NRC 236 (2015)
if there were any doubt over the intent of Congress not to require a safety finding on spent fuel disposal, it was laid to rest by enactment of the Energy Reorganization Act of 1974; CLI-15-4, 81 NRC 228 (2015)
- Natural Resources Defense Council, Inc. v. NRC*, 582 F.2d 166, 175 (2d Cir. 1978)
NRC is not required to conduct a rulemaking proceeding or to withhold action on pending or future applications for nuclear power reactor operating licenses until it makes a determination that high-level radioactive wastes can be permanently disposed of safely; CLI-15-4, 81 NRC 233 (2015)
- Natural Resources Defense Council, Inc. v. Thomas*, 838 F.2d 1224, 1242 (D.C. Cir. 1988)
contrary rule on notice of proposed rulemaking would lead to the absurdity that the agency can learn from the comments on its proposed rules only at the peril of starting a new procedural round of commentary; LBP-15-15, 81 NRC 611 n.95 (2015)
- Nevada v. Department of Energy*, 457 F.3d 78, 90-91 (D.C. Cir. 2006)
NRC need not undertake incorporation by reference of a generic environmental impact statement where the Commission has already taken public comment and performed a comprehensive analysis of the environmental consequences of continued spent fuel storage; CLI-15-10, 81 NRC 542 (2015)

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- New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 93-94 (1st Cir. 1978)
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- New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012)
Waste Confidence Decision and Temporary Storage Rule were vacated and remanded; CLI-15-11, 81 NRC 547 (2015); CLI-15-12, 81 NRC 551 (2015); CLI-15-13, 81 NRC 562 (2015)
- New York v. NRC*, 681 F.3d 471, 473, 481-82 (D.C. Cir. 2012)
in its Waste Confidence Decision, NRC failed to consider environmental impacts of a repository never becoming available, its analysis of spent fuel pool leaks was not forward-looking, and it had not sufficiently considered the consequences of spent fuel pool fires; CLI-15-4, 81 NRC 229-30 (2015)
- New York v. NRC*, 681 F.3d 471, 480 (D.C. Cir. 2012)
generic analyses of the environmental impacts of continued storage and disposal in the context of NRC reactor licensing proceedings are acceptable; CLI-15-4, 81 NRC 238 (2015)
- New York v. NRC*, 681 F.3d 471, 482 (D.C. Cir. 2012)
agency conducting a NEPA analysis must examine both the probability of a given harm occurring and the consequences of that harm if it does occur; CLI-15-6, 81 NRC 379 (2015)
only if the probability of a severe accident is so small as to be effectively zero could NRC Staff dispense with the consequences portion of the analysis; CLI-15-6, 81 NRC 379 (2015)
- New York v. NRC*, 681 F.3d 471, 483 (D.C. Cir. 2012)
remand was based solely on the court's finding that NRC did not satisfy its obligations under NEPA; CLI-15-4, 81 NRC 236 (2015)
Temporary Storage Rule was vacated; LBP-15-1, 81 NRC 21 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 307 (2012), *petition for review denied sub nom. Beyond Nuclear v. NRC*, 704 F.3d 12 (1st Cir. 2013)
NRC deliberately raised the admission standards for contentions to obviate serious hearing delays caused in the past by poorly defined or poorly supported contentions; LBP-15-1, 81 NRC 38 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 310-11 (2012), *petition for review denied sub nom. Beyond Nuclear v. NRC*, 704 F.3d 12 (1st Cir. 2013)
intervenor's requests for more testing, more methods of testing, and more information, without an explanation of why the current program is inadequate, are not sufficient to create a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 41 n.150 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 315 (2012)
contentions calling for requirements in excess of those imposed by NRC regulations will be rejected as a collateral attack on the regulations; LBP-15-4, 81 NRC 167 n.64 (2015)
NRC Staff guidance is entitled to special weight in a decision on the merits; LBP-15-20, 81 NRC 847 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 315-22 (2012)
thinly supported contention is inadmissible; CLI-15-6, 81 NRC 355 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 318-19 & n.108 (2012)
contention is inadmissible where arguments and expert testimony are copied, largely without change, from another proceeding and fail to offer information specific to the challenged license renewal application; CLI-15-6, 81 NRC 355-56 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 320 (2012)
applicability of a guidance document may be challenged in an individual proceeding; LBP-15-20, 81 NRC 847 n.100 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 322-24 (2012)
it must be genuinely plausible that revising the severe accident mitigation alternatives analysis would change the outcome so that one or more of the SAMA candidates that applicant evaluated and rejected would become cost-beneficial; LBP-15-5, 81 NRC 270, 276 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 323 (2012)
severe accident mitigation alternatives analysis issues can present difficult judgment calls at the contention admissibility stage; LBP-15-5, 81 NRC 261 (2015)
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 alternatives

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- candidates evaluated, no purpose would be served to further refine the SAMA analysis; LBP-15-5, 81 NRC 261 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 323-24, 329 (2012)
petitioner need not rerun applicant's own cost-benefit calculations, but must do more than merely suggest that additional factors be evaluated or that different analytical techniques be used; LBP-15-5, 81 NRC 261 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 324 (2012)
contention that environmental report fails to accurately and thoroughly conduct severe accident mitigation alternatives analysis to design vulnerability of GE Mark I boiling water reactor pressure suppression containment system and environmental consequences of a to-be-anticipated severe accident post-Fukushima Daiichi fails to present a genuine material dispute; LBP-15-5, 81 NRC 265 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 334 n.199 (2012),
petition for review denied sub nom. Beyond Nuclear v. NRC, 704 F.3d 12 (1st Cir. 2013)
generalized economic cost arguments, unsupported by asserted facts or expert opinion, are insufficient to show a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 42 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 335 (2012), *petition for review denied sub nom. Beyond Nuclear v. NRC*, 704 F.3d 12 (1st Cir. 2013)
petitioner that fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v), also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi); LBP-15-1, 81 NRC 38 n.124 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 341 (2012)
NEPA requires a hard look at the environmental effects of the planned action, not a circular restatement of NRC Staff's own conclusions; LBP-15-11, 81 NRC 422-23 (2015)
- NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342-43 (2012), *petition for review denied sub nom. Beyond Nuclear v. NRC*, 704 F.3d 12 (1st Cir. 2013)
intervenor fail to specify what other alternatives to the license renewal application should be discussed in the draft supplemental environmental impact statement, much less show that any proposed alternative would satisfy the purpose of the applicant's proposed action; LBP-15-1, 81 NRC 42 (2015)
- North Atlantic Energy Services Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 217 n.8 (1999)
intervention petitioner may not attack generic NRC requirements or regulations or express generalized grievances about NRC policies; CLI-15-9, 81 NRC 527-28 n.98 (2015)
- Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), LBP-98-22, 48 NRC 149, 155, *aff'd*, CLI-98-20, 48 NRC 183, 184 (1998)
licensing board declined to apply proximity presumption in a license amendment proceeding where there was no obvious potential for offsite consequences; LBP-15-17, 81 NRC 773, 774 (2015)
- Northeast Nuclear Energy Co.* (Millstone Nuclear Power Station, Unit 3), LBP-98-22, 48 NRC 149, 155-56 (1998)
intervention petition was not sufficiently specific when it merely repeated the contents of petitioner's earlier petition concerning a prior license amendment; LBP-15-17, 81 NRC 774 (2015)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-252, 8 AEC 1175, 1177-78 (1975)
party may seek reconsideration of an earlier ruling whereby the party was not actually prejudiced, where the ruling could well have an impact upon the course of many licensing hearings; CLI-15-6, 81 NRC 369 n.151 (2015)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 44 (1978)
in determining whether a license amendment, construction permit, or early site permit will be issued to applicant, common standards of 10 C.F.R. 50.40 are applied; LBP-15-20, 81 NRC 841 n.65 (2015)
section 50.40 requires that NRC be persuaded that applicant will comply with all applicable regulations, that health and safety of the public will not be endangered, and that issuance of the amendment will not be inimical to the health and safety of the public; LBP-15-17, 81 NRC 778 (2015); LBP-15-20, 81 NRC 847 n.104 (2015)

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- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 484 (2010)
claims of past and current mismanagement are outside the scope of the license renewal proceedings; LBP-15-5, 81 NRC 300 (2015)
safety culture issues are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 300 (2015)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 484-85, 494 (2010)
contention challenging applicant's safety culture and claiming to rely on NRC Staff's Safety Evaluation Report is inadmissible because the SER did not discuss safety culture as a general matter and could not serve as a reasonably apparent foundation for a safety culture contention; LBP-15-11, 81 NRC 409 (2015)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 491 (2010)
broad-based issues akin to safety culture, such as operational history, quality assurance, quality control, management competence, and human factors, are beyond the bounds of a license renewal proceedings; LBP-15-5, 81 NRC 300, 301 (2015)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 494-95 (2010)
intervenor's reliance on long-available documents regarding leakages and notices of violation made a contention untimely as filed; LBP-15-11, 81 NRC 409 (2015)
- Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 496 (2010)
intervenor's are not allowed to postpone filing a contention challenging environmental or safety information or analysis until Staff issues some document that collects, summarizes, and places into context the facts supporting that contention; LBP-15-11, 81 NRC 409 (2015)
- Northwest Resource Information Center, Inc v. National Marine Fisheries Service*, 56 F.3d 1060, 1067-69 (9th Cir. 1995)
action lacks independent utility when it would be irrational or unwise to pursue the action without the presence of the EIS-generating central action; LBP-15-16, 81 NRC 697 (2015)
- Nuclear Fuel Services* (Erwin, Tennessee), LBP-04-5, 59 NRC 186, 193 n.10, *aff'd*, CLI-04-13, 59 NRC 244 (2004)
petitioner could not rely on caretakers maintaining and farming the property in petitioner's absence as grounds for proximity-based standing; LBP-15-17, 81 NRC 775 n.139 (2015)
- Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203, 208-09 (2011)
decision of the board or Commission becomes the record of decision, which may also incorporate the final supplemental environmental impact statement; CLI-15-6, 81 NRC 376, 388 n.255 (2015)
- Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), LBP-11-7, 73 NRC 254, 290 n.233, *petition for review denied as premature*, CLI-11-6, 74 NRC 203 (2011)
intervenor's were correct to file contentions on a newly adopted rule because, unlike a proposed rule, it now has indisputable legal effect; LBP-15-15, 81 NRC 611-12 n.96 (2015)
proposed rule or proposed law may not support an admissible contention because its ultimate effect is at best speculative; LBP-15-15, 81 NRC 610 (2015)
- Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), LBP-11-25, 74 NRC 380, 397 (2011)
at the contention admissibility stage of a proceeding, intervenor's need not marshal their evidence as though preparing for an evidentiary hearing; LBP-15-20, 81 NRC 858 n.155 (2015)
- Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 473 (9th Cir. 2000)
mitigation plan in final supplemental environmental impact statement need not be in final form to comply with NEPA's procedural requirements; LBP-15-16, 81 NRC 694 (2015)
- Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 476 (9th Cir. 2000)
courts decide whether a mitigation plan was adequately or inadequately discussed, but the line between these two options is not well defined; LBP-15-16, 81 NRC 688 (2015)
merely listing possible mitigation options does not satisfy NEPA; LBP-15-16, 81 NRC 687 (2015)

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- Okanogan Highlands Alliance v. Williams*, 236 F.3d 468, 479-80 (9th Cir. 2000)
NEPA requires acknowledgment of tribal hunting and fishing rights, as well as an analysis of how the project will affect those rights; LBP-15-5, 81 NRC 282, 286 (2015)
- Omaha Public Power District* (Fort Calhoun Station, Unit 1), CLI-15-5, 81 NRC 329 (2015)
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- Omaha Public Power District* (Fort Calhoun Station, Unit 1), CLI-15-5, 81 NRC 329, 333 n.19 (2015)
Commission exercises its discretionary authority to consider amicus brief; CLI-15-10, 81 NRC 537-38 n.5 (2015)
- Omaha Public Power District* (Fort Calhoun Station, Unit 1), CLI-15-5, 81 NRC 329, 337 (2015)
hearing rights do not attach to licensee changes made under section 50.59 because those changes do not require NRC approval but are instead subject to normal NRC oversight through the inspection process; CLI-15-14, 81 NRC 747 n.41 (2015)
- Omaha Public Power District* (Fort Calhoun Station, Unit 1), CLI-15-5, 81 NRC 329, 338 (2015)
Commission declined to interpret the AEA to require hearings based on the possibility that a licensee may request an amendment to make unspecified modifications at some uncertain time in the future; CLI-15-14, 81 NRC 741-42, 743 (2015)
- Pa'ina Hawaii, LLC*, CLI-08-3, 67 NRC 151, 168 n.73 (2008)
adequacy of NRC Staff's review is not a litigable issue in a licensing case; CLI-15-9, 81 NRC 531 (2015)
contention fails because it contests NRC Staff's safety review rather than the license renewal application; LBP-15-15, 81 NRC 614 n.111 (2015)
- Pa'ina Hawaii, LLC*, CLI-10-18, 72 NRC 56, 75 (2010)
considering the reasonable alternatives analysis, it is only in the depth of the consideration and in the level of detail provided in the corresponding environmental documents that an environmental assessment and an environmental impact statement will differ; LBP-15-11, 81 NRC 439 n.249 (2015)
- Pa'ina Hawaii, LLC*, CLI-10-18, 72 NRC 56, 87-88 (2010)
material difference must exist between information on which a contention is based and information that was previously available, e.g., a difference between the environmental report and the draft EIS or the draft EIS and the final EIS; CLI-15-1, 81 NRC 7 (2015)
- Pa'ina Hawaii, LLC*, LBP-06-12, 63 NRC 403, 414 (2006)
if a contention makes a prima facie allegation that the application omits information required by law, it necessarily presents a genuine dispute with applicant on a material issue and raises an issue plainly material to an essential finding of regulatory compliance needed for license issuance; LBP-15-5, 81 NRC 259 (2015)
petitioners' contention challenges the sufficiency of the equivalent margins analysis to provide reasonable assurance of reactor safety and is therefore within the scope of the proceeding; LBP-15-20, 81 NRC 849 (2015)
pleading requirements calling for a recitation of facts or expert opinion supporting the issue raised are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-15-5, 81 NRC 258 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-763, 19 NRC 571, 577 & n.22, rev. declined, CLI-84-14, 20 NRC 285 (1984)
relative to factual matters, to carry burden of proof, NRC Staff and/or applicant must establish that its position is supported by a preponderance of the evidence; LBP-15-3, 81 NRC 85 (2015); LBP-15-16, 81 NRC 642 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 29 (2003)
Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses or NRC regulations; LBP-15-4, 81 NRC 175 (2015)
in setting license conditions, NRC Staff may assume that a licensee will comply with all requirements imposed by the license; LBP-15-16, 81 NRC 695 n.494 (2015)

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- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 435-36 (2011)
claims of past and current mismanagement are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 300, 301 (2015)
ongoing compliance oversight activities are not within the scope of license renewal proceedings; LBP-15-5, 81 NRC 300 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 436 (2011)
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- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 436-37 (2011)
contention that does not dispute any specific portion of Entergy's fuel handling accident analysis is inadmissible for lack of a genuine dispute; LBP-15-18, 81 NRC 801 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 437 (2011)
petitioners can raise compliance issues only under 10 C.F.R. 2.206, which would allow them to petition NRC to take enforcement action; LBP-15-5, 81 NRC 264 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 440-43 (2011)
inadequacy in the severe accident mitigation alternatives analysis is material if license renewal applicant failed to consider complete information without justifying why particular information was omitted; LBP-15-5, 81 NRC 298 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 442 (2011)
at the contention filing stage, factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion; LBP-15-11, 81 NRC 442 n.271 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 442 n.81 (2011)
at the contention filing stage the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion; LBP-15-1, 81 NRC 39 (2015); LBP-15-11, 81 NRC 426 n.157 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 442-43 (2011)
board admitted a contention without deciding if it was a contention of omission or a contention of inadequacy; LBP-15-5, 81 NRC 284 n.220 (2015)
contention that applicant had failed to discuss a report on a recently identified seismic fault near the plant is admissible; LBP-15-20, 81 NRC 858-59 & n.181 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-12-13, 75 NRC 681, 685 (2012)
sua sponte review authority is to be used only in extraordinary circumstances; CLI-15-1, 81 NRC 9 n.39 (2015)
- Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-1, 67 NRC 1, 6 (2008)
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- 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)
decision of the board or Commission becomes the record of decision, which may also incorporate the final supplemental environmental impact statement; CLI-15-6, 81 NRC 376 (2015)

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- Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 426-27 (2002)
proximity presumption applies where there is an obvious potential for offsite consequences; LBP-15-17, 81 NRC 772 (2015)
- Pennsylvania Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-79-6, 9 NRC 291, 295-96 (1979)
boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-15-5, 81 NRC 262, 270 n.116, 273 (2015)
- Pennzoil Co. v. Federal Energy Regulatory Commission*, 645 F.2d 360, 371 (5th Cir. 1981)
requirement for a notice of proposed rulemaking is to sufficiently and fairly apprise interested parties of the issues involved, rather than to specify every precise proposal that the agency may ultimately adopt; LBP-15-15, 81 NRC 611 n.94 (2015)
- Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-814, 22 NRC 191, 196 (1985)
party seeking a stay must specifically and reasonably demonstrate an injury, not merely allege generalized harm; LBP-15-2, 81 NRC 57 (2015)
- Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 706 (1985), *aff'd in part*, CLI-86-5, 23 NRC 125 (1986), *remanded in part on other grounds sub nom.*
- Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719 (1989)
section 51.102(c) merges the final supplemental environmental impact statement with any relevant licensing board decision; CLI-15-6, 81 NRC 387 (2015)
section 51.102(c) replaced a previous version that expressly permitted licensing boards to modify the content of an environmental impact statement; CLI-15-6, 81 NRC 388 (2015)
- Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 707 (1985), *aff'd in part*, CLI-86-5, 23 NRC 125 (1986), *remanded in part on other grounds sub nom.*
- Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719 (1989)
environmental impact statement may be deemed modified by the hearing record because hearing procedures allow for additional and a more rigorous public scrutiny of the FSEIS than does the usual circulation for comment; CLI-15-6, 81 NRC 388 (2015)
- Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974)
contention admissibility criteria are strict by design but should not be turned into a fortress to deny intervention; LBP-15-20, 81 NRC 855-56 (2015)
intervention petitioner may not attack generic NRC requirements or regulations or express generalized grievances about NRC policies; CLI-15-9, 81 NRC 527-28 n.98 (2015)
- Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979)
contentions that fall outside the specified scope of the proceeding are inadmissible; LBP-15-20, 81 NRC 849 (2015)
- Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1974)
licensing proceedings are not the appropriate venue for generic rulemaking issues; CLI-15-9, 81 NRC 530 (2015)
licensing boards should not accept in individual license proceedings contentions that are, or are about to become, the general rulemaking by the Commission; CLI-15-9, 81 NRC 534 n.3 (2015); CLI-15-11, 81 NRC 547 n.5 (2015); CLI-15-12, 81 NRC 552 n.5 (2015)
- Power Authority of the State of New York* (James A. Fitzpatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 295 (2000)
Commission grants standing to a governmental body within close proximity of a proposed nuclear reactor under the proximity presumption, effectively dispensing with the need to make an affirmative showing of injury, causation, and redressability; LBP-15-19, 81 NRC 819 n.17 (2015)
mere notice pleading is insufficient, but requirement for contention specificity and factual support rather than vague or conclusory statements is not intended to prevent intervention when material and concrete issues exist; LBP-15-20, 81 NRC 853 n.140 (2015)

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- Power Reactor Development Co. v. International Union of Electrical, Radio & Machine Workers*, 367 U.S. 396, 409 (1961)
it is fair to read the AEC and NRC history as a de facto acquiescence in and ratification of the Commission's licensing procedure by Congress; CLI-15-4, 81 NRC 227 (2015)
- Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-13-9, 78 NRC 37, 46 (2013)
admitted contentions challenging applicant's environmental report may function as challenges to similar portions of NRC Staff's NEPA document; LBP-15-11, 81 NRC 409-10 (2015)
- Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-13-9, 78 NRC 37, 49 (2013)
it is the duty of NRC Staff, not applicant, to consult with interested tribes concerning the proposed site in the context of a National Historic Preservation Act contention; LBP-15-5, 81 NRC 280 n.178 (2015)
- Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-13-9, 78 NRC 37, 67 (2013)
it is not clear NRC Staff relied upon the generic environmental impact statement when preparing the draft supplemental EIS because it was not incorporated by reference or mentioned in any other manner; LBP-15-11, 81 NRC 440 n.258 (2015)
- Powertech USA, Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-13-9, 78 NRC 37, 67-68 n.181 (2013)
principle of *expressio unis est exclusio alterius* is discussed; LBP-15-11, 81 NRC 440 n.258 (2015)
- PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 139 (2010)
proximity-based standing based on frequent contacts is a determination to be made by a licensing board after weighing all the information provided; LBP-15-17, 81 NRC 775 n.140 (2015)
- PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 139-40 (2010)
petitioner may use its reply as an opportunity to cure potential defects in standing; LBP-15-5, 81 NRC 285 n.224 (2015); LBP-15-13, 81 NRC 461 (2015)
- PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 140 (2010)
petitioning member's affidavit must be sufficiently specific to show frequent contact within 50 miles of the plant; LBP-15-17, 81 NRC 775 (2015)
statement that petitioner lives, recreates, and conducts business within the vicinity of the plant is too vague to demonstrate a substantial or regular presence within 50 miles of the plant; LBP-15-17, 81 NRC 775-76 (2015)
to demonstrate frequent contacts within the 50-mile site radius under the proximity presumption, petitioner must show that his/her contacts are substantial and regular, and must describe them with specificity; LBP-15-17, 81 NRC 775 (2015)
- PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 299-302 (2007)
reply brief may not be used to present entirely new arguments in support of an existing contention or to propose a new contention, but board may consider information in a reply that legitimately amplifies an issue presented in the original petition; LBP-15-5, 81 NRC 285 n.223 (2015)
- Preservation Coalition, Inc. v. Pierce*, 667 F.2d 851, 859 (9th Cir. 1982)
compliance with the National Historic Preservation Act does not relieve a federal agency of the duty of complying with the environmental impact statement requirement to the fullest extent possible; LBP-15-16, 81 NRC 654-55 (2015)
- Private Fuel Storage, LLC*. (Independent Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 33-34 (1998)
Commission grants standing to a governmental body within close proximity of a proposed nuclear reactor under the proximity presumption, effectively dispensing with the need to make an affirmative showing of injury, causation, and redressability; LBP-15-19, 81 NRC 819 n.17 (2015)
- Private Fuel Storage, LLC*. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999)
when an organization seeks to intervene on behalf of its members, it may establish standing by showing that one or more of its members would individually meet the standing requirements, the

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- member has authorized the organization to represent its interest, and the interest represented is germane to the organization's purpose; LBP-15-13, 81 NRC 463 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999)
- failure to comply with any of the section 2.309(f)(1) requirements renders a contention inadmissible; LBP-15-13, 81 NRC 468 (2015); LBP-15-19, 81 NRC 820 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-9, 53 NRC 232, 235 (2001)
- in the absence of some showing of substantial prior misdeeds, an applicant/licensee will be presumed to follow the agency's regulatory requirements, including the directives in its license; LBP-15-3, 81 NRC 140-41 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-12, 53 NRC 459, 467 (2001)
- exemptions ordinarily do not trigger hearing rights when an already-licensed facility is asking for relief from performing a duty imposed by NRC regulations; LBP-15-18, 81 NRC 797 (2015)
- hearing on exemption-related matters is necessary insofar as resolution of the exemption request directly affects the licensability of a proposed fuel storage site and the exemption raises material questions directly connected to an agency licensing action; LBP-15-18, 81 NRC 797 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001)
- guidance documents that are developed to assist in compliance with applicable regulations are entitled to special weight; CLI-15-6, 81 NRC 356 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264-65 (2001)
- where no Staff guidance was available for the particular type of facility undergoing license review, the board reasonably selected a standard for a facility most like the facility under review; CLI-15-6, 81 NRC 358 n.86 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-26, 54 NRC 376, 380 (2001)
- petitioners asserted that NRC actions following the events of September 11, 2001, and the accident at Fukushima Dai-ichi were insufficient to satisfy NRC's general obligation under the Atomic Energy Act to protect public health and safety; CLI-15-4, 81 NRC 231 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 347 (2002)
- purpose of the final supplemental environmental impact statement is to inform the decisionmaking agency and the public of a broad range of environmental impacts that will result, with a fair degree of likelihood, from a proposed project, rather than to speculate about worst-case scenarios and how to prevent them; CLI-15-6, 81 NRC 386 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 (2002)
- NEPA does not require NRC Staff to examine every conceivable aspect of federally licensed projects in preparing its environmental impact statement; LBP-15-3, 81 NRC 82 (2015); LBP-15-16, 81 NRC 638 n.101 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 352 (2002)
- NEPA's mandate to federal agencies is to consider a broad range of environmental effects that are reasonably likely to ensue as a result of a major federal action; CLI-15-6, 81 NRC 386 n.247 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-03-8, 58 NRC 11, 26 (2003)
- Commission gives substantial deference to licensing board findings of fact, and will not overturn a board's factual findings unless they are not even plausible in light of the record viewed in its entirety; CLI-15-9, 81 NRC 522 (2015)

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- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 138 (2004)
although intervenors disagree with applicant's opportunistic inspection strategy for managing rebar corrosion, they merely assert, and do not plausibly explain, how applicant's approach will lead to a material safety impact; LBP-15-1, 81 NRC 42 n.156 (2015)
intervenors' allegations do not plausibly indicate that the shield building would lose its functionality under the proposed aging management plan; LBP-15-1, 81 NRC 40-41 & n.146 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 138-39 (2004)
facts put forward by intervenor should plausibly indicate why a program is inadequate; LBP-15-20, 81 NRC 853 n.144 (2015)
in explaining why there is a genuine material dispute, contention must give the board a reason to believe that the alleged deficiency will lead to a material safety or environmental outcome, based on factual or expert support; LBP-15-1, 81 NRC 37-38 n.122 (2015)
intervenors do not point to any recitation of the factors underlying the contention or references to documents and texts that give the board reason to believe applicant's inspection program may lead to a material negative impact on public safety, or that an improved program will lead to any positive impact; LBP-15-1, 81 NRC 40 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-12, 61 NRC 345, 350 n.18 (2005)
there would be little hope of completing administrative proceedings if each newly arising allegation required an agency to reopen its hearings; LBP-15-14, 81 NRC 595 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 411 (2005)
Commission defers to board's factual findings unless they are clearly erroneous and generally steps in only to correct factual findings not even plausible in light of the record reviewed in its entirety, e.g., where it appears that the board has overlooked or misunderstood important evidence; CLI-15-6, 81 NRC 351 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-06-3, 63 NRC 19, 28 (2006)
party offering a new contention on the need to supplement an issued final EIS must explain why the new information is sufficiently significant to present a seriously different picture of the environmental landscape; LBP-15-16, 81 NRC 704 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179, *aff'd as to other matters*, CLI-98-13, 48 NRC 26 (1998)
"materiality" requires petitioner to show why the alleged error or omission is of possible significance to the result of the proceeding; LBP-15-20, 81 NRC 850 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80, *aff'd as to other matters*, CLI-98-13, 48 NRC 26 (1998)
subject matter of the contention must impact the grant or denial of a pending license application; LBP-15-20, 81 NRC 850 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180, *aff'd as to other matters*, CLI-98-13, 48 NRC 26 (1998)
there must be some significant link between a claimed deficiency and NRC's ultimate determination whether the license applicant will adequately protect the health and safety of the public and the environment; LBP-15-20, 81 NRC 850 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-28, 52 NRC 226 (2000)
even if contentions are based on NRC Staff's FSEIS, intervenor still bears the responsibility of demonstrating that a new contention merits admission and meets all six requirements of 10 C.F.R. 2.309; LBP-15-16, 81 NRC 703 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-23, 54 NRC 163, 172 n.3 (2001)
admitted contentions challenging applicant's environmental report may function as challenges to similar portions of NRC Staff's NEPA document; LBP-15-11, 81 NRC 409-10 (2015)

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- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-30, 58 NRC 454, 479 (2003)
reasonable alternatives under NEPA do not include alternatives that are impractical, present unique problems, or cause extraordinary costs; LBP-15-3, 81 NRC 104 (2015)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-05-12, 61 NRC 319, 331-31 (2005)
directing NRC Staff to investigate a safety issue that the board could not reach through the adjudicatory process may put the Commission in a position, after receiving views of applicant if it desired, to assure itself about the significance, or lack thereof, of the shield building cracking issues raised by intervenors, and to direct such followup proceedings, if any, as it might deem appropriate; LBP-15-1, 81 NRC 45 n.181 (2015)
- Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 559 (2008)
licensing boards are obliged to independently assess petitioners' standing; LBP-15-5, 81 NRC 256 (2015)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 34 (2010)
when NEPA contentions are involved, the burden of proof shifts to NRC Staff; LBP-15-3, 81 NRC 84-85 (2015); LBP-15-16, 81 NRC 641 (2015)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 40-41 (2010)
expert witness must have enough knowledge in the subject area to allow him to proffer an expert opinion for the purposes of determining contention admissibility; LBP-15-20, 81 NRC 851 n.129 (2015)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 45 (2010)
evidentiary objections made for the first time after briefing has been completed unfairly deprive the petitioners of the opportunity to file the response expressly provided in the NRC's procedural rules; LBP-15-20, 81 NRC 859 (2015)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), CLI-10-2, 71 NRC 27, 46 (2010)
NEPA and 10 C.F.R. Part 52 requirements do not apply in the license transfer context; CLI-15-8, 81 NRC 511 n.81 (2015)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 99-100 (2009)
brief explanation of the rationale underlying the contention is sufficient to satisfy 10 C.F.R. 2.309(f)(1)(ii); LBP-15-20, 81 NRC 849 (2015)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 101 (2009)
once challenged, there is no presumption that an environmental report is correct or accurate, with applicant, as the proponent of the license, bearing the burden of proof; LBP-15-2, 81 NRC 57 n.63 (2015)
- Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-11-1, 73 NRC 19, 26 (2011)
migration tenet applies when information in the draft environmental impact statement is sufficiently similar to information in applicant's environmental report, and allows previously admitted contentions challenging the environmental report to apply to relevant portions of the DSEIS; LBP-15-16, 81 NRC 631 n.39 (2015)
- Public Citizen Health Research Group v. Commissioner, Food and Drug Administration*, 740 F.2d 21, 31 (D.C. Cir. 1984)
courts decline to review tentative agency positions because doing so severely compromises the interests that the ripeness doctrine protects; LBP-15-15, 81 NRC 610 n.83 (2015)

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- Public Citizen Health Research Group v. Commissioner, Food and Drug Administration*, 740 F.2d 21, 32 (D.C. Cir. 1984)
tentative conclusion articulated in a nonfinal, proposed rule does not command deference from the court nor is it binding on the agency; LBP-15-15, 81 NRC 610 n.83 (2015)
- Public Citizen, Inc. v. Shalala*, 932 F. Supp. 13, 18 n.6 (D.D.C. 1996)
tentative conclusion articulated in a nonfinal, proposed rule does not command deference from the court nor is it binding on the agency; LBP-15-15, 81 NRC 610 n.83 (2015)
- Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-493, 8 NRC 253, 270 (1978)
stay movant has the burden of persuasion on the four factors of 10 C.F.R. 2.1213(d); LBP-15-2, 81 NRC 53 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 68 (1977)
Commission may incorporate in any license at the time of issuance, or thereafter, by appropriate rule, regulation, or order, such additional requirements and conditions with respect to licensee's receipt, possession, use, and transfer of source or byproduct material as it deems appropriate or necessary in order to protect health or to minimize danger to life or property; LBP-15-16, 81 NRC 638 n.104 (2015)
- 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)
because NRC Staff relies heavily on applicant's environmental report in preparing the environmental impact statement, should applicant become a proponent of a particular challenged position set forth in the EIS, applicant, as such a proponent, also has the burden on that matter; LBP-15-3, 81 NRC 85 (2015); LBP-15-16, 81 NRC 642 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-940, 32 NRC 225, 234-38 (1990)
NRC Staff oversight activities normally conducted for the purpose of ensuring that licensees comply with existing NRC requirements and license conditions do not typically trigger the opportunity for a hearing under the AEA; CLI-15-5, 81 NRC 334 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 408-09 (1990)
failure to offer factual support for the proposition that applicant's inputs for evacuation times are flawed or unreasonable or that its sensitivity analysis of these inputs was incorrect renders a contention inadmissible; LBP-15-5, 81 NRC 299 n.338 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 527 (1977)
deference can be given to a state permit's findings as to the acceptability of environmental impacts; LBP-15-11, 81 NRC 439 n.253 (2015)
it is appropriate for NRC Staff to give substantial weight to state agency's decision that issuing the NPDES permit would be environmentally acceptable; LBP-15-11, 81 NRC 436 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 530 (1977)
in granting a proposed license, board may condition it upon some precautionary measures required at the chosen site; LBP-15-16, 81 NRC 638 n.104 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-77-27, 6 NRC 715, 716 (1977)
stay of an NRC license is an extraordinary remedy, and a rare occurrence in NRC practice; LBP-15-2, 81 NRC 53 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 241 (1989)
wholesale incorporation by reference does not serve the purposes of a pleading; LBP-15-5, 81 NRC 290 n.263 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-90-3, 31 NRC 219, 232 (1990)
arrangements for requesting and effectively using assistance resources should be identified and supported by appropriate letters of agreement; LBP-15-18, 81 NRC 800 n.40 (2015)

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- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-90-3, 31 NRC 219, 248 (1990)
 lack of detail for emergency sheltering option is not significant because size of sheltering population is very small; LBP-15-18, 81 NRC 800 n.42 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-89-4, 29 NRC 62, 73 (1989)
 in assessing whether applicant/licensee adequately carries out a licensing directive, boards are to assume that NRC Staff will be fair and judge the matter of an applicant/licensee's compliance on the merits; LBP-15-3, 81 NRC 141 n.66 (2015)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-89-32, 30 NRC 375, 554 n.56 (1989), *rev'd in part on other grounds and remanded*, ALAB-937, 32 NRC 135 (1990), *aff'd in part and rev'd in part on other grounds*, ALAB-941, 32 NRC 337 (1990), *and aff'd on other grounds*, ALAB-947, 33 NRC 299 (1991)
 board considered evidence submitted with petitioner's reply to which opposing parties didn't object; LBP-15-5, 81 NRC 289 n.252 (2015)
- Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487, 489 (1973)
 although a totally deficient pleading may not be justified on the basis that it was prepared without the assistance of counsel, pro se petitioners should not be held to those standards of clarity and precision to which a lawyer might reasonably be expected to adhere; LBP-15-13, 81 NRC 468 n.65 (2015)
- Quechan Tribe v. U.S. Department of the Interior*, 755 F. Supp. 2d 1104, 1106-07 (S.D. Cal. Dec. 15, 2010)
 preliminary injunction halting a solar energy project was granted based on a tribal claim that the project would not avoid most of the 459 cultural sites identified, and that the NEPA and NHPA process had been insufficient; LBP-15-2, 81 NRC 55-56 (2015)
- Quechan Tribe v. U.S. Department of the Interior*, 755 F. Supp. 2d 1104, 1120 (S.D. Cal. Dec. 15, 2010)
 irreparable harm element of the test for issuance of injunctive relief was met where the tribe's evidence showed that a phase of the project would involve damage to at least one known site, and virtually ensure some loss or damage; LBP-15-2, 81 NRC 56 (2015)
- RadLAX Gateway Hotel, LLC v. Amalgamated Bank*, 132 S. Ct. 2065, 2071 (2012)
 specific regulations control over general regulations; CLI-15-10, 81 NRC 540 (2015)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)
 environmental impact statement ensures that decisionmakers will have available and will carefully consider detailed information concerning significant environmental impacts; CLI-15-10, 81 NRC 540 (2015)
 environmental impact statement guarantees that the relevant information will be made available to the larger audience, such as petitioners and state and local governments, that may also play a role in the decisionmaking process; CLI-15-10, 81 NRC 540-41 (2015)
 final environmental impact statements must be supplemented to provide complete, accurate, and up-to-date sources of information for members of the public and state and local governments; CLI-15-10, 81 NRC 538 n.7 (2015)
 statutory requirement to prepare an environmental impact statement serves two purposes; CLI-15-10, 81 NRC 540 (2015)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349-50 (1989)
 principal goals of a final environmental impact statement are to force agencies to take a hard look at the environmental consequences of a proposed project and to permit the public a role in the agency's decisionmaking process; LBP-15-16, 81 NRC 697 n.511 (2015)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)
 NEPA does not mandate particular results, but simply prescribes the necessary process that agencies must follow in evaluating environmental impacts; LBP-15-19, 81 NRC 824 (2015)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)
 final supplemental environmental impact statement need not contain a complete mitigation plan; LBP-15-16, 81 NRC 694 (2015)
 NEPA requires a reasonably complete discussion of possible mitigation measures; LBP-15-11, 81 NRC 430 (2015)

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- where the agency has found mitigation strategies necessary to alleviate a potential impact, the associated discussion should be reasonably complete to properly evaluate the severity of the adverse effects; LBP-15-11, 81 NRC 431, 437 (2015); LBP-15-16, 81 NRC 687 n.436 (2015)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353 (1989)
- NEPA does not demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act; LBP-15-16, 81 NRC 688 (2015)
- Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), ALAB-655, 14 NRC 799, 816 (1981)
- licensing proceedings are not the appropriate venue for generic rulemaking issues; CLI-15-9, 81 NRC 530 (2015)
- San Luis Obispo Mothers for Peace v. NRC*, 799 F.2d 1268, 1270 (9th Cir. 1986)
- NRC regulations appropriately require a hearing before the proposed license amendment becomes effective whenever the amendment creates the possibility of a new or different kind of accident; LBP-15-20, 81 NRC 859 n.181 (2015)
- Securities and Exchange Commission v. Chenery Corp.*, 332 U.S. 194, 203 (1947)
- choice made between proceeding by general rule or by individual, ad hoc litigation is one that lies primarily in the informed discretion of the administrative agency; CLI-15-11, 81 NRC 549 n.19 (2015)
- Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning), LBP-99-46, 50 NRC 386 (1999)
- “synergistic” refers to the joint action of different parts or sites which, acting together, enhance the effects of one or more individual sites; LBP-15-5, 81 NRC 274 n.135 (2015)
- Sequoyah Fuels Corp. and General Atomics* (Gore Oklahoma Site), CLI-94-12, 40 NRC 64 (1994)
- oversight activities at times involve enforcement actions, including orders and civil penalties, to which a hearing right or opportunity attaches; CLI-15-5, 81 NRC 338 n.52 (2015)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 72 (1994)
- organization seeking representational standing on behalf of its members may meet the injury-in-fact requirement by demonstrating that at least one of its members, who has authorized the organization to represent his or her interest, will be injured by the possible outcome of the proceeding; LBP-15-5, 81 NRC 256, 257 (2015); LBP-15-17, 81 NRC 771 n.104, 776 (2015)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 (1994)
- living within a specific distance from the plant is enough to confer standing on an individual or group in proceedings for construction permits, operating licenses, or significant amendments thereto; LBP-15-20, 81 NRC 837 n.30 (2015)
- proximity presumption applies to persons who have frequent contacts in the area near a nuclear power plant; LBP-15-17, 81 NRC 77 n.97 (2015)
- Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 183 (2007)
- to demonstrate organizational standing, petitioner must show injury-in-fact to the interests of the organization itself; LBP-15-17, 81 NRC 771 (2015)
- Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-08-11, 67 NRC 460, 482 (2008)
- boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-15-5, 81 NRC 262, 270 n.116, 273 (2015); LBP-15-13, 81 NRC 468 n.66 (2015); LBP-15-17, 81 NRC 780 n.165 (2015)
- Shieldalloy Metallurgical Corp.* (Decommissioning of the Newfield, New Jersey Site), CLI-09-1, 69 NRC 1, 5 (2009)
- absent compelling circumstances, NRC Staff is expected to accord sufficient priority and devote sufficient resources to meeting its current estimated safety and environmental review schedule; LBP-15-2, 81 NRC 59 (2015)
- 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 factors for grant or denial of a stay; LBP-15-2, 81 NRC 53-54 (2015)

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- Shieldalloy Metallurgical Corp.* (Decommissioning of the Newfield, New Jersey Site), CLI-10-8, 71 NRC 142, 154 (2010)
 even if a party moving for a stay fails to show irreparable injury, a board may still grant a stay if movant has made an overwhelming showing or a demonstration of virtual certainty that it will prevail on the merits; LBP-15-2, 81 NRC 54, 58 (2015)
- Sierra Club v. Van Antwerp*, 661 F.3d 1147, 1155 (D.C. Cir. 2011)
 federal agency is required to consult if an action may affect listed species or designated critical habitat, even if the effects are expected to be beneficial; LBP-15-11, 81 NRC 445 n.297 (2015)
- Society Hill Towers Owners' Association v. Rendell*, 210 F.3d 168, 181 (3d Cir. 2000)
 action lacks independent utility when it would be irrational or unwise to pursue the action without the presence of the EIS-generating central action; LBP-15-16, 81 NRC 697 (2015)
- Solite Corp. v. Environmental Protection Agency*, 952 F.2d 473, 484-85 (D.C. Cir. 1991)
 preamble to notice of proposed rulemaking addresses agency's duty to identify and make available technical studies and data that it has employed in reaching the decisions to propose particular rules; LBP-15-15, 81 NRC 612-13 (2015)
- South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 (2010)
 Commission permits petitioners to cure deficiencies with regard to standing in their replies; LBP-15-5, 81 NRC 285 n.224 (2015); LBP-15-13, 81 NRC 461 (2015)
- South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-12-9, 75 NRC 421, 428 (2012)
 Commission does not review combined license application de novo, but rather considers the sufficiency of NRC Staff's review of the application; CLI-15-13, 81 NRC 560-61 (2015)
- South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-12-9, 75 NRC 421, 460-64 (2012)
 inservice testing and inspection program for squib valves in combined license applications is discussed; CLI-15-13, 81 NRC 578 (2015)
- South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-12-9, 75 NRC 421, 461 (2012)
 in the event of a severe accident in an AP1000, squib valves, which are explosively activated, reduce pressure and inject water as needed into the reactor vessel; CLI-15-13, 81 NRC 578 (2015)
 purpose of the testing program for squib valves is to ensure that the valves operate as intended under design conditions; CLI-15-13, 81 NRC 578 (2015)
- South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-12-9, 75 NRC 421, 461-63 (2012)
 although the Commission found NRC Staff's review of combined license applications rigorous, it imposed a condition requiring implementation of a squib-valve surveillance program prior to fuel load; CLI-15-13, 81 NRC 578 (2015)
- South Fork Band Council v. U.S. Department of Interior*, 588 F.3d 718, 726 (9th Cir. 2009)
 final supplemental environmental impact statement cannot rely on non-NEPA documents; LBP-15-16, 81 NRC 682 n.390, 699 (2015)
 non-NEPA document, let alone one prepared and adopted by a state government, cannot satisfy a federal agency's obligations under NEPA; LBP-15-11, 81 NRC 430 n.187, 439 (2015)
- South Texas Project Nuclear Operating Co.* (South Texas Project, Units 3 and 4), CLI-10-24, 72 NRC 451, 467 (2010)
 guidance documents do not create binding legal requirements; LBP-15-20, 81 NRC 847 n.100 (2015)
- South Texas Project Nuclear Operating Co.* (South Texas Project, Units 3 and 4), LBP-09-21, 70 NRC 581, 617, 618, 619 (2009), *review denied*, *Nuclear Innovation North America LLC* (South Texas Project, Units 3 and 4), CLI-11-6, 74 NRC 203, 210 (2011)
 petitioners' assertion that applicant must address the potential impacts of a radiological incident on the operations of the other units establishes an admissible contention of omission; LBP-15-5, 81 NRC 275 (2015)

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- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 1 and 2), CLI-12-20, 76 NRC 437, 440 (2012)
 Commission referred request to licensing board, directing the board to consider whether a Confirmatory Action Letter issued to licensee constituted a de facto license amendment; CLI-15-14, 81 NRC 749 (2015)
- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 1 and 2), LBP-13-7, 77 NRC 307, 327, *vacated as moot*, CLI-13-9, 78 NRC 551 (2013)
 board examined whether any aspect of the larger Confirmatory Action Letter process constituted a de facto license amendment; CLI-15-14, 81 NRC 749 (2015)
- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 1 and 2), LBP-13-7, 77 NRC 307, 333-34, *vacated as moot*, CLI-13-9, 78 NRC 551 (2013)
 board erred in determining that it could review unilateral, unapproved, licensee actions under section 50.59(c)(2) to determine whether they also constituted de facto license amendments; CLI-15-14, 81 NRC 749-50 (2015)
- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), ALAB-717, 17 NRC 346, 365 n.32 (1983)
 Federal Rules of Evidence are not directly applicable to NRC proceedings, but NRC adjudicatory boards often look to those rules for guidance; LBP-15-20, 81 NRC 859 n.184 (2015)
- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-12-20, 76 NRC 437, 439-40 (2012)
 assertion that the section 2.206 process does not provide a viable forum for relief is rejected; CLI-15-14, 81 NRC 736 n.32 (2015)
 NRC's 2.206 process affords a meaningful opportunity to seek review of and action on safety-related concerns; CLI-15-5, 81 NRC 339 (2015)
- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-13-9, 78 NRC 551, 556 n.17 (2013)
 amicus curiae filings are allowed at the Commission's discretion or sua sponte; CLI-15-4, 81 NRC 225 n.8 (2015); CLI-15-5, 81 NRC 333 n.19 (2015); CLI-15-10, 81 NRC 537-38 n.5 (2015)
 Commission exercises its discretion to consider briefs that were not filed via the agency's E-Filing system; LBP-15-4, 81 NRC 163 n.38 (2015)
- Southern California Edison Co.* (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-13-9, 78 NRC 551, 560 & n.36 (2013)
 licensing boards are the appropriate finders of fact in most circumstances, and referral of a matter for a fact-specific dispute occurs in the ordinary course of business; CLI-15-14, 81 NRC 735 n.27, 751 n.62 (2015)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-07-17, 65 NRC 392, 395 (2007)
 NRC hearings on NEPA issues focus entirely on the adequacy of NRC Staff's work; LBP-15-3, 81 NRC 84-85 (2015); LBP-15-16, 81 NRC 641-41 n.126 (2015)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-08-2, 67 NRC 54, 63-64 (2008)
 migration of a contention is appropriate only where the environmental analysis or discussion at issue is essentially in pari materia with applicant's analysis or discussion that is the focus of the contention; LBP-15-11, 81 NRC 410 (2015)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-7, 69 NRC 613, 632 (2009)
 board's ultimate NEPA judgments can be made on the basis of the entire adjudicatory record in addition to NRC Staff's final environmental impact statement; LBP-15-3, 81 NRC 82 (2015)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-7, 69 NRC 613, 696-702 (2009), *review denied*, CLI-10-5, 71 NRC 90 (2010)
 ruling that supplements the record should state clearly what evidence the board found credible, whether the evidence supports or alters NRC Staff's conclusions in the environmental impact statement, and what the impact of the proposed action for the specific issue is expected to be; CLI-15-6, 81 NRC 389 n.258 (2015)

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- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-09-7, 69 NRC 613, 733 (2009), *petition for review denied*, CLI-10-5, 71 NRC 90 (2010)
board's ultimate NEPA judgments are made on the basis of the entire adjudicatory record in addition to NRC Staff's final supplemental environmental impact statement; LBP-15-16, 81 NRC 638 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 217 n.1 (2011)
heavy barrier to reopening applies whenever an adjudication has been closed and not merely after a case has been terminated following a full evidentiary hearing on the merits; LBP-15-14, 81 NRC 595 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-11-8, 74 NRC 214, 221 (2011)
merits questions cannot be resolved at the contention admission stage of the proceeding; LBP-15-20, 81 NRC 855 n.158 (2015)
petitioners are not required at the contention admissibility stage to prove their case on the merits or even to provide expert or factual support as strong as that necessary to withstand a summary disposition motion; LBP-15-20, 81 NRC 851, 855 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63, 74 (2012)
Commission does not review combined license application de novo, but rather considers the sufficiency of NRC Staff's review of the application; CLI-15-13, 81 NRC 560-61 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63, 90 (2012)
in the event of a severe accident in an AP1000, squib valves, which are explosively activated, reduce pressure and inject water as needed into the reactor vessel; CLI-15-13, 81 NRC 578 (2015)
purpose of the testing program for squib valves is to ensure that the valves operate as intended under design conditions; CLI-15-13, 81 NRC 578 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63, 90-96 (2012)
inservice testing and inspection program for squib valves in combined license applications is discussed; CLI-15-13, 81 NRC 578 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-2, 75 NRC 63, 93-95 (2012)
although the Commission found NRC Staff's review of combined license applications rigorous, it imposed a condition requiring implementation of a squib-valve surveillance program prior to fuel load; CLI-15-13, 81 NRC 578 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-11, 75 NRC 523, 529 (2012)
even if stay movant fails to show irreparable injury, a board may still grant a stay if movant has made an overwhelming showing or a demonstration of virtual certainty that it will prevail on the merits; LBP-15-2, 81 NRC 54, 58 (2015)
for a potential injury to be irreparable, it must be shown to be imminent, certain, and great; LBP-15-2, 81 NRC 54 (2015)
irreparable injury is the most important of the factors for grant or denial of a stay; LBP-15-2, 81 NRC 53-54 (2015)
where movant cannot show either irreparable injury or a likelihood of prevailing on the merits, a board need not consider the remaining factors; LBP-15-2, 81 NRC 54 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-11, 75 NRC 523, 530-31 (2012)
to qualify as irreparable injury, the potential harm cited by stay movant first must be related to the underlying claim that is the focus of the adjudication; LBP-15-2, 81 NRC 54, 55 (2015)
- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-11, 75 NRC 523, 533 n.53 (2012)
party offering a new contention on the need to supplement an issued final EIS must explain why the new information is sufficiently significant to present a seriously different picture of the environmental landscape; LBP-15-16, 81 NRC 704 (2015)

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- Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-12-11, 75 NRC 523, 534 (2012)
results of review by NRC Staff and Indian tribe of applicant's newly disclosed well log data did not paint a seriously different picture of the environmental landscape; LBP-15-16, 81 NRC 705 (2015)
- Southern Utah Wilderness Alliance Corp. v. Norton*, 301 F.3d 1217, 1238 n.19 (10th Cir. 2002), *rev'd on other grounds*, 542 U.S. 55 (2004)
standard for preparing a supplemental environmental assessment is the same as for preparing a supplemental environmental impact statement; LBP-15-13, 81 NRC 471 n.89 (2015)
- 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 U.S. Fish & Wildlife Service consultation requirements are not triggered; LBP-15-11, 81 NRC 444 n.284 (2015)
- Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22 (1998)
board may appropriately view petitioner's support for its contention in a light that is favorable to petitioner, but the board cannot do so by ignoring the requirements set forth in 10 C.F.R. 2.309(f)(1); LBP-15-5, 81 NRC 288 n.248 (2015)
- Statement of Policy on Conduct of Adjudicatory Proceedings*, CLI-98-12, 48 NRC 18, 22-23 (1998)
sua sponte review authority shall be used only in extraordinary circumstances; CLI-15-1, 81 NRC 9 (2015)
- Statement of Policy on Conduct of Licensing Proceedings*, CLI-81-8, 13 NRC 452, 453 (1981)
NRC Rules of Practice provide the board with substantial authority to regulate hearing procedures; LBP-15-15, 81 NRC 615 n.114 (2015)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-12-3, 75 NRC 164, 207 (2012), *aff'd on other grounds*, CLI-12-12, 75 NRC 603 (2012)
generic environmental impact statement for ISL mining is subject to an appropriate challenge in an adjudicatory proceeding; LBP-15-11, 81 NRC 441 (2015)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-15-3, 81 NRC 65, 91-92 (2015)
prelicensing monitoring program to characterize site groundwater constituents need not be coextensive with the Criterion 7A preoperational monitoring, license condition-based program intended to provide the information needed for setting Criterion 5B groundwater protection standards and UCLs; LBP-15-16, 81 NRC 665 (2015)
- Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-15-3, 81 NRC 65, 132 (2015)
there is nothing in the record to suggest that applicant or NRC Staff will not act in good faith to ensure that applicant's regulatory responsibilities, including its license conditions, are honored, and the board cannot assume noncompliance; LBP-15-11, 81 NRC 439 n.252 (2015)
- System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005)
boards do not sit to "flyspeck" environmental documents or to add details or nuances, but the environmental report or environmental impact statement must come to grips with all important considerations; LBP-15-5, 81 NRC 283 (2015)
petitioners may raise contentions seeking correction of significant inaccuracies and omissions in the environmental report; LBP-15-5, 81 NRC 282-83 (2015)
- Te-Moak Tribe of Western Shoshone of Nevada v. U.S. Department of Interior*, 608 F.3d 592, 606, 610 (9th Cir. 2010)
agency failed to take a hard look at cumulative impacts on cultural resources under NEPA even though the agency had satisfied its obligations under NHPA to consult with the tribe; LBP-15-16, 81 NRC 654 n.214 (2015)
- Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 75 (2009)
absent a waiver, parties are prohibited from collaterally attacking NRC regulations in an adjudication; LBP-15-4, 81 NRC 173 n.96 (2015)
contention challenging a Category 1 issue is inadmissible because petitioner has not requested a rule waiver and makes no arguments unique to this reactor; LBP-15-5, 81 NRC 302 (2015)

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- Tennessee Valley Authority* (Browns Ferry Nuclear Plant, Units 1, 2, and 3), ALAB-664, 15 NRC 1, 15-16 (1982), *vacated and remanded on other grounds*, CLI-82-26, 16 NRC 880 (1982)
prior to license issuance NRC must find reasonable assurance that activities authorized by the amendment can be conducted without endangering the health and safety of the public, and are in compliance with Commission regulations; LBP-15-17, 81 NRC 778 n.154 (2015); LBP-15-20, 81 NRC 841 n.65 (2015)
- Tennessee Valley Authority* (Hartsville Nuclear Plant, Units 1A, 2A, 1B, and 2B), ALAB-463, 7 NRC 341, 362 n.90 (1978)
board considered a letter written after the original petition was filed and submitted with petitioner's reply; LBP-15-5, 81 NRC 289 n.252 (2015)
- Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2), CLI-14-3, 79 NRC 31, 36 (2014)
limited interlocutory appeal right attaches only when the board has fully ruled on the initial intervention petition, i.e., when it has admitted or rejected all proposed contentions; LBP-15-1, 81 NRC 46 (2015)
- Tennessee Valley Authority* (Watts Bar Nuclear Plant, Unit 2), LBP-09-26, 70 NRC 939, 33-34 (2009)
contention where a fisheries biologist opined that applicant lacked adequate data on which to conclude that impacts on the aquatic environment were insignificant was admissible; LBP-15-20, 81 NRC 852 n.139 (2015)
- Theodore Roosevelt Conservation Partnership v. Salazar*, 616 F.3d 497, 517 (D.C. Cir. 2010)
when the adequacy of an EIS mitigation strategy is challenged, the determining issue is whether the agency took a sufficiently hard look at environmental consequences, and ensured that its decision was supported by a completely informed record; LBP-15-16, 81 NRC 688 (2015)
- Toledo Edison Co.* (Davis-Besse Nuclear Power Station), ALAB-300, 2 NRC 752, 761 (1975)
specific regulations control over general regulations; CLI-15-10, 81 NRC 540 (2015)
- Town of Winthrop v. Federal Aviation Administration*, 535 F.3d 1, 13 (1st Cir. 2008)
environmental impact statements are not intended to be research documents; LBP-15-3, 81 NRC 82 (2015)
- Trout Unlimited v. Morton*, 509 F.2d 1276, 1283 (9th Cir. 1974)
NRC Staff must provide a reasonably thorough discussion of the significant aspects of the probable environmental consequences of a proposed action; LBP-15-16, 81 NRC 637 (2015)
- Tucker v. Atwood*, 880 F.2d 1250, 1250 (11th Cir. 1989)
Administrative Procedure Act requires no more than a description of the subjects and issues involved in a notice of proposed rulemaking; LBP-15-15, 81 NRC 611 n.94 (2015)
- U.S. Department of Energy* (Clinch River Breeder Reactor Plant), ALAB-721, 17 NRC 539, 544 (1983)
in addressing the stay criteria in a Subpart L proceeding, litigant must come forth with more than general or conclusory assertions in order to demonstrate its entitlement to relief; LBP-15-2, 81 NRC 54 (2015)
- U.S. Department of Energy* (High-Level Waste Repository), CLI-05-27, 62 NRC 715, 718 (2005)
stay of an NRC license is an extraordinary remedy, and a rare occurrence in NRC practice; LBP-15-2, 81 NRC 53 (2015)
- U.S. Department of Energy* (High-Level Waste Repository), CLI-09-14, 69 NRC 580, 588 (2009)
petitioner may not rely on general allegations, but must show specific ties to NRC regulatory requirements or to safety in general to demonstrate a genuine dispute of fact or law; LBP-15-20, 81 NRC 848 n.105 (2015)
- U.S. Department of Energy* (High-Level Waste Repository), CLI-10-13, 71 NRC 387, 389 (2010)
interpretation of statutes at issue and the regulations governing their implementation falls within the Commission's province; LBP-15-5, 81 NRC 302 n.363 (2015)
- U.S. Department of Energy* (High-Level Waste Repository), LBP-09-6, 69 NRC 367, 416 (2009)
requiring petitioners to proffer conclusive support for the effect of their proposed contention would improperly require boards to adjudicate the merits of contentions before admitting them; LBP-15-20, 81 NRC 858 n.155 (2015)
- U.S. Department of Energy* (High-Level Waste Repository), LBP-09-6, 69 NRC 367, 467 (2009)
NRC generally presumes that licensees will comply with its regulations; LBP-15-16, 81 NRC 695 n.494 (2015)

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- Union Electric Co.* (Callaway Plant, Unit 1), CLI-15-11, 81 NRC 546 (2015)
contention that supplementation of the environmental impact statement is necessary to allow members of the public to lodge placeholder contentions challenging Commission reliance, in individual licensing proceedings, on the Continued Storage Rule and GEIS is denied; CLI-15-10, 81 NRC 538 n.7 (2015)
motion to reopen the record on claim that final environmental impact statement for combined license application violates National Environmental Policy Act by failing to consider the environmental impacts associated of continued storage of spent nuclear fuel is denied; CLI-15-12, 81 NRC 551 (2015)
placeholder contentions that challenge the 2014 Continued Storage Rule and associated Generic Environmental Impact Statement for Continued Storage are inadmissible; CLI-15-15, 81 NRC 805 (2015)
- Union Electric Co.* (Callaway Plant, Unit 1), CLI-15-11, 81 NRC 546, 548-50 (2015)
contention that challenges an agency regulation does not raise an issue appropriately within the scope of an individual licensing proceeding and thus is not admissible absent a waiver; CLI-15-12, 81 NRC 553 (2015)
- Union Electric Co.* (Callaway Plant, Unit 1), CLI-15-11, 81 NRC 546, 549 (2015)
contention that does not engage the combined license application has not demonstrated a genuine dispute with applicant on a material issue; CLI-15-12, 81 NRC 554 (2015)
- Union Electric Co.* (Callaway Plant, Unit 1), CLI-15-11, 81 NRC 546, 549 n.17 (2015)
lack of an admissible contention necessarily precludes reopening the proceeding; CLI-15-12, 81 NRC 554 (2015)
- Union Electric Co.* (Callaway Plant, Unit 1), LBP-12-15, 76 NRC 14, 27 (2012)
petitioner that fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v) also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi); LBP-15-1, 81 NRC 38 (2015)
- Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 146, 177-78 (2011)
request for suspension of proceedings and other relief after the Fukushima Dai-ichi accident was denied; CLI-15-13, 81 NRC 564 n.42 (2015)
- Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 151 (2011)
petitioners asserted that NRC actions following the events of September 11, 2001, and the accident at Fukushima Dai-ichi were insufficient to satisfy NRC's general obligation under the Atomic Energy Act to protect public health and safety; CLI-15-4, 81 NRC 231 (2015)
- Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 152-57, 161-65 (2011)
decision to suspend final licensing decisions is highly dependent upon the facts and requires a judgment that the significance of the matter raised is so substantial as to warrant suspension; CLI-15-14, 81 NRC 736-37 (2015)
- Union Electric Co.* (Callaway Plant, Unit 2), CLI-11-5, 74 NRC 141, 158 n.65 (2011)
because the Commission finds that the suspension petition and new contention fail on the merits, and it considers and takes action on the petition and motions in its supervisory capacity, it need not address procedural issues; CLI-15-4, 81 NRC 239 n.100 (2015)
where petition fails on the merits, the Commission need not address procedural issues; CLI-15-10, 81 NRC 539 n.8 (2015)
- United States v. Alexander*, 326 F.2d 736, 741 (5th Cir. 1964)
in absence of objection, hearsay evidence is treated as being properly admitted and may be given such probative effect and value to which it is entitled; LBP-15-20, 81 NRC 859 n.184 (2015)
- United States v. Carney*, 468 F.2d 354, 357 (8th Cir. 1972)
in absence of objection, hearsay evidence is treated as being properly admitted and may be given such probative effect and value to which it is entitled; LBP-15-20, 81 NRC 859 n.184 (2015)
- United States v. Chemical Foundation, Inc.*, 272 U.S. 1, 14-15 (1926)
in assessing whether applicant/licensee adequately carries out a licensing directive, boards are to assume that NRC Staff will be fair and judge the matter of an applicant/licensee's compliance on the merits; LBP-15-3, 81 NRC 141 n.66 (2015)

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- United States v. Duvall*, 740 F.3d 604, 605 (D.C. Cir. 2013)
concurring opinions, by their nature, do not carry the force of law, except in very narrow circumstances; CLI-15-4, 81 NRC 233 n.61 (2015)
- United States v. Green Acres Enterprises, Inc.*, 86 F.3d 130, 133 (8th Cir. 1996)
to qualify as irreparable injury, the potential harm cited by stay movant first must be related to the underlying claim that is the focus of the adjudication; LBP-15-2, 81 NRC 54 (2015)
- United States v. Jamerson*, 549 F.2d 1263, 1266-67 (9th Cir. 1977)
objection not timely made is waived; LBP-15-20, 81 NRC 859 n.184 (2015)
- United States v. Jenkins*, 714 F. Supp. 2d 1213, 1222 (S.D. Ga. Dec. 5, 2008)
harming Native American artifacts would constitute an irreparable injury because artifacts are, by their nature, unique, and their historical and cultural significance make them difficult to value monetarily; LBP-15-2, 81 NRC 55 n.54 (2015)
- United States v. Turkette*, 452 U.S. 576, 580 (1981)
because the UFSAR updated under section 50.71(e) also includes changes the agency approved by the license amendment process under section 50.90, challenges under 10 C.F.R. 50.59 would have the agency effectively approve these changes for a second time, without apparent purpose or effect; CLI-15-14, 81 NRC 748 (2015)
- USEC Inc. (American Centrifuge Plant)*, CLI-05-11, 61 NRC 309, 314 (2005)
Atomic Energy Act authorizes NRC to accord protection from radiological injury to both health and property interests, and thus a genuine property interest is sufficient to accord petitioner proximity-based standing; LBP-15-17, 81 NRC 776 (2015)
proximity presumption applies to persons who have a significant property interest in the area near a nuclear power plant; LBP-15-17, 81 NRC 770, 775 (2015)
- USEC Inc. (American Centrifuge Plant)*, CLI-05-11, 61 NRC 309, 314-15 (2005)
failure of organization member to provide an exact address in her affidavit is not a limiting concern; LBP-15-17, 81 NRC 776 n.144 (2015)
- USEC Inc. (American Centrifuge Plant)*, CLI-06-9, 63 NRC 433, 437 (2006)
contention admissibility standards are strict by design; LBP-15-19, 81 NRC 820 (2015)
- USEC Inc. (American Centrifuge Plant)*, CLI-06-10, 63 NRC 451, 457 (2006)
petitioner is obliged to present factual allegations and/or expert opinion necessary to support its contention; LBP-15-1, 81 NRC 38 (2015)
- USEC Inc. (American Centrifuge Plant)*, CLI-06-10, 63 NRC 451, 462-63 (2006)
any contention that fails to directly controvert the application or environmental impact statement, or mistakenly asserts the application does not address a relevant issue, will be dismissed; LBP-15-1, 81 NRC 37 (2015)
- USEC Inc. (American Centrifuge Plant)*, CLI-06-10, 63 NRC 451, 472 (2006)
contention admissibility stage is not the appropriate point at which to evaluate witness credibility or to weigh competing evidence, but an expert must provide a reasoned basis or explanation for opinions in support of a contention; LBP-15-17, 81 NRC 783 (2015)
neither mere speculation nor bare or conclusory assertions, even by an expert, alleging that a matter should be considered will suffice to allow admission of a proffered contention; LBP-15-1, 81 NRC 38-39, 42 (2015)
- USEC Inc. (American Centrifuge Plant)*, CLI-06-10, 63 NRC 451, 472-74 (2006)
even if a contention provided information not discussed in the environmental report, it is still not admissible if it fails to provide a reasoned basis or explanation for why the ER is wrong; LBP-15-5, 81 NRC 306 n.394 (2015)
- USEC Inc. (American Centrifuge Plant)*, CLI-06-10, 63 NRC 451, 476 (2006)
petitioner cannot cure a deficient contention with new arguments not presented in the initial petition; LBP-15-4, 81 NRC 174 n.103 (2015)
- USEC Inc. (American Centrifuge Plant)*, LBP-05-28, 62 NRC 585, 596-97 (2005)
petitioners are not required at the contention admission stage to prove their case on the merits or even to provide expert or factual support as strong as that necessary to withstand a summary disposition motion; LBP-15-20, 81 NRC 851, 855 (2015)

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- Utility Air Regulatory Group v. Environmental Protection Agency*, 320 F.3d 272, 279 (D.C. Cir. 2003)
reviewing proposed actions improperly intrudes into the agency's decisionmaking process; LBP-15-15, 81 NRC 610 (2015)
- Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 553 (1978)
it is NRC Staff, not petitioners, that has the burden of complying with NEPA; LBP-15-5, 81 NRC 283 (2015)
- Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 555 (1978)
there would be little hope of completing administrative proceedings if each newly arising allegation required an agency to reopen its hearings; LBP-15-14, 81 NRC 595 (2015)
- 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)
board examines the information, facts, and expert opinions provided by petitioners to confirm that they do indeed provide adequate support for the contention; LBP-15-20, 81 NRC 850-51 (2015)
- Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 169 (2000)
license transfer proceedings do not encompass a full-scale health-and-safety review of a plant;
CLI-15-8, 81 NRC 508 (2015)
- Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), LBP-87-7, 25 NRC 116, 118 (1987)
radius for the proximity presumption has to be at least as large as the range where obvious offsite consequences can occur; LBP-15-17, 81 NRC 773 n.122 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-14, 75 NRC 692, 692 (2012)
heavy barrier to reopening applies whenever an adjudication has been closed and not merely after a case has been terminated following a full evidentiary hearing on the merits; LBP-15-14, 81 NRC 595 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-14, 75 NRC 692, 693, 699-701 (2012)
board's jurisdiction terminates when there are no longer any contested matters pending before it;
CLI-15-13, 81 NRC 564 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-14, 75 NRC 692, 699 (2012)
when there are no proffered or admitted contentions remaining in the adjudicatory proceeding, the board's jurisdiction terminates; LBP-15-12, 81 NRC 454 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-14, 75 NRC 692, 699, 701 (2012)
licensing board's ruling resolving the last pending contention is equivalent to a final decision under 10 C.F.R. 2.341, and a licensing board's jurisdiction ends after it has rendered a final decision;
LBP-15-9, 81 NRC 397 n.10 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 317 (2008)
facts relied on to support a contention of omission need not show that the facility cannot be safely operated, but only that the application is incomplete; LBP-15-5, 81 NRC 258 (2015)
if applicant cures the omission cited in a contention, the contention will become moot unless revised by intervenors; LBP-15-5, 81 NRC 258 (2015)
pleading requirements of 10 C.F.R. 2.309(f)(1)(v), calling for a recitation of facts or expert opinion supporting the issue raised, are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-15-5, 81 NRC 258 (2015); LBP-15-11, 81 NRC 437-38 n.241 (2015)

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- Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-146, 6 AEC 631, 633 & n.4 (1973)
pro se petitioner is not held to the same standards of clarity and precision as a lawyer; LBP-15-5, 81 NRC 286 n.234 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-146, 6 AEC 631, 633 n.5 (1973)
question whether the environmental assessment is sufficient to satisfy NRC Staff's NEPA requirements must await consideration at a full evidentiary hearing; LBP-15-13, 81 NRC 476 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-491, 8 NRC 245 (1978)
Commission must find that activities authorized by a license amendment can be conducted without endangering the health and safety of the public and will be in compliance with Commission regulations; LBP-15-20, 81 NRC 841 (2015)
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petitioners' contention challenges the sufficiency of the equivalent margins analysis to provide reasonable assurance of reactor safety and is therefore within the scope of the proceeding; LBP-15-20, 81 NRC 849 (2015)
petitioners may raise issues not addressed by a specific regulation when unique features in the facility or ongoing development of a generic solution mean that there are some gaps in the regulatory scheme that must be addressed on a case-by-case basis; LBP-15-20, 81 NRC 840 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), CLI-76-22, 4 NRC 480, 491 n.11 (1976)
parties' duty to report material significant developments in a matter under adjudication arises immediately upon discovery of that information; CLI-15-16, 81 NRC 813 n.11 (2015)
- Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), LBP-75-70, 2 NRC 879, 890 (1975), *aff'd*, ALAB-325, 3 NRC 404 (1976), *petition for rev. dismissed sub nom., Culpeper League for Protection v. NRC*, 574 F.2d 633 (D.C. Cir. 1978)
the fact that a competent and responsible state authority has approved the environmental acceptability of a site or a project after extensive and thorough environmentally sensitive hearings is properly entitled to substantial weight in the conduct of NRC's own NEPA analysis; LBP-15-11, 81 NRC 439 n.253 (2015)
- Warm Springs Dam Task Force v. Gribble*, 621 F.2d 1017, 1026-27 (9th Cir. 1980)
NRC Staff must provide a reasonably thorough discussion of the significant aspects of the probable environmental consequences of a proposed action; LBP-15-16, 81 NRC 637 (2015)
- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 101 n.7 (1994)
members of the public may challenge an action taken under 10 C.F.R. 50.59 only by means of a petition under 10 C.F.R. 2.206; CLI-15-14, 81 NRC 747-48 (2015)
- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998)
contemporaneous judicial concepts of standing are applied in NRC proceedings; LBP-15-13, 81 NRC 463 (2015); LBP-15-19, 81 NRC 819 (2015)
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- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-05-15, 61 NRC 365, 375 n.26 (2005)
guidance documents that are developed to assist in compliance with applicable regulations are entitled to special weight; CLI-15-6, 81 NRC 356 (2015)
standard review plans do not have the force and effect of law; CLI-15-6, 81 NRC 358 n.85 (2015)
- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75-76 (1996), *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996)
contention alleging a material deficiency must link the claimed deficiency to a public health and safety or an environmental impact; LBP-15-1, 81 NRC 39-40 n.137 (2015)

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- 10 C.F.R. 1.13
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- 10 C.F.R. Part 2
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- 10 C.F.R. 2.105
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- 10 C.F.R. 2.109(b)
existing license will not be deemed to have expired until the license renewal application has been finally determined; CLI-15-6, 81 NRC 343 (2015)
- 10 C.F.R. 2.202
discrete enforcement actions such as orders and civil penalties involve defined opportunities for participation; CLI-15-5, 81 NRC 338 n.52 (2015)
- 10 C.F.R. 2.206
any member of the public may seek enforcement action associated with matters affecting plant operation, including the vitality of component maintenance programs; CLI-15-6, 81 NRC 367 n.140 (2015)
Commission denies hearing request, but refers the matters raised to the Executive Director of Operations for consideration as a request for enforcement action; CLI-15-5, 81 NRC 333, 339 (2015); CLI-15-14, 81 NRC 730 (2015)
concerns about current or ongoing safety deficiencies can be raised as a petition for enforcement action; CLI-15-8, 81 NRC 508 n.62 (2015)
concerns about safety, licensee's compliance with regulatory requirements, and adequacy of NRC oversight are appropriately addressed as requests for enforcement action; CLI-15-14, 81 NRC 733 (2015)
concerns with the current design and operation of a nuclear power plant are more properly addressed through a petition for enforcement action; LBP-15-13, 81 NRC 479 (2015)
contention claiming that modifications to repair or replace inadequate structural beams and columns is more appropriately presented as a request for enforcement action; CLI-15-5, 81 NRC 337 (2015)
if petitioner has a credible basis to question the adequacy of licensee's compliance with 10 C.F.R. 50.54(q)(3), it may petition for enforcement action; LBP-15-4, 81 NRC 175 (2015)
pending tax litigation would not have a significant implication for public health and safety and, to the extent the claim is viable, it would be better handled through a petition for enforcement action; LBP-15-15, 81 NRC 616 n.120 (2015)
petition will be reviewed only where petitioner specifies the bases for taking the requested action; DD-15-6, 81 NRC 890 (2015)
petitioner's concerns about tube leaks, unplanned power changes, and potential primary coolant contamination did not constitute any violations that were more than minor; DD-15-2, 81 NRC 206-11 (2015)
petitioner's request that the NRC take escalated enforcement action against licensee concerning flooding protection is being addressed by the NRC's request for information; DD-15-5, 81 NRC 877-83 (2015)
request for enforcement action based on support beam deficiencies, flood protection inadequacy, flood risks from upstream dams, and primary reactor containment electrical penetration seals containing Teflon

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- is denied because petitioner's requests have been addressed through other actions; DD-15-4, 81 NRC 869-76 (2015)
- request for immediate action on flaws in the control rod drive mechanisms did not meet the criteria for review; DD-15-3, 81 NRC 714 (2015)
- request for immediate action on leakage from the safety injection refueling water tank did not meet the criteria for review; DD-15-3, 81 NRC 714 (2015)
- request for immediate action to prevent restart because a piece of primary coolant pump impeller was lodged between the reactor vessel and the flow skirt is denied; DD-15-3, 81 NRC 713-27 (2015)
- request that NRC order the immediate shutdown of all nuclear power reactors that are known to be located on or near an earthquake fault line is denied; DD-15-6, 81 NRC 884-93 (2015)
- request that NRC order the immediate suspension of the operating licenses of all General Electric boiling-water reactors that use the Mark I primary containment system citing the Fukushima Dai-ichi accident in Japan as its rationale basis is resolved; DD-15-1, 81 NRC 193-204 (2015)
- 10 C.F.R. 2.206(a)
any person may file a request to institute a proceeding to modify, suspend, or revoke a license; CLI-15-14, 81 NRC 733 n.14 (2015)
- 10 C.F.R. 2.206(c)
Commission on its own motion may review a decision that modifies, suspends, or revokes a license; CLI-15-14, 81 NRC 733 n.14 (2015)
- 10 C.F.R. 2.302(g)
failure to comply with NRC's e-filing requirements without good cause or without obtaining an exemption from the requirements under this section can result in rejection of a pleading; LBP-15-4, 81 NRC 164 (2015)
- 10 C.F.R. 2.307
"good cause" in this section does not share the same definition that is used for good cause in section 2.309(c); LBP-15-1, 81 NRC 30 n.73 (2015)
- if intervenor cannot meet the requirements for filing a contention under the new section 2.309(c)(1), he or she can still take advantage of an extension request if unanticipated events, such as a weather event or unexpected health issues, prevented participant from filing for a reasonable period of time after the deadline; LBP-15-1, 81 NRC 30 n.73 (2015)
- 10 C.F.R. 2.307(a)
State intervenor provided good cause for its late E-filing submission because it submitted its petition to NRC by e-mail before the deadline lapsed and the delay was purely a matter of obtaining digital credentials for the system, not an attempt to gain extra time to prepare a pleading or otherwise to flout the NRC's procedural requirements; LBP-15-4, 81 NRC 163 (2015)
- 10 C.F.R. 2.309
amendment of this section in 2012 was to simplify the rules, not fundamentally change the rationale boards use to admit new/amended contentions; LBP-15-11, 81 NRC 408 n.30 (2015)
- contents of the licensees' responses may lead to additional regulatory actions to update plants' licensing bases, such as orders, license amendments, or rulemakings, for which the public would have participation rights; CLI-15-14, 81 NRC 743 (2015)
- even if contentions are based on NRC Staff's FSEIS, intervenor still bears the responsibility of demonstrating that a new contention merits admission and meets all six admission requirements; LBP-15-16, 81 NRC 703 (2015)
- petitioner may file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement or environmental assessment that differ significantly from data or conclusions in applicant's documents; LBP-15-11, 81 NRC 408 (2015)
- referral to licensing board includes threshold issues such as standing, timeliness, and satisfaction of contention admissibility standards; CLI-15-14, 81 NRC 735 (2015)
- to gain the admission of a new or amended contention, a party must meet the requirements of both paragraphs (c) and (f) of this section; LBP-15-16, 81 NRC 703 (2015)
- 10 C.F.R. 2.309(a)
hearing request is granted where petitioners have submitted a timely petition, established representational standing, and proffered an admissible contention; LBP-15-20, 81 NRC 832 (2015)

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- intervention petitioner must establish standing to intervene and submit at least one admissible contention that meets the requirements of 10 C.F.R. 2.309(f); LBP-15-5, 81 NRC 254 (2015); LBP-15-13, 81 NRC 463, 467 (2015); LBP-15-17, 81 NRC 777 (2015)
- to participate in NRC licensing proceedings, petitioner must establish standing to intervene; LBP-15-19, 81 NRC 819 (2015)
- 10 C.F.R. 2.309(a)-(f)
- admissible contention is required for grant of a hearing request; LBP-15-17, 81 NRC 758 (2015)
- intervention petitions must be timely, demonstrate standing, and proffer at least one admissible contention; CLI-15-5, 81 NRC 333 (2015)
- 10 C.F.R. 2.309(b)
- timeliness of an initial hearing petition in different situations is defined as being filed between 20 and 60 days after certain specified events; LBP-15-11, 81 NRC 408 n.28 (2015)
- 10 C.F.R. 2.309(b)(3)
- in proceedings for which a Federal Register notice of agency action is published, a hearing request must be filed not later than the time specified in the notice or if no notice is specified, 60 days from the date of publication of the notice; CLI-15-5, 81 NRC 332 n.13 (2015)
- 10 C.F.R. 2.309(b)(3)(i)
- contentions must be raised at the earliest possible opportunity; CLI-15-1, 81 NRC 7 (2015)
- intervention petition must be filed within the time specified in any notice of proposed action; LBP-15-13, 81 NRC 467 n.60 (2015)
- 10 C.F.R. 2.309(b)(4)
- in proceedings for which a notice of agency action is not published, a hearing request must be filed not later than the latest of 60 days after publication of notice on the NRC website or 60 days after the requestor receives actual notice of a pending application but not more than 60 days after agency action on the application; CLI-15-5, 81 NRC 332 n.13 (2015)
- 10 C.F.R. 2.309(c)
- contentions must be raised at the earliest possible opportunity; CLI-15-1, 81 NRC 7 (2015)
- if intervenors sought to introduce new issues, then they should have filed a new or amended contention; CLI-15-9, 81 NRC 529 (2015)
- if petitioner submits a proposed contention after the initial filing deadline announced in the applicable Federal Register notice for submitting a hearing petition, it will not be entertained absent a determination by the presiding officer that petitioner has demonstrated good cause; LBP-15-11, 81 NRC 407 (2015)
- material difference must exist between information on which a contention is based and information that was previously available, e.g., a difference between the environmental report and the draft EIS or the draft EIS and the final EIS; CLI-15-1, 81 NRC 7 (2015)
- motion to reopen that relates to a contention not previously in controversy must satisfy the requirements for new or amended contentions filed after the original hearing petition deadline; LBP-15-14, 81 NRC 595 n.29 (2015)
- petitioners who choose to wait to raise contentions that could have been raised earlier risk the possibility that there will not be a material difference between the application and the Staff's review documents, thus rendering any newly proposed contention on previously available information impermissibly late; CLI-15-1, 81 NRC 7 (2015)
- 10 C.F.R. 2.309(c)(1)
- contention submitted after the initial filing deadline for submitting a hearing request will not be entertained absent a determination by the presiding officer that petitioner has demonstrated good cause; LBP-15-15, 81 NRC 601 (2015)
- contention that draft EIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that they will change the plume dynamics of the industrial wastewater facility/cooling canal contaminant plume is inadmissible; LBP-15-19, 81 NRC 824 (2015)
- contention that environmental review documents fail to identify source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene in groundwater is inadmissible as untimely; LBP-15-19, 81 NRC 822 (2015)

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- eight-factor test that allowed a board to consider new or amended contentions that did not meet the three requirements for admissibility of late-filed contentions under 10 C.F.R. 2.309(f)(2) is no longer available; LBP-15-1, 81 NRC 30 n.73 (2015)
- once the deadline for filing petitions to intervene has passed, a party may file new or amended contentions if it is able to demonstrate good cause by meeting the three requirements specified in this section; LBP-15-1, 81 NRC 29 (2015)
- when petitioner seeks leave to intervene after the initial deadline for the filing of contentions, it must demonstrate good cause for its belated filing; LBP-15-19, 81 NRC 819-20 (2015)
- 10 C.F.R. 2.309(c)(1)(i)
new contentions cannot be based on previously available information; LBP-15-11, 81 NRC 418 (2015)
- 10 C.F.R. 2.309(c)(1)(i)-(iii)
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good cause for a newly proposed contention exists when information on which it is based was not previously available and is materially different than information previously available and has been submitted in a timely fashion based on the availability of the subsequent information; CLI-15-1, 81 NRC 7 n.29 (2015); LBP-15-1, 81 NRC 29-30 (2015); LBP-15-11, 81 NRC 407-08 (2015); LBP-15-15, 81 NRC 601 (2015)
persons not currently a party may file timely petitions to intervene provided that they satisfy the good-cause criteria; LBP-15-6, 81 NRC 318 (2015)
requirements for demonstrating good cause are the same as the requirements for filing late contentions previously available under section 2.309(f)(2)(i)-(iii); LBP-15-1, 81 NRC 30 n.72 (2015)
- 10 C.F.R. 2.309(c)(1)(iii)
contentions relying on information and findings discussed in the notice of proposed rulemaking, as opposed to tentative rules or policy determinations, are not timely filed; LBP-15-15, 81 NRC 614 (2015)
determination as to whether requests or petitions are filed in a timely manner shall be subject to a reasonableness standard and are not subject to the 30-day deadline applicable to motions by existing parties to add or amend contentions; LBP-15-6, 81 NRC 318 (2015)
new or amended contention is considered timely if it is filed within 60 days of the date when the material information first became available to the moving party through service, publication, or any other means; LBP-15-1, 81 NRC 30 (2015)
section does not stipulate what is considered timely, and the board looks to Commission precedent; LBP-15-11, 81 NRC 408 (2015)
when a contention is considered to be timely filed is not specified in this rule; LBP-15-15, 81 NRC 601 (2015)
- 10 C.F.R. 2.309(c)(2)
new contention is inadmissible because it relies on information that is not materially different from information previously available and already in the record; LBP-15-16, 81 NRC 704-05 (2015)
- 10 C.F.R. 2.309(c)(2)(i)
State intervenor provided good cause for its late E-filing submission because it submitted its petition to NRC by e-mail before the deadline lapsed and the delay was purely a matter of obtaining digital credentials for the system, not an attempt to gain extra time to prepare a pleading or otherwise to flout the NRC's procedural requirements; LBP-15-4, 81 NRC 163 (2015)
- 10 C.F.R. 2.309(d)
intervention petitioner must demonstrate standing and proffer at least one admissible contention; LBP-15-6, 81 NRC 317 (2015)
- 10 C.F.R. 2.309(d)(1)
intervention petition must state the nature of petitioner's statutory right to be made a party to the proceeding, nature and extent of petitioner's property, financial, or other interest in the proceeding, and possible effect of any decision or order that may be issued on petitioner's interest; LBP-15-13, 81 NRC 463 (2015); LBP-15-19, 81 NRC 819 (2015)
- 10 C.F.R. 2.309(d)(1)(i)
intervention petition must contain the name, address, and phone number of the requestor or petitioner; LBP-15-20, 81 NRC 837 n.40 (2015)

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- 10 C.F.R. 2.309(d)(1)(ii)-(iv)
licensing boards must consider the nature of petitioner's right under the AEA or the National Environmental Policy Act to be made a party to the proceeding, nature and extent of petitioner's property, financial, or other interest in the proceeding, and possible effect of any decision or order that may be issued in the proceeding on petitioner's interest; LBP-15-17, 81 NRC 770 (2015)
- 10 C.F.R. 2.309(d)(2)
board is obliged to independently assess petitioners' standing, even if it is unchallenged; LBP-15-5, 81 NRC 256 (2015); LBP-15-17, 81 NRC 776 (2015)
- 10 C.F.R. 2.309(e)
intervention as a matter of discretion is permitted only where at least one petitioner has established standing and at least one admissible contention has been admitted, and petitioner is required to address six factors in its initial petition; CLI-15-14, 81 NRC 738 n.41 (2015)
- 10 C.F.R. 2.309(f)
intervention petitioner must demonstrate standing and proffer at least one admissible contention; LBP-15-6, 81 NRC 317 (2015)
intervention petitions must set forth with particularity the contentions petitioner seeks to have litigated in a hearing; CLI-15-8, 81 NRC 504 (2015)
- 10 C.F.R. 2.309(f)(1)
admissibility of contention that severe accident mitigation alternatives analysis fails to evaluate the impact that a severe accident at one unit would have on the operation of a proposed nearby unit is decided; LBP-15-5, 81 NRC 273 (2015)
admissible contention is required for grant of a hearing request; LBP-15-17, 81 NRC 758 (2015)
admissible contentions must meet all six pleading requirements; LBP-15-4, 81 NRC 164 (2015); LBP-15-5, 81 NRC 257 (2015); LBP-15-6, 81 NRC 320 n.36 (2015); LBP-15-13, 81 NRC 467 (2015); LBP-15-16, 81 NRC 703-04 (2015); LBP-15-17, 81 NRC 777 (2015); LBP-15-18, 81 NRC 798 (2015); LBP-15-20, 81 NRC 840 (2015)
hearing request is granted where petitioners have submitted a timely petition, established representational standing, and proffered an admissible contention; LBP-15-20, 81 NRC 832 (2015)
in addition to being timely, new contention must satisfy the six-factor admissibility standard; LBP-15-19, 81 NRC 820 (2015)
new or amended contentions must satisfy the substantive contention admissibility standards and failure to meet any of them renders a contention inadmissible; LBP-15-11, 81 NRC 407 (2015); LBP-15-15, 81 NRC 500-01 (2015)
petitioners have not raised an issue material to findings that the NRC must make to support final decisions and they are unable to satisfy contention admissibility standards or meet the criteria to reopen a closed record; CLI-15-4, 81 NRC 231 n.47 (2015)
purpose of this section is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-15-5, 81 NRC 257-58 (2015)
- 10 C.F.R. 2.309(f)(1)(i)
allegations of inadequacies and omissions in NRC Staff's environmental assessment satisfy the requirement to provide a specific statement of the issue of law or fact to be raised; LBP-15-13, 81 NRC 472 (2015)
narrowed reformulation of contention regarding tribal hunting and fishing includes a specific statement of the issue of fact or law to be raised or controverted; LBP-15-5, 81 NRC 282 (2015)
two issues in one contention are best evaluated as separate contentions; LBP-15-5, 81 NRC 268 (2015)
- 10 C.F.R. 2.309(f)(1)(i)-(ii)
contention of omission on a matter related to the National Environmental Policy Act must describe the information that should have been included in applicant's environmental report and provide the legal basis that requires the omitted information to be included; LBP-15-5, 81 NRC 258 (2015)
contention that population used for analysis might underestimate the exposed population in a severe accident and, in turn, underestimate the benefit achieved in implementing a severe accident mitigation alternatives analysis is admissible; LBP-15-5, 81 NRC 298 (2015)
- 10 C.F.R. 2.309(f)(1)(i)-(vi)
contentions must meet the six pleading criteria of this regulation, and failure to meet any of them renders the contention inadmissible; LBP-15-1, 81 NRC 28-29 (2015)

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- NRC rules of practice are designed to avoid unfocused inquiry in contested proceedings; CLI-15-1, 81 NRC 11 (2015)
- petitioners do not need to cite a specific portion of the application to support a contention of omission; LBP-15-5, 81 NRC 283 (2015)
- requirements for an admissible contention are provided; CLI-15-8, 81 NRC 504 (2015)
- 10 C.F.R. 2.309(f)(1)(ii)
- admissibility of contention that severe accident mitigation alternatives analysis fails to evaluate the impact that a severe accident at one unit would have on the operation of a proposed nearby unit is decided; LBP-15-5, 81 NRC 273 (2015)
- challenges to the admissibility of a contention on the ground that basis does not include sufficient facts, evidence, or supporting factual information are misguided; LBP-15-20, 81 NRC 849 (2015)
- contention alleging that environmental assessment has not adequately addressed environmental impacts associated with saltwater intrusion arising from saline water migration from the plant into surrounding waters, and applicant's use of aquifer withdrawals to lower salinity and temperature is admissible; LBP-15-13, 81 NRC 472-73 (2015)
- petitioner must explain the basis for each proffered contention by stating alleged facts or expert opinions that support petitioner's position and on which petitioner intends to rely in litigating the contention at hearing; CLI-15-8, 81 NRC 504 (2015)
- requirement for brief explanation of the basis for a contention merely requires an explanation of the rationale or theory of the contention; LBP-15-20, 81 NRC 849 (2015)
- 10 C.F.R. 2.309(f)(1)(iii)
- contention is material to the result of the proceeding because it concerns whether the LAR demonstrates equivalent margins of safety as required by regulation; LBP-15-20, 81 NRC (2015)
- contention is within the scope of license renewal proceeding because NRC regulations require that the environmental report include a severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 298 (2015)
- contention that license renewal application has failed to establish that the effects of aging on relay switches and snubbers will be adequately managed for the period of extended operation is not within the scope of the proceeding; LBP-15-6, 81 NRC 324 (2015)
- contention that operating license should not be renewed unless and until applicant establishes that the plant can withstand and be safely shut down following an earthquake is not within the scope of a license renewal proceeding; LBP-15-6, 81 NRC 321 (2015)
- contention that severe accident mitigation alternatives analysis fails to evaluate the impact that a severe accident at one unit would have on the operation of a proposed nearby unit is within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 274 (2015)
- environmental justice is a Category 2 issue, within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 282 (2015)
- licensing board lacks authority to hold a hearing on the adequacy of a different agency's regulations; LBP-15-5, 81 NRC 306 (2015)
- petitioner must demonstrate that a contention of omission is within the scope of the proceeding; LBP-15-5, 81 NRC 258 (2015)
- petitioner's issue of NRC Staff's compliance with its NEPA obligation to undertake a full evaluation of the environmental impacts associated with a proposed federal action is within the scope of an operating license amendment proceeding and material to the findings NRC must make; LBP-15-13, 81 NRC 472 (2015)
- 10 C.F.R. 2.309(f)(1)(iii)-(iv)
- to be admissible, an issue raised must fall within the scope of the proceeding and be material to the findings that NRC must make; CLI-15-8, 81 NRC 504 (2015)
- 10 C.F.R. 2.309(f)(1)(iv)
- adequacy of the equivalent margins analysis is material to the agency's decision to approve or deny the license amendment request; LBP-15-20, 81 NRC 850 (2015)
- because the shield building functions as a radiation and biological shield, failure or collapse of the shield building due to cracking propagation could lead to health and safety impacts and thus petitioner's contention concerns a matter that could impact the grant or denial of a pending license application; LBP-15-1, 81 NRC 39 (2015)

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contention that applicant has failed to establish in its aging management plan that the effects of aging will be adequately managed for the period of extended operation does not raise an issue that is material to findings NRC must make to support the proposed licensing action; LBP-15-6, 81 NRC 324-25 (2015)

contention that DEIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that they will change the plume dynamics of the industrial wastewater facility/cooling canal contaminant plume is inadmissible; LBP-15-19, 81 NRC 824 (2015)

contention that DEIS must identify the percentage of radial collector well water drawn from underneath the industrial wastewater facility is inadmissible; LBP-15-19, 81 NRC 826-27 (2015)

contention that final environmental assessment fails to present relevant information in a clear and concise manner that is readily accessible to the public and other reviewers is inadmissible; LBP-15-11, 81 NRC 427 (2015)

contention that license renewal application has failed to establish that the effects of aging on relay switches and snubbers will be adequately managed for the period of extended operation is not material to findings NRC must make; LBP-15-6, 81 NRC 324 (2015)

contention that operating license should not be renewed unless and until applicant establishes that the plant can withstand and be safely shut down following an earthquake is not material a license renewal proceeding; LBP-15-6, 81 NRC 321-22 (2015)

contention that severe accident mitigation alternatives analysis fails to evaluate the impact that a severe accident at one unit would have on the operation of a proposed nearby unit is material to the license renewal proceeding; LBP-15-5, 81 NRC 274 (2015)

if a contention makes a prima facie allegation that the application omits information required by law, it necessarily presents a genuine dispute with applicant on a material issue and raises an issue plainly material to an essential finding of regulatory compliance needed for license issuance; LBP-15-5, 81 NRC 259 (2015)

inadequacy in the severe accident mitigation alternatives analysis is material if license renewal applicant failed to consider complete information without justifying why particular information was omitted; LBP-15-5, 81 NRC 298 (2015)

petitioner must demonstrate that a contention asserts an issue of law or fact that is material to the findings NRC must make to support the action that is involved in the proceeding; LBP-15-20, 81 NRC 850 (2015)

petitioner's issue of NRC Staff's compliance with its NEPA obligation to undertake a full evaluation of the environmental impacts associated with a proposed federal action is within the scope of an operating license amendment proceeding and material to the findings NRC must make; LBP-15-13, 81 NRC 472 (2015)

radiological claims that represent a direct challenge to prior license amendments authorizing extended power uprates are outside the scope of a license amendment proceeding; LBP-15-13, 81 NRC 478 (2015)

10 C.F.R. 2.309(f)(1)(v)

alleged facts and expert opinions in intervention petition and associated exhibits are sufficient to satisfy regulatory requirements; LBP-15-13, 81 NRC 472 (2015)

because of the need to provide specific support for a contention in order to raise a genuine dispute, the genuine dispute admissibility requirement is sometimes discussed together with the requirement for petitioners and intervenors to provide factual or expert support for their allegations; LBP-15-1, 81 NRC 38 (2015)

contention that draft EIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that they will change the plume dynamics of the industrial wastewater facility/cooling canal contaminant plume is inadmissible; LBP-15-19, 81 NRC 824 (2015)

contention that draft EIS must identify the percentage of radial collector well water drawn from underneath the industrial wastewater facility is inadmissible; LBP-15-19, 81 NRC 826-27 (2015)

failure to reference specific sources showing that wind or other renewables are viable sources of baseload power within the service area, renders a contention inadmissible; LBP-15-5, 81 NRC 279 (2015)

petitioner must explain the basis for each proffered contention by stating alleged facts or expert opinions that support petitioner's position and on which petitioner intends to rely in litigating the contention at hearing; CLI-15-8, 81 NRC 504 (2015); LBP-15-1, 81 NRC 38 (2015); LBP-15-5, 81 NRC 258, 275 (2015); LBP-15-20, 81 NRC 851 (2015)

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pleading requirements calling for a recitation of facts or expert opinion supporting the issue raised are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-15-5, 81 NRC 258 (2015)

10 C.F.R. 2.309(f)(1)(v)-(vi)

petitioners are required to provide sufficient factual support to demonstrate a genuine dispute; LBP-15-20, 81 NRC 850 (2015)

10 C.F.R. 2.309(f)(1)(vi)

contention alleging that environmental assessment has not adequately addressed impacts associated with saltwater intrusion arising from saline water migration from the plant into surrounding waters, and applicant's use of aquifer withdrawals to lower salinity and temperature is admissible; LBP-15-13, 81 NRC 472-73 (2015)

contention bases that do not pertain specifically to the license renewal application do not provide sufficient information to demonstrate a genuine dispute with applicant on a material issue; CLI-15-11, 81 NRC 549 (2015)

contention of omission claims that the application fails to contain information on a relevant matter as required by law and provides the supporting reasons for petitioner's belief; LBP-15-5, 81 NRC 258 (2015)

contention quotes text from a notice of proposed rulemaking, but it never ties the statements from the NOPR to any specific section of the environmental assessment, and thus fails to raise a genuine dispute with the EA; LBP-15-15, 81 NRC 614 n.111, 617 (2015)

contention that applicant has failed to establish in its aging management plan that the effects of aging will be adequately managed for the period of extended operation fails to demonstrate the existence of a genuine dispute with applicant; LBP-15-6, 81 NRC 325 (2015)

contention that DEIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that they will change the plume dynamics of the industrial wastewater facility/cooling canal contaminant plume is inadmissible; LBP-15-19, 81 NRC 824 (2015)

contention that DEIS must identify the percentage of radial collector well water drawn from underneath the industrial wastewater facility is inadmissible; LBP-15-19, 81 NRC 826-27 (2015)

contention that does not actually challenge any specific part of the integrated plant assessment or time-limited aging analyses fails to demonstrate the existence of a genuine dispute with the applicant; LBP-15-6, 81 NRC 322 (2015)

contention that does not dispute any specific portion of applicant's fuel handling accident analysis is inadmissible for lack of a genuine dispute; LBP-15-18, 81 NRC 801 (2015)

contention that license renewal application has failed to establish that the effects of aging on relay switches and snubbers will be adequately managed for the period of extended operation fails to demonstrate the existence of a genuine dispute with the applicant; LBP-15-6, 81 NRC 324 (2015)

contention that NRC Staff's environmental assessment fails to consider that applicant's use of copper sulfate to control algae blooms will increase reactor operating temperatures in relation to waste is inadmissible; LBP-15-13, 81 NRC 478 (2015)

contentions must provide sufficient information to show a genuine dispute with applicant on a material issue of law or fact; CLI-15-8, 81 NRC 504 (2015)

contentions should refer to portions of the application that petitioner disputes along with supporting reasons for each dispute, and if petitioner believes that an application fails altogether to contain information required by law, petitioner must identify each failure and provide supporting reasons for petitioner's belief; CLI-15-8, 81 NRC 504 (2015)

crux of the "genuine dispute" prong under this section is the requirement for specificity, that a contention must have more than general allegations; LBP-15-1, 81 NRC 37 (2015)

failure to provide a direct critique of the analysis in the environmental report discussing the potential for offshore power and interconnected wind farms is a failure to identify a genuine dispute with the applicant; LBP-15-5, 81 NRC 279 (2015)

if a contention makes a prima facie allegation that the application omits information required by law, it necessarily presents a genuine dispute with applicant on a material issue and raises an issue plainly material to an essential finding of regulatory compliance needed for license issuance; LBP-15-5, 81 NRC 259 (2015)

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- petitioner must show that a genuine dispute exists on a material issue of law or fact relating to the application; LBP-15-19, 81 NRC 820 n.22 (2015)
- petitioner's burden on a contention of omission is to identify the omission and the supporting reasons for petitioners' belief that the application fails to contain information on a relevant matter as required by law; LBP-15-5, 81 NRC 258 (2015)
- petitioners allege a specific material error in applicant's SAMA analysis in its failure to consider the potential for a severe accident at one unit to negatively impact safe operation at a proposed unit, thereby potentially increasing the total damage that would result from a severe accident; LBP-15-5, 81 NRC 275 (2015)
- requirement that a contention refer to specific portions of the application ensures that the board will be able to determine whether the contention is within the scope of the proceeding and that applicant knows which portions of the application it must defend; LBP-15-20, 81 NRC 861-62 (2015)
- to raise a genuine dispute on a material issue of law or fact, a properly formulated contention must challenge specific portions of, or alleged omissions from, the application or the agency's environmental impact statement, and provide reasons in support; LBP-15-1, 81 NRC 37 (2015)
- 10 C.F.R. 2.309(f)(2)
- although environmental contentions are, in essence, challenges to NRC Staff's compliance with NEPA, those contentions must be raised, if possible, in response to applicant's environmental report; CLI-15-1, 81 NRC 7 (2015); LBP-15-19, 81 NRC 819 (2015)
- 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, late-filing standards are no bar to the admission of properly supported contentions; LBP-15-11, 81 NRC 423 n.130 (2015)
- material difference must exist between information on which a contention is based and information that was previously available, e.g., a difference between the environmental report and the draft EIS or the draft EIS and the final EIS; CLI-15-1, 81 NRC 7 (2015)
- 10 C.F.R. 2.309(h)(2)
- state government has standing because the facility is located within the boundaries of the state and, accordingly, no further demonstration of standing is required; LBP-15-4, 81 NRC 163 (2015); LBP-15-18, 81 NRC 794 (2015)
- 10 C.F.R. 2.309(i)(2)
- petitioner has the right to file a reply; LBP-15-13, 81 NRC 461 (2015)
- 10 C.F.R. 2.311(c)
- appeal as of right from a licensing board ruling on an intervention petition is permitted only in two limited circumstances; LBP-15-1, 81 NRC 46 (2015)
- 10 C.F.R. 2.311(d)(1)
- appeal as of right from a licensing board ruling on an intervention petition is permitted only in two limited circumstances; LBP-15-1, 81 NRC 46 (2015)
- Commission affirmed the board's standing ruling, but declined to accept review of challenges to the board's admission of two contentions because petitioner had failed to perfect its appeal by challenging the validity of the board's admissibility rulings regarding other contentions; LBP-15-3, 81 NRC 77 (2015)
- 10 C.F.R. 2.315(c)
- boards may afford an interested state, local governmental body, and federally recognized Indian tribe that has not been admitted as a party under section 2.309 a reasonable opportunity to participate in a hearing; LBP-15-19, 81 NRC 828 (2015)
- governmental entity is permitted to participate in the proceeding as an interested local governmental body and will thus have the opportunity to support intervenors' already-admitted contention; LBP-15-19, 81 NRC 822 n.35 (2015)
- litigation opportunities available to an entity participating as a local governmental body are discussed; LBP-15-19, 81 NRC 818, 828 n.63 (2015)
- representative of a governmental entity that wishes to participate as a nonparty in the proceeding must identify those contentions on which it will participate in advance of any hearing held; LBP-15-11, 81 NRC 405 n.6 (2015)

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- 10 C.F.R. 2.315(d)
amicus curiae filings are allowed at the Commission's discretion or sua sponte; CLI-15-1, 81 NRC 5 n.19 (2015); CLI-15-4, 81 NRC 225 n.8 (2015); CLI-15-5, 81 NRC 333 n.19 (2015)
persons who are not parties may file an amicus curiae brief; CLI-15-1, 81 NRC 5 n.19 (2015)
state government may file an amicus brief within the time allowed to the party whose position the brief will support; CLI-15-2, 81 NRC 216 (2015)
- 10 C.F.R. 2.319
although boards are accorded considerable discretion to manage proceedings before them, they need not exercise it; LBP-15-15, 81 NRC 615 n.114 (2015)
boards are given broad discretion in the conduct of NRC adjudicatory proceedings, and the Commission generally defers to board case-management decisions; LBP-15-15, 81 NRC 615 n.114 (2015)
boards have the power to take necessary and appropriate actions consistent with the Atomic Energy Act to conduct a fair hearing; LBP-15-15, 81 NRC 615 n.114 (2015)
- 10 C.F.R. 2.319(d), (e), and (g)
board has ample authority to ensure that evidence offered concerning microcracking is limited to that specific material issue and does not stray into issues outside the scope of the license amendment proceeding; LBP-15-20, 81 NRC 859 (2015)
- 10 C.F.R. 2.323
heightened showing is required to prevent overuse of sua sponte review, including a demonstration of extraordinary circumstances; CLI-15-1, 81 NRC 9 n.39 (2015)
requests for action from the presiding officer in an NRC adjudicatory proceeding must come in the form of a motion; CLI-15-13, 81 NRC 569 n.86 (2015)
- 10 C.F.R. 2.323(c)
evidentiary objections made for the first time after briefing has been completed unfairly deprive petitioners of the opportunity to file the response expressly provided in the NRC's procedural rules; LBP-15-5, 81 NRC 289 (2015); LBP-15-20, 81 NRC 859 (2015)
- 10 C.F.R. 2.323(f)
referred rulings or certified questions must raise significant and novel legal or policy issues or issues whose early resolution would materially advance the orderly disposition of the proceeding; CLI-15-1, 81 NRC 9 n.39 (2015)
- 10 C.F.R. 2.325
as proponent of the agency action at issue, applicant generally has the burden of proof in a licensing proceeding; LBP-15-3, 81 NRC 84 (2015); LBP-15-16, 81 NRC 641 (2015)
unless the presiding officer otherwise orders, applicant or the proponent of an order has the burden of proof; LBP-15-2, 81 NRC 57 n.63 (2015)
- 10 C.F.R. 2.326
petitioners have not raised an issue material to findings that the NRC must make to support final decisions in the captioned matters and they are unable to satisfy contention admissibility standards or meet the criteria to reopen a closed record; CLI-15-4, 81 NRC 231 n.47 (2015)
- 10 C.F.R. 2.326(a)
motions to reopen must be timely, 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; LBP-15-14, 81 NRC 594 (2015)
- 10 C.F.R. 2.326(a)(1)
board has discretion to consider an untimely motion to reopen if the motion presents an exceptionally grave issue; LBP-15-14, 81 NRC 594 (2015)
- 10 C.F.R. 2.326(a)(2)-(3)
petitioner has not satisfied reopening standards because it has not raised a significant environmental issue and has not demonstrated that a materially different result would be likely if the contention had been considered initially; CLI-15-11, 81 NRC 549 (2015)
- 10 C.F.R. 2.326(b)
affidavits accompanying motions 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; LBP-15-14, 81 NRC 594 (2015)

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- evidence contained in affidavits accompanying motions to reopen must meet admissibility standards; LBP-15-14, 81 NRC 594 n.24 (2015)
- motions to reopen must also be accompanied by affidavits that set forth the factual and/or technical bases for movant's claim; LBP-15-14, 81 NRC 594, 596 (2015)
- 10 C.F.R. 2.326(d)
- motion to reopen that relates to a contention not previously in controversy must satisfy the section 2.309(c) requirements for new or amended contentions filed after the original hearing petition deadline; LBP-15-14, 81 NRC 595 n.29 (2015)
- 10 C.F.R. 2.332(d)
- hearing on environmental issues must await issuance of final environmental impact statement; LBP-15-3, 81 NRC 122 n.49 (2015)
- 10 C.F.R. 2.335
- board improperly allowed petitioner to challenge the generic environmental impact statement's finding regarding severe accident consequences; CLI-15-6, 81 NRC 379 (2015)
- boards cannot add a new requirement to a regulation; LBP-15-17, 81 NRC 788 (2015)
- boards cannot prohibit what regulations allow except under specific conditions; LBP-15-17, 81 NRC 780 (2015)
- contention is a challenge to section 50.61a itself, which is impermissible; LBP-15-17, 81 NRC 781 (2015)
- generic environmental analysis is incorporated into NRC regulations, and thus Category 1 generic findings may not be challenged in individual licensing proceedings unless accompanied by a petition for rule waiver; CLI-15-6, 81 NRC 350-51 (2015)
- 10 C.F.R. 2.335(a)
- challenge to use of an alternate concentration limit is an impermissible challenge to an NRC regulation; LBP-15-11, 81 NRC 434 n.213 (2015)
- contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications; LBP-15-3, 81 NRC 106 (2015); LBP-15-5, 81 NRC 258 (2015)
- except as provided by the waiver provision in 10 C.F.R. 2.335(b) and (d), no rule or regulation of the Commission, or any provision thereof is subject to attack in any adjudicatory proceeding subject to 10 C.F.R. Subpart 2; LBP-15-4, 81 NRC 164 (2015); LBP-15-6, 81 NRC 325 (2015)
- litigants may not challenge a rule in NRC adjudicatory proceedings absent a showing of special circumstances; CLI-15-1, 81 NRC 10 (2015)
- no rule or regulation of the Commission, or any provision thereof, concerning the licensing of production and utilization facilities is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding; LBP-15-5, 81 NRC 272 n.128 (2015); LBP-15-17, 81 NRC 778 (2015)
- petitioners are not barred from contending that additional testing is necessary to show margins of safety equivalent to those of the ASME BPV Code, Section XI, Appendix G because petitioners allege noncompliance with 10 C.F.R. Part 50, Appendix G and not Appendix H; LBP-15-20, 81 NRC 845 (2015)
- regulations can be challenged only under extremely limited circumstances; LBP-15-5, 81 NRC 302 n.363 (2015)
- to the extent a contention would require licensee to maintain the ERDS link or to create another ERDS-like system after its reactor is permanently shut down and defueled, it is an impermissible collateral attack on a regulation; LBP-15-4, 81 NRC 167 (2015)
- 10 C.F.R. 2.335(a)-(b)
- petitioners cannot challenge an NRC regulation without first obtaining a waiver; LBP-15-20, 81 NRC 840 (2015)
- 10 C.F.R. 2.335(b)
- absent a waiver, contentions that raise a direct or indirect challenge to a Commission regulation are inadmissible; LBP-15-4, 81 NRC 164-65 (2015)
- it is a well-established principle that a petitioner in an adjudicatory proceeding cannot use one regulation to challenge another without first obtaining a waiver by showing special circumstances; LBP-15-4, 81 NRC 173 (2015)
- litigants may not challenge a rule in an NRC adjudicatory proceedings absent a showing of special circumstances; CLI-15-1, 81 NRC 10 (2015); LBP-15-5, 81 NRC 272 n.129 (2015)

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- to obtain waiver of a rule, the allegation of special circumstances must be set forth with particularity and supported by an affidavit or other proof; LBP-15-5, 81 NRC 272 n.129 (2015)
- waiver of rule or regulation may be obtained upon a showing that applying provision at issue would not serve the purposes for which the rule or regulation was adopted; CLI-15-6, 81 NRC 379 n.204 (2015); LBP-15-3, 81 NRC 96 n.22 (2015); LBP-15-17, 81 NRC 778 n.156 (2015)
- 10 C.F.R. 2.335(b)-(d)
conditions necessary for grant of a rule waiver are outlined; LBP-15-6, 81 NRC 325 (2015)
- 10 C.F.R. 2.336(d)
if a board issues a scheduling order before the effective date of the final rule that incorporates this section, which currently requires parties to update their disclosures every 14 days, that obligation would change to every month on a day specified by the board, unless the parties agree otherwise, once the effective date of the rule is reached; LBP-15-1, 81 NRC 31 n.75 (2015)
- 10 C.F.R. 2.337(f)
licensing board takes official notice of NRC-issued licenses; LBP-15-3, 81 NRC 140 n.64 (2015)
licensing board takes official notice of NRC regulatory guide; LBP-15-3, 81 NRC 83 n.11 (2015)
- 10 C.F.R. 2.340(a)(2)(ii)
when an adjudicatory proceeding has been initiated with respect to a license amendment issued with a no significant hazards determination, once the presiding officer's initial decision becomes effective, the appropriate official shall take action with respect to that amendment in accordance with the initial decision; LBP-15-13, 81 NRC 474 n.114 (2015)
- 10 C.F.R. 2.340(b)
adequacy of NRC Staff's review of transmission-corridor impacts might be appropriate for the board's consideration sua sponte; CLI-15-1, 81 NRC 4 (2015)
boards must request Commission approval to undertake sua sponte review; CLI-15-1, 81 NRC 4-5 (2015)
with Commission's express approval, a licensing board may make findings on a serious safety, environmental, or common defense and security matter not put into controversy by the parties; CLI-15-1, 81 NRC 8-9 (2015)
- 10 C.F.R. 2.341
amicus curiae filings are allowed at the Commission's discretion or sua sponte; CLI-15-4, 81 NRC 225 n.8 (2015); CLI-15-10, 81 NRC 537-38 n.5 (2015)
heightened showing is required to prevent overuse of sua sponte review, including a demonstration of extraordinary circumstances; CLI-15-1, 81 NRC 9 n.39 (2015)
- 10 C.F.R. 2.341(a)(4)(iii) & (iv)
review is granted where petitions for review raise substantial questions of law and procedure; CLI-15-6, 81 NRC 369 (2015)
- 10 C.F.R. 2.341(b)(3)
although rules do not provide for filing of reply briefs, as a matter of discretion the Commission reviews a reply brief; CLI-15-7, 81 NRC 492 n.68 (2015)
any other party to the proceeding may file an answer supporting or opposing Commission review; CLI-15-6, 81 NRC 368 n.149 (2015)
only the petitioning party may file reply briefs; CLI-15-7, 81 NRC 492 n.68 (2015)
- 10 C.F.R. 2.341(b)(4)
Commission may, as a matter of discretion, grant review of a full or partial initial decision, giving due weight to the existence of a substantial question with respect to any of the considerations outlined in this regulation; CLI-15-2, 81 NRC 214 (2015)
standard for discretionary review is described; CLI-15-7, 81 NRC 493 (2015)
- 10 C.F.R. 2.341(b)(4)(i)
grant of discretionary review requires that intervenors raise a substantial question that the board's findings of fact are clearly erroneous; CLI-15-7, 81 NRC 497 (2015)
important questions of law and material fact merit Commission review; CLI-15-6, 81 NRC 351 (2015)
- 10 C.F.R. 2.341(b)(4)(i)-(v)
petition for review will be granted at Commission discretion upon a showing that petitioner has raised a substantial question as to any of the five factors of this regulation; CLI-15-1, 81 NRC 6 (2015); CLI-15-9, 81 NRC 519 (2015)

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- 10 C.F.R. 2.341(b)(4)(ii)
petition for review must raise a substantial question with respect to whether a necessary legal conclusion is without governing precedent or is contrary to established law; CLI-15-7, 81 NRC 494, 496 (2015)
- 10 C.F.R. 2.341(b)(4)(iii)
important questions of law and material fact merit Commission review; CLI-15-6, 81 NRC 351 (2015)
intervention petitioner may not attack generic NRC requirements or regulations or express generalized grievances about NRC policies; CLI-15-9, 81 NRC 527-28 & n.98 (2015)
- 10 C.F.R. 2.341(f)(1)
referred rulings or certified questions must raise significant and novel legal or policy issues or issues whose early resolution would materially advance the orderly disposition of the proceeding; CLI-15-1, 81 NRC 9 n.39 (2015)
- 10 C.F.R. 2.342(e)
irreparable injury is the most important of the factors for grant or denial of a stay; LBP-15-2, 81 NRC 53-54 (2015)
- 10 C.F.R. 2.390
flooding hazard reevaluation report contains security-related information, and so a portion of the document is not publicly available; DD-15-4, 81 NRC 872 (2015); DD-15-5, 81 NRC 880 (2015)
- 10 C.F.R. 2.802
if intervenor wishes to effect a substantive change to Part 50, Appendix E, § VI.2, it may petition for rulemaking; LBP-15-4, 81 NRC 175 (2015)
- 10 C.F.R. 2.805
contents of the licensees' responses may lead to additional regulatory actions to update plants' licensing bases, such as orders, license amendments, or rulemakings, for which the public would have participation rights; CLI-15-14, 81 NRC 743 (2015)
- 10 C.F.R. 2.1202(a)
"prompt" issuance is not defined as an immediate one; LBP-15-2, 81 NRC 53 n.33 (2015)
timing of license issuance is informed by instruction for NRC Staff to promptly issue its approval or denial of the application consistent with its findings, and despite the pendency of a hearing; LBP-15-2, 81 NRC 53 n.33 (2015); LBP-15-16, 81 NRC 638 n.104 (2015)
- 10 C.F.R. 2.1213
notification of renewal of source materials license triggers the 5-day filing deadline to apply for a stay of the license; LBP-15-2, 81 NRC 49-50 (2015)
- 10 C.F.R. 2.1213(a)
intervenors may seek a stay of NRC Staff's immediately effective license issuance; LBP-15-3, 81 NRC 78 n.3 (2015)
- 10 C.F.R. 2.1213(d)
in determining whether to grant or deny an application for a stay, a board must balance four separate interests; LBP-15-2, 81 NRC 53 (2015)
movant has the burden of persuasion on the four stay factors; LBP-15-2, 81 NRC 53 (2015)
- 10 C.F.R. 2.1300
provisions of 10 C.F.R. Part 2, Subpart M, together with the generally applicable intervention provisions in 10 C.F.R. Part 2, Subpart C, govern adjudicatory proceedings on license transfer applications; CLI-15-8, 81 NRC 504 n.20 (2015)
- 10 C.F.R. Part 2, Appendix B, § II
board is directed to rule within 140 days of the date of the referral on whether the hearing request should be granted; CLI-15-14, 81 NRC 735 n.28 (2015)
- 10 C.F.R. 30.4
"byproduct material" refers to the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed for its source material content; LBP-15-16, 81 NRC 626 n.2 (2015)
- 10 C.F.R. 40.4
"byproduct material" refers to the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed for its source material content; LBP-15-16, 81 NRC 626 n.2 (2015)

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- “construction” does not include site exploration, including preconstruction monitoring to establish background information related to the environmental impacts of construction or operation, or the protection of environmental values; LBP-15-3, 81 NRC 91 (2015)
- definition of byproduct material was clarified by adding the clause “including discrete surface wastes resulting from uranium solution extraction processes”; LBP-15-16, 81 NRC 636 n.92 (2015)
- nothing in the definition of “construction” precludes the installation of wells or the use of monitoring protocols as needed to provide those background data; LBP-15-3, 81 NRC 91 (2015)
- “source material” is defined as uranium being extracted through the ISL process; LBP-15-16, 81 NRC 626 n.1 (2015)
- 10 C.F.R. 40.9
- licensee or applicant must inform the NRC of information that applicant or licensee has identified as having a significant implication for public health and safety or common defense and security; LBP-15-15, 81 NRC 616 n.120 (2015)
- materials license application must provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that cultural and historic resources are identified and protected; LBP-15-16, 81 NRC 643 n.141 (2015)
- 10 C.F.R. 40.31(f)
- applicant for a license to possess and use source and AEA § 11e(2) byproduct material for the purpose of in situ uranium recovery must submit an environmental report with its application; LBP-15-3, 81 NRC 82 (2015)
- 10 C.F.R. 40.31(i)
- admissibility of contention that environmental documents lack an adequate description of financial assurances sufficient to ensure the payment of the costs of restoration and long-term monitoring of up to 30 years is decided; LBP-15-15, 81 NRC 6002-03 (2015)
- 10 C.F.R. 40.32(c)
- water balance in the final supplemental environmental impact statement is appropriate and in accordance with NRC regulatory guidance and federal regulations; LBP-15-16, 81 NRC 683 n.404 (2015)
- 10 C.F.R. 40.32(e)
- commencement of construction is prohibited prior to a NEPA determination; LBP-15-16, 81 NRC 660 n.250 (2015)
- in situ recovery license applicant is barred from installing a complete wellfield and associated monitor well networks until after a license is issued; LBP-15-3, 81 NRC 91 (2015)
- 10 C.F.R. 40.41(c)
- water balance in the final supplemental environmental impact statement is appropriate and in accordance with NRC regulatory guidance and federal regulations; LBP-15-16, 81 NRC 683 n.404 (2015)
- 10 C.F.R. 40.41(e)(2)
- issued licenses can be revoked, conditioned, modified, or affirmed based on the evidence reviewed at the evidentiary hearing; LBP-15-16, 81 NRC 638 n.104 (2015)
- 10 C.F.R. 40.42(a)
- timing of source materials license renewal application enables licensee to operate under NRC’s timely renewal provision until the agency renews the license; LBP-15-2, 81 NRC 50, 57 n.66 (2015)
- when licensee has made timely and sufficient application for a renewal, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency; LBP-15-11, 81 NRC 404 n.2 (2015)
- 10 C.F.R. 40.42(d), (e), 40.42(g)(4)(v)
- admissibility of contention that applicant submit a decommissioning plan and related updated financial plans is decided; LBP-15-15, 81 NRC 603 (2015)
- 10 C.F.R. Part 40, Appendix A
- contention that final supplemental environmental impact statement fails to comply with NRC regulations 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 is decided; LBP-15-3, 81 NRC 85 (2015)
- intervenors fail to establish the validity of their various challenges to the adequacy of the FSEIS description of the baseline water quality at the ISR site; LBP-15-3, 81 NRC 111 (2015)
- neither “baseline” nor “background” is explicitly defined; LBP-15-16, 81 NRC 659 (2015)

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- requirements in Part 40, such as many of the provisions in Appendix A, that, by their own terms, apply only to conventional uranium milling activities, cannot sensibly govern in situ leach mining; LBP-15-16, 81 NRC 637 n.94 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 5B
nothing in this criterion precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in applicant's precicensing program were adequate to provide the necessary information to properly characterize the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 92 (2015)
post-licensing, preoperational activities conducted to comply with Part 40, Appendix A, Criterion 7 are associated with compliance with the dictates of this regulation; LBP-15-3, 81 NRC 75 n.2 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 5B(5)
background water quality data are used to establish existing hazardous constituent concentrations in an aquifer, which can then be used to set post-operational concentration limits; LBP-15-16, 81 NRC 659 (2015)
Commission-approved background cannot be established until after an ISR license has been issued; LBP-15-3, 81 NRC 91 (2015)
requirements for groundwater restoration standards for ISR mining operations are set forth; LBP-15-3, 81 NRC 113 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 5B(5)(a)
no in situ recovery facility has ever requested that all OZ aquifer groundwater hazardous constituents be restored to CAB concentrations or Criterion 5B(5)(b) MCLs, as those are currently defined; LBP-15-3, 81 NRC 129 n.58 (2015)
"primary groundwater restoration" is to return the constituent to background levels; LBP-15-3, 81 NRC 114 (2015)
subset of the production and injection wells to be drilled within the boundaries of the ISR wellfield is to be used to sample groundwater from the aquifer prior to the commencement of operations to establish hazardous constituent Commission-approved background concentrations; LBP-15-3, 81 NRC 76 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 5B(5)(a)-(c)
bounding analysis provided in the final supplemental environmental impact statement, as supplemented in the record, provides sufficient information about a reasonable range of hazardous constituent concentration values associated with potential post-operational alternate concentration limits so as to provide an appropriate NEPA assessment of the environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits; LBP-15-3, 81 NRC 153 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 5B(5)(b)
EPA drinking water maximum contaminant levels continue to be an accepted groundwater restoration standard; LBP-15-3, 81 NRC 116 n.46 (2015)
"secondary groundwater restoration" is restoration of constituent levels to the drinking water limits enumerated in Appendix A, Table 5C; LBP-15-3, 81 NRC 114 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 5B(5)(c)
contention that FSEIS fails to analyze environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits is decided; LBP-15-3, 81 NRC 111 (2015)
NRC regulations explicitly allow the use of alternate concentration limits for hazardous constituents; LBP-15-11, 81 NRC 434 n.212 (2015)
restoration to an alternate concentration limit is permitted only when restoration to a primary or the secondary Table 5C standard is not practically achievable; LBP-15-3, 81 NRC 114 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 5B(6)
restoration to an alternate concentration limit is permitted only when restoration to a primary or the secondary Table 5C standard is not practically achievable; LBP-15-3, 81 NRC 114 (2015)
to have an alternate concentration limit approved, licensee must demonstrate that the hazardous constituent value is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the ACL is not exceeded; LBP-15-3, 81 NRC 114 (2015)
- 10 C.F.R. Part 40, Appendix A, Criteria 5B(6)(a)(i)-(x)
nineteen factors must be considered in making the "present and potential hazard" finding requisite to Commission approval of an alternate concentration limit; LBP-15-3, 81 NRC 114 (2015)

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- 10 C.F.R. Part 40, Appendix A, Criterion 5C
EPA drinking water maximum contaminant levels continue to be an accepted groundwater restoration standard; LBP-15-3, 81 NRC 116 n.46 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 7
activities associated with, and the data coming from, precensuring groundwater monitoring activities are associated with compliance with the dictates of this regulation; LBP-15-3, 81 NRC 75 n.2 (2015)
applicant must establish a precensuring monitoring program that is used to provide complete baseline data on the in situ recovery site and its environs; LBP-15-3, 81 NRC 89 (2015); LBP-15-16, 81 NRC 659 (2015)
applicant must provide complete baseline data on a milling site and its environs; LBP-15-16, 81 NRC 660 (2015)
applicant's monitoring program for establishing existing site characterization baseline values for certain site groundwater constituents prior to issuance of a source materials license for ISR facility construction and operation need not, to comply with NEPA and NRC's Part 51 implementing regulations, be conducted so as to also provide background information needed to set Appendix A, Criterion 5B groundwater protection standards; LBP-15-3, 81 NRC 111 (2015)
contention alleging that final supplemental environmental impact statement fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies is decided; LBP-15-16, 81 NRC 659-60 (2015)
nothing in this criterion precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in an applicant's precensuring program were adequate to provide the necessary information to properly characterize the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 92 (2015)
to comply with NEPA and Part 51 implementing regulations, applicant's precensuring monitoring program for site characterization is not required to be conducted so as to provide information needed to set Appendix A, Criterion 5B groundwater protection standards, in accord with an Appendix A, Criterion 7A preoperational license condition-based monitoring program; LBP-15-3, 81 NRC 153 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 7A
licensee shall establish a detection monitoring program needed for NRC to set the site-specific groundwater protection standards in paragraph 5B(1) of this appendix, and the monitoring program must be in place when specified by NRC in license conditions; LBP-15-3, 81 NRC 91 (2015)
nothing in this criterion precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in applicant's precensuring program were adequate to provide the necessary information to properly characterize the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 92 (2015)
post-licensing, preoperational activities conducted to comply with this Criterion are associated with compliance with the dictates of this regulation; LBP-15-3, 81 NRC 75 n.2 (2015)
- 10 C.F.R. Part 40, Appendix A, Criterion 9
financial surety arrangements must be established by each mill operator before the commencement of operations to ensure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas; LBP-15-15, 81 NRC 615 n.116 (2015)
- 10 C.F.R. Part 50
stringent safety requirements apply to the construction and operation of reactor spent fuel pools and independent spent fuel storage installations; CLI-15-4, 81 NRC 240 (2015)
- 10 C.F.R. 50.2
"permanent cessation of operations" for a nuclear power reactor facility is defined as a certification by a licensee to the NRC that it has permanently ceased or will permanently cease reactor operations; LBP-15-4, 81 NRC 170 n.77 (2015)
"permanent fuel removal" from a nuclear power reactor facility is defined as a certification by the licensee to the NRC that it has permanently removed all fuel assemblies from the reactor vessel; LBP-15-4, 81 NRC 170 n.77 (2015)

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- 10 C.F.R. 50.10(a)(2)(vii)
Limited Work Authorization Rule expressly excludes transmission lines from the delineated construction activities that would require NRC approval before being undertaken; CLI-15-1, 81 NRC 10 n.48 (2015)
- 10 C.F.R. 50.12(a)(2)(ii)
because current levels of emergency planning are required by regulation, licensee cannot make changes contemplated in its license amendment request without first receiving certain regulatory exemptions; LBP-15-18, 81 NRC 795 (2015)
- 10 C.F.R. 50.33(f)(2)
applicant must submit information that demonstrates that it possesses or has reasonable assurance of obtaining funds necessary to cover estimated operating costs for the period of the license; CLI-15-8, 81 NRC 506 n.48, 508-09 (2015)
license transfer applicant must submit estimates for total annual operating costs for each of the first 5 years of facility operation; CLI-15-8, 81 NRC 509 n.65 (2015)
- 10 C.F.R. 50.33(k)(1)
license transfer applicant must show reasonable assurance of sufficient funds to decommission the facility; CLI-15-8, 81 NRC 505 (2015)
- 10 C.F.R. 50.34(b)(4)
contention that final safety analysis report is deficient because it does not include information provided in applicant's seismic evaluation process report is rejected; LBP-15-14, 81 NRC 593 (2015)
final safety analysis report must take into account any pertinent information developed since the submittal of the preliminary safety analysis report; LBP-15-14, 81 NRC 593 (2015)
- 10 C.F.R. 50.38
any alien or any corporation or other entity that the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government is ineligible to apply for and obtain a license; CLI-15-7, 81 NRC 482, 485, 486 n.29, 491 (2015)
- 10 C.F.R. 50.40
considerations that NRC should review for grant of a license amendment are defined in this regulation; LBP-15-17, 81 NRC 778 (2015)
in determining whether a license amendment, construction permit, or early site permit will be issued to applicant, common standards of this regulation are applied; LBP-15-20, 81 NRC 841 (2015)
- 10 C.F.R. 50.47
emergency plans are approved by the NRC and FEMA and are updated on an ongoing basis; CLI-15-6, 81 NRC 378 (2015)
- 10 C.F.R. 50.47(a)(1)(i)
no finding on emergency planning is necessary for issuance of a renewed nuclear power reactor operating license; CLI-15-6, 81 NRC 377 (2015)
- 10 C.F.R. 50.47(a)(2)
in any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on questions of adequacy and implementation ability of state and local emergency plans; LBP-15-4, 81 NRC 175 n.107 (2015)
offsite emergency plans are reviewed biennially by NRC and the Federal Emergency Management Agency in a comprehensive emergency preparedness exercise; CLI-15-6, 81 NRC 377 (2015)
- 10 C.F.R. 50.47(b)
licensee is prohibited from simply disconnecting its ERDS when the reactor is powered down during decommissioning; LBP-15-4, 81 NRC 178-79 (2015)
- 10 C.F.R. 50.47(b)(2), (4), (5)
licensee's obligation to provide emergency planning data is discussed; LBP-15-4, 81 NRC 180 (2015)
- 10 C.F.R. 50.47(b)(6)
adequate provisions must exist for prompt communications among principal response organizations to emergency personnel and to the public; LBP-15-4, 81 NRC 180 (2015)
licensee's obligation to provide emergency planning data is discussed; LBP-15-4, 81 NRC 180 (2015)
- 10 C.F.R. 50.47(b)(9)
licensee's obligation to provide emergency planning data is discussed; LBP-15-4, 81 NRC 180 (2015)

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- 10 C.F.R. 50.47(e)
holder of a combined license for a newly built reactor may not load fuel or operate except as provided in accordance with Appendix E; LBP-15-4, 81 NRC 171 (2015)
- 10 C.F.R. 50.54(bb)
licensees must submit for NRC approval their plans to manage spent fuel after the permanent cessation of reactor operation; CLI-15-4, 81 NRC 240 (2015)
- 10 C.F.R. 50.54(f)
as part of the NRC post-Fukushima lessons-learned activities, NRC is requiring all licensees to reevaluate seismic hazards at their sites, and to this end, issued a request for information; DD-15-1, 81 NRC 197 (2015)
flood hazard reevaluations being performed pursuant to a request for information are beyond the current design/licensing basis of operating plants; DD-15-4, 81 NRC 872 (2015)
NRC addressed concerns about flooding at GE Mark I and II boiling water reactors through a request for information; DD-15-1, 81 NRC 200 (2015)
petitioner's request that the NRC take escalated enforcement action against licensee concerning flooding protection is being addressed by NRC's request for information; DD-15-5, 81 NRC 879-80, 881 (2015)
request for information instructed all licensees to reevaluate seismic hazards at their sites using updated seismic hazard information, present-day guidance and methodologies, and a risk evaluation; DD-15-6, 81 NRC 888 (2015)
request under this section is to enable the Commission to determine whether or not the license should be modified, suspended, or revoked; CLI-15-14, 81 NRC 737 (2015)
- 10 C.F.R. 50.54(q)
licensee must maintain an emergency plan, review it annually through an independent reviewer, and conduct periodic exercises to measure the plan's effectiveness; CLI-15-6, 81 NRC 377 (2015)
- 10 C.F.R. 50.54(q)(2)
all Part 50 licensees must meet emergency planning requirements, regardless of whether the facility is operating or has been permanently shut down and defueled; LBP-15-18, 81 NRC 796 n.16 (2015)
holder of a license under Part 50, or a combined license under Part 52, shall follow and maintain the effectiveness of an emergency plan that meets the requirements in Appendix E to Part 50; LBP-15-4, 81 NRC 171 n.87 (2015)
- 10 C.F.R. 50.54(q)(3)
to discontinue the ERDS link, analysis showing that such a change does not reduce the plan's effectiveness is required; LBP-15-4, 81 NRC 173, 174 n.101 (2015)
- 10 C.F.R. 50.55a
NRC Staff is incorporating the 2012 edition of the ASME code by reference into the regulation; CLI-15-13, 81 NRC 578-79 (2015)
- 10 C.F.R. 50.55a(b)(2)
latest edition and addenda of the ASME Boiler and Pressure Vessel Code has been incorporated by reference; LBP-15-20, 81 NRC 834 n.8 (2015)
- 10 C.F.R. 50.55a(f)(4)(i)
after the rulemaking is completed, licensees for new reactors will be required to comply with the ASME code preservice and inservice surveillance provisions for squib valves; CLI-15-13, 81 NRC 579 (2015)
- 10 C.F.R. 50.57(a)(3)
Commission must find that activities authorized by a license amendment can be conducted without endangering the health and safety of the public and will be in compliance with Commission regulations; LBP-15-20, 81 NRC 841 (2015)
contention about a matter not covered by a specific rule need only allege that the matter poses a significant safety problem; LBP-15-17, 81 NRC 787 (2015); LBP-15-20, 81 NRC 847-48, 854 n.151 (2015)
licensee is prohibited from simply disconnecting its ERDS when the reactor is powered down during decommissioning; LBP-15-4, 81 NRC 178-79 (2015)
- 10 C.F.R. 50.58(b)(6)
no significant hazards consideration determination is a procedural decision barred from litigation; LBP-15-13, 81 NRC 477 (2015); LBP-15-17, 81 NRC 790 (2015)

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- 10 C.F.R. 50.59
admissibility of contention that a license amendment will be required for licensee to update and maintain accurate design basis documents is decided; CLI-15-5, 81 NRC 336-37 (2015)
admissibility of contention that licensee is undertaking modifications for protection against severe flooding in the event of upstream dam failures that will require a license amendment is decided; CLI-15-5, 81 NRC 335 (2015)
challenges to licensee actions taken under this regulation may only be taken by means of a petition for enforcement action under 10 C.F.R. 2.206; CLI-15-5, 81 NRC 337 (2015)
licensee will determine whether any proposed changes to the plant, procedures, license, or licensing basis associated with its design reconstitution effort require a license amendment; CLI-15-5, 81 NRC (2015)
petitioners' argument that power reactor is being operated as a test reactor reflects a misreading of the regulations; LBP-15-20, 81 NRC 863 (2015)
request that NRC immediately revoke prior preapproval of the hardened vent system or direct torus vent system at each GE BWR Mark I unit has been addressed by an order modifying licenses with regard to reliable hardened containment vents capable for operation under severe accident conditions; DD-15-1, 81 NRC 198-99 (2015)
- 10 C.F.R. 50.59(c)
types of changes, tests, or experiments that may be undertaken without prior NRC approval as well as those that would require a license amendment are outlined; CLI-15-14, 81 NRC 732 n.11 (2015)
- 10 C.F.R. 50.59(c)(1)
activities the licensee may pursue without submitting a license amendment request, including certain tests or experiments, are defined; LBP-15-17, 81 NRC 791 (2015)
- 10 C.F.R. 50.61
neutron radiation embrittlement of reactor pressure vessel walls, decreasing their fracture toughness, is discussed; LBP-15-17, 81 NRC 759, 762 (2015)
surveillance data are continuously integrated into future embrittlement projections; LBP-15-17, 81 NRC 765 (2015)
- 10 C.F.R. 50.61(a)(7)
if reference values projected at specific areas of the reactor pressure vessel for the end of life of the plant surpass the current screening criteria, licensee must submit a safety analysis and obtain NRC approval to continue to operate; LBP-15-17, 81 NRC 763 n.37 (2015)
- 10 C.F.R. 50.61(b)(2)
pressurized thermal shock screening criterion is given for plates, forgings, and axial and circumferential weld materials; LBP-15-17, 81 NRC 763 (2015)
when the reference temperature of a reactor pressure vessel is above the screening limit, the RPV is considered to have an unreasonably high risk of fracture from a pressurized thermal shock event; LBP-15-17, 81 NRC 763 (2015)
- 10 C.F.R. 50.61(b)(6)
if NRC does not approve continued operation based on licensee's safety analysis, licensee must request an opportunity to modify the reactor pressure vessel or related reactor systems to reduce the potential for failure of the reactor vessel due to pressurized thermal shock events; LBP-15-17, 81 NRC 763-64 (2015)
- 10 C.F.R. 50.61(c)(2)(i)
plant-specific surveillance data must be integrated into the transition fracture toughness reference temperature estimate; LBP-15-17, 81 NRC 762 n.27, 765 n.54 (2015)
- 10 C.F.R. 50.61a
applicant requests an operating license amendment to implement alternate fracture toughness requirements for protection against pressurized thermal shock events; LBP-15-17, 81 NRC 758 (2015)
probabilistic embrittlement model is used to predict future reference temperatures across the reactor pressure vessel, which is then verified by existing surveillance data in a process called the consistency check; LBP-15-17, 81 NRC 765 (2015)
- 10 C.F.R. 50.61a, equations 1, 5
reference temperature shift is the difference in reference temperature from the unirradiated to the post-irradiated states; LBP-15-17, 81 NRC 769 n.87 (2015)

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- 10 C.F.R. 50.61a, equations 5-7
consistency check does not rely on information that is unique to a particular reactor pressure vessel, but instead on the chemical properties and fluence of the material samples; LBP-15-17, 81 NRC 788 (2015)
- 10 C.F.R. 50.61a(a)(10)
surveillance data include any data that demonstrate embrittlement trends for the beltline materials; LBP-15-17, 81 NRC 783 (2015)
surveillance data need not be obtained from the same reactor pressure vessel that is the subject of the license amendment; LBP-15-17, 81 NRC 767 (2015)
use of a material sample in the consistency check is not dependent on its location inside a reactor pressure vessel or which RPV it comes from; LBP-15-17, 81 NRC 788 (2015)
- 10 C.F.R. 50.61a(c)(1)-(2)
application to use Alternate PTS Rule must contain the projected embrittlement reference temperatures along various portions of the reactor pressure vessel, from the present to a future point, compared to the Alternate Screening Criteria and assessment of flaws in the reactor pressure vessel; LBP-15-17, 81 NRC 766 (2015)
- 10 C.F.R. 50.61a(c)(2)
licensee must separately examine for flaws in the reactor vessel; LBP-15-17, 81 NRC 766 n.58 (2015)
- 10 C.F.R. 50.61a(c)(3)
reference temperature values are compared to the alternate screening criteria to determine whether the reactor pressure vessel is safe to operate; LBP-15-17, 81 NRC 766 (2015)
- 10 C.F.R. 50.61a(d)(1)
alternate pressurized thermal shock rule provides measures for ongoing reporting; LBP-15-17, 81 NRC 765 n.49 (2015)
- 10 C.F.R. 50.61a(d)(2)-(7)
alternate pressurized thermal shock rule specifies mitigation processes for licensees if they project they will exceed (or they do exceed) the rules' screening criteria; LBP-15-17, 81 NRC 765 n.49 (2015)
- 10 C.F.R. 50.61a(e)
application to use Alternate PTS Rule must contain an assessment of flaws in the reactor pressure vessel; LBP-15-17, 81 NRC 766 (2015)
- 10 C.F.R. 50.61a(f)
alternate pressurized thermal shock rule changes how licensees derive projected reference temperatures for the components of their reactor pressure vessels; LBP-15-17, 81 NRC 765 (2015)
application to use Alternate PTS Rule must contain the projected embrittlement reference temperatures along various portions of the reactor pressure vessel, from the present to a future point, compared to the Alternate Screening Criteria and assessment of flaws in the reactor pressure vessel; LBP-15-17, 81 NRC 766 (2015)
in calculating embrittlement reference temperatures, licensee must calculate neutron flux through the reactor pressure vessel using a methodology that has been benchmarked to experimental measurements and with quantified uncertainties and possible biases; LBP-15-17, 81 NRC 766 (2015)
- 10 C.F.R. 50.61a(f)(1)-(3)
embrittlement model projects the reference temperatures for various parts of the reactor pressure vessel at the end of life of the plant; LBP-15-17, 81 NRC 766 n.61 (2015)
- 10 C.F.R. 50.61a(f)(4)
licensee must establish the nil-ductility reference temperature for the reactor pressure vessel material in the annealed state, before the reactor was operational for various key points along the RPV; LBP-15-17, 81 NRC 766 (2015)
- 10 C.F.R. 50.61a(f)(4)(i), (ii)
licensee can use a set of generic mean nil-ductility reference temperature values if measured values are not available; LBP-15-17, 81 NRC 766 n.60 (2015)
- 10 C.F.R. 50.61a(f)(6)
if three or more surveillance data points measured at three or more different neutron fluences exist for a specific material, licensee shall determine if the surveillance data show a significantly different trend than the embrittlement model predicts; LBP-15-17, 81 NRC 784 (2015)
licensees have some discretion in considering other plant-specific information that may be helpful in aligning their embrittlement models with the surveillance data; LBP-15-17, 81 NRC 768 (2015)

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- 10 C.F.R. 50.61a(f)(6), equations 5-7
differing amounts of copper, nickel, phosphorus, and manganese between material samples for the consistency check are accounted for; LBP-15-17, 81 NRC 792 n.256 (2015)
- 10 C.F.R. 50.61a(f)(6)(i)
alternate pressurized thermal shock rule is designed to enable all commercial pressurized water reactor licensees to assess the state of their reactor pressure vessels relative to a new criterion without the need to make new material property measurements, instead using only information that is currently available; LBP-15-17, 81 NRC 765 (2015)
licensee must perform a consistency check of its embrittlement model against available surveillance data; LBP-15-17, 81 NRC 765 (2015)
licensees have to verify that their reference temperature calculations at the time of the application match up with surveillance data; LBP-15-17, 81 NRC 766-67 (2015)
- 10 C.F.R. 50.61a(f)(6)(i)(A)
material samples that are to be used for the consistency check must be of the same heat-specific match; LBP-15-17, 81 NRC 791 (2015)
surveillance data must consist of material samples that are the same composition, or heat, as the materials being evaluated by the model; LBP-15-17, 81 NRC 767 (2015)
- 10 C.F.R. 50.61a(f)(6)(i)(A), (B)
surveillance data must be used in the consistency check when it is a heat-specific match for one or more of the materials for which the reference temperature is being calculated and three or more different neutron fluences exist for a specific material; LBP-15-17, 81 NRC 788 (2015)
- 10 C.F.R. 50.61a(f)(6)(i)(B)
consistency check is required if three or more surveillance data points measured at three or more different neutron fluences exist for a specific material; LBP-15-17, 81 NRC 767 (2015)
consistency check seeks to compare, for a specific material type, the model's projected embrittlement with the actual embrittlement values at the same fluence provided by material samples; LBP-15-17, 81 NRC 788 (2015)
if fewer than three surveillance data points exist for a specific material, then the embrittlement model must be used without performing the consistency check; LBP-15-17, 81 NRC 767 (2015)
purpose of the consistency check is to determine if the surveillance data show a significantly different trend than the embrittlement model predicts; LBP-15-17, 81 NRC 767 (2015)
three or more samples are required to conduct a consistency check; LBP-15-17, 81 NRC 769 n.84 (2015)
- 10 C.F.R. 50.61a(f)(6)(i)(B)(ii)
alternate pressurized thermal shock rule changes how licensees derive projected reference temperatures for the components of their reactor pressure vessels; LBP-15-17, 81 NRC 765 (2015)
- 10 C.F.R. 50.61a(f)(6)(ii)-(v)
consistency check compares mean and slope of the embrittlement model curve against surveillance data and checks to confirm that outliers fall within acceptable residual values provided in the regulation; LBP-15-17, 81 NRC 767 n.67 (2015)
- 10 C.F.R. 50.61a(f)(6)(vi)
if the embrittlement model deviates from the physical samples over the limits specified in the regulation, licensee must submit additional evaluations and seek approval for the deviations from the Director of the Office of Nuclear Reactor Regulation; LBP-15-17, 81 NRC 767-68 (2015)
- 10 C.F.R. 50.61a(g), tbl. 1
alternate screening criteria consist of eighteen different reference temperature limits that depend on reactor pressure vessel wall thickness and the part of the RPV under consideration; LBP-15-17, 81 NRC 765 (2015)
- 10 C.F.R. 50.65
active components are excluded from aging management review on the basis of existing regulatory requirements for maintenance and monitoring of structures, systems, and components; CLI-15-6, 81 NRC 348 (2015)
licensees must monitor structures, systems, and components in a manner sufficient to provide reasonable assurance that the SSCs are capable of supporting their intended function; CLI-15-6, 81 NRC 348 n.30 (2015); DD-15-3, 81 NRC 724 (2015)

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- relay switches and snubbers do not rely on time-limited assumptions based on the plant's operating term, but rather are subject to ongoing maintenance programs; LBP-15-6, 81 NRC 323 (2015)
- 10 C.F.R. 50.65(a)(1)
Maintenance Rule requires monitoring of a component's performance or condition; CLI-15-6, 81 NRC 364 n.120 (2015)
- 10 C.F.R. 50.65(b)
all structures and components that are important to safety must be maintained to manage the effects of aging, but most systems, structures, and components are adequately maintained under existing programs as required by the Maintenance Rule; CLI-15-6, 81 NRC 352 (2015)
- 10 C.F.R. 50.71(e)
licensees must periodically provide updated final safety analysis reports; CLI-15-14, 81 NRC 742 n.8 (2015)
licensees must periodically submit an updated FSAR to the agency, but NRC does not review the submittals for accuracy or otherwise approve the analyses therein; CLI-15-14, 81 NRC 746 (2015)
updates to the UFSAR are controlled by the requirements of 10 C.F.R. 50.90 and 50.59; CLI-15-14, 81 NRC 746 n.37 (2015)
- 10 C.F.R. 50.71(e)(4)
licensees must update their final safety analysis reports every 2 years; CLI-15-14, 81 NRC 747 (2015)
- 10 C.F.R. 50.72
ERDS activation requirement applies only to operating nuclear power reactors; LBP-15-4, 81 NRC 170, 172 (2015)
exception provision is most reasonably interpreted as exempting from the ERDS program all nuclear reactors that have permanently ceased operations and defueled, i.e., that are permanently shut down; LBP-15-4, 81 NRC 167 (2015)
licensee of a permanently shutdown reactor is never required to activate the ERDS link, and thus it follows that such a licensee need not maintain the ERDS link; LBP-15-4, 81 NRC 167 (2015)
- 10 C.F.R. 50.72(a)(4)
licensees must activate the ERDS as soon as possible but not later than 1 hour after declaring an Emergency Class of alert, site area emergency, or general emergency; LBP-15-4, 81 NRC 170 (2015)
provision directing licensees to activate ERDS during exigent circumstances applies only to operating nuclear power reactors; LBP-15-4, 81 NRC 161 (2015)
this section describes implementation, maintenance and activation of the ERDS system in the event of an emergency; LBP-15-4, 81 NRC 184 n.36 (2015)
- 10 C.F.R. 50.75
license transfer applicant must show reasonable assurance of sufficient funds to decommission the facility; CLI-15-8, 81 NRC 505 (2015)
- 10 C.F.R. 50.75(c)
decommissioning funding requirements encompass costs of low-level waste burial; CLI-15-8, 81 NRC 511 (2015)
formulas, based on reactor type and power level, are provided for determining minimum dollar amounts required to demonstrate reasonable assurance of decommissioning funding; CLI-15-8, 81 NRC 505 (2015)
- 10 C.F.R. 50.75(e)(1)(i)
financial assurance for decommissioning may be based on the prepayment method; CLI-15-8, 81 NRC 505 (2015)
- 10 C.F.R. 50.80(a)
written consent from NRC is required for all license transfers; CLI-15-8, 81 NRC 502 (2015)
- 10 C.F.R. 50.80(b)(1)(i)
license transfer applicant must show reasonable assurance of sufficient funds to decommission the facility; CLI-15-8, 81 NRC 505 (2015)
subject areas that license transfer applications must address are outlined; CLI-15-8, 81 NRC 511 (2015)
- 10 C.F.R. 50.80(b)(2)
subject areas that license transfer applications must address are outlined; CLI-15-8, 81 NRC 511 (2015)

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- 10 C.F.R. 50.82(a)(1)(i) & (ii)
licensee must provide certifications when a nuclear power station has permanently ceased power operations and all fuel has been permanently removed from the reactor vessel and placed in the spent fuel pool; DD-15-1, 81 NRC 203 (2015)
- 10 C.F.R. 50.82(a)(2)
when licensees certify permanent cessation of operations and permanent removal of fuel from the reactor vessel, the license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel, and physically the reactor can't be operated; LBP-15-4, 81 NRC 170 n.80 (2015)
- 10 C.F.R. 50.82(a)(3)
nuclear power facility arguably exists until final decommissioning, which may take up to 60 years, or longer if approved by the Commission; LBP-15-4, 81 NRC 169 n.76 (2015)
- 10 C.F.R. 50.90
to take advantage of the Alternate PTS Rule, licensee must request approval from the Office of Nuclear Reactor Regulation, in accordance with the procedures for submitting a license amendment; LBP-15-17, 81 NRC 766 (2015)
when licensee wants to amend a license, application for an amendment must be filed with the Commission; CLI-15-5, 81 NRC 334 (2015); CLI-15-14, 81 NRC 741 (2015)
- 10 C.F.R. 50.91(a)(1)
when licensee submits its license amendment application to NRC, it must provide the agency its analysis about the issue of no significant hazards consideration using the standards in 10 C.F.R. 50.92; LBP-15-17, 81 NRC 790 n.238 (2015)
- 10 C.F.R. 50.91(a)(4)
final no significant hazards consideration determination allows the Commission to issue the challenged license amendment before the petitioner's request for a hearing is adjudicated; LBP-15-17, 81 NRC 790 n.238 (2015)
license amendment will be effective on issuance, even if adverse public comments have been received and even if an interested person meeting the provisions for intervention has filed a request for a hearing; LBP-15-17, 81 NRC 790 n.238 (2015)
- 10 C.F.R. 50.91(a)(5)
"exigent circumstances" determination seems compelled by the fact that violation of the technical specifications limit for the plant, whatever the cause of the temperature increase, requires a dual unit shutdown; LBP-15-13, 81 NRC 477 (2015)
where the Commission finds that an emergency situation exists, in that failure to act in a timely way would result in derating or shutdown of a nuclear power plant, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment; LBP-15-13, 81 NRC 477 (2015)
- 10 C.F.R. 50.91(a)(6)
NRC Staff may determine that exigent circumstances exist such that there is insufficient time for a full 30-day public comment period on a license amendment request; LBP-15-13, 81 NRC 476 (2015)
- 10 C.F.R. 50.92
licensee is prohibited from simply disconnecting its ERDS when the reactor is powered down during decommissioning; LBP-15-4, 81 NRC 178-79 (2015)
- 10 C.F.R. 50.92(a)
in determining whether a license amendment, construction permit, or early site permit will be issued to applicant, the Commission is guided by the considerations that govern issuance of initial licenses, construction permits, or early site permits to the extent applicable and appropriate; LBP-15-17, 81 NRC 778 (2015); LBP-15-20, 81 NRC 840-41 (2015)
- 10 C.F.R. 50.109
Commission requests briefing from NRC Staff on the circumstances, if any, NRC Staff would judge a potentially cost-beneficial mitigation alternative to warrant further NRC consideration outside of the license renewal review, either via a backfit analysis or as part of another process; CLI-15-3, 81 NRC 219 (2015)
- 10 C.F.R. Part 50, Appendix A, Criterion 44
plants must employ an ultimate heat sink to transfer heat from structures, systems, and components that are important to safety; LBP-15-13, 81 NRC 459 n.5 (2015)

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- 10 C.F.R. Part 50, Appendix A, Criterion 61
spent fuel storage systems must be designed to ensure adequate safety under normal and postulated accident conditions; CLI-15-4, 81 NRC 240 (2015)
- 10 C.F.R. Part 50, Appendix B
“quality assurance” comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service; DD-15-2, 81 NRC 207-08 (2015)
- 10 C.F.R. Part 50, Appendix B, Criterion III
licensee’s operation of primary coolant pumps contrary to plant licensing and the FSAR is a violation of this criterion; DD-15-3, 81 NRC 725 (2015)
- 10 C.F.R. Part 50, Appendix E, § IV.F.2
offsite emergency plans are reviewed biennially by NRC and the Federal Emergency Management Agency in a comprehensive emergency preparedness exercise; CLI-15-6, 81 NRC 377 (2015)
- 10 C.F.R. Part 50, Appendix E, § V
activities that the closed plants in 1991 are exempt from performing are limited to only implementation and maintenance of the ERDS; LBP-15-4, 81 NRC 184 (2015)
- 10 C.F.R. Part 50, Appendix E, § VI
any alleged ambiguity in the exception provision is eliminated when the regulatory language is examined in light of the regulatory history and framework; LBP-15-4, 81 NRC 174 n.100 (2015)
ERDS is a direct electronic data link between licensees of operating reactors and the NRC Operations Center, and its objective is to allow NRC to monitor critical parameters during an emergency; LBP-15-4, 81 NRC 160-61 (2015)
if this section were a one-time requirement that applied only to units existing in 1991, that would mean it was not intended to apply prospectively to newly built reactors; LBP-15-4, 81 NRC 171 (2015)
regulatory history, like the regulation itself, is focused entirely on implementation and maintenance of the ERDS operations with not one word about decommissioning the system; LBP-15-4, 81 NRC 182 (2015)
- 10 C.F.R. Part 50, Appendix E, § VI.2
all nuclear power facilities that are shut down permanently or indefinitely are exempted from participating in the ERDS program; LBP-15-4, 81 NRC 161, 167 (2015)
any facility with an operating reactor unit is required to provide ERDS for that unit, regardless of the status of other reactors at the facility; LBP-15-4, 81 NRC 168 (2015)
except for Big Rock Point and all nuclear power facilities that are shut down permanently or indefinitely, onsite ERDS hardware shall be provided at each unit by the licensee to interface with the NRC receiving system; LBP-15-4, 81 NRC 161, 172 (2015)
if licensee of a permanently shutdown reactor is never required to activate the ERDS link, it must be concluded that such a licensee is exempt from the ERDS program; LBP-15-4, 81 NRC 170 (2015)
nuclear power facility has shut down permanently within the meaning of this regulation when it has permanently ceased reactor operations, and permanently removed fuel from the reactor vessel, as those terms are defined in 10 C.F.R. 50.2; LBP-15-4, 81 NRC 169-70 (2015)
plants that are shut down do not have to provide the ERDS hardware, or assemble and transmit data; LBP-15-4, 81 NRC 181 (2015)
scope of the ERDS exception is informed by the regulatory history, which states that ERDS is to be used by licensees of operating reactors; LBP-15-4, 81 NRC 167 (2015)
- 10 C.F.R. Part 50, Appendix E, § VI.2.a(ii)
parameters from which ERDS transmits data points for boiling water reactors are identified; LBP-15-4, 81 NRC 169 n.73 (2015)
- 10 C.F.R. Part 50, Appendix E, § VI.4.d
each licensee is required to complete implementation of the ERDS by February 13, 1993, or before initial escalation to full power, whichever comes later; LBP-15-4, 81 NRC 161, 171 n.87, 189 (2015)
- 10 C.F.R. Part 50, Appendix G
licensees may follow regulatory guides to determine equivalent safety margins, or may use any other methods, procedures, or selection of materials data and transients to demonstrate compliance with this regulation; LBP-15-20, 81 NRC 835 n.20 (2015)

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- materials in a reactor vessel must maintain a minimum level of 50 ft-lb of Charpy upper-shelf energy, which is a measurement of the amount of energy the material can absorb at high temperatures before it fractures and fails; LBP-15-20, 81 NRC 833 (2015)
- 10 C.F.R. Part 50, Appendix G, § IV.1.a
licensees have the option of demonstrating that values of Charpy upper-shelf energy below 50 ft-lb will provide margins of safety against fracture equivalent to those required by Appendix G of Section XI of the ASME BPV Code; LBP-15-20, 81 NRC 833-34, 842 (2015)
- 10 C.F.R. Part 50, Appendix H
contention contesting adequacy of licensee's equivalent margins analysis is not a challenge to NRC regulations; LBP-15-20, 81 NRC 841-42 (2015)
licensees must attach a particular number of surveillance capsules to specified areas within the reactor vessel, typically near the inside vessel wall at the beltline; LBP-15-20, 81 NRC 838 (2015)
surveillance program to monitor pressurized water reactor pressure vessel is described; LBP-15-17, 81 NRC 761 (2015)
- 10 C.F.R. Part 50, Appendix H, § I
minimum frequency with which surveillance capsules must be tested is set by ASTM Standard E 185 (1982 version), which is incorporated into Appendix H; LBP-15-20, 81 NRC 842 (2015)
pressurized water reactor pressure vessel surveillance program relies on physical material samples, also known as specimens, capsules, or coupons, which are withdrawn periodically from the reactor vessel; LBP-15-17, 81 NRC 761 (2015)
- 10 C.F.R. Part 50, Appendix H, § III.A
exemption from the surveillance program is allowed if a reactor's lifetime irradiation levels are below a certain threshold; LBP-15-17, 81 NRC 761 n.25 (2015)
- 10 C.F.R. Part 50, Appendix H, § III.B.2
physical specimens must come from near the inside vessel wall in the beltline region so that the specimen irradiation history duplicates the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface; LBP-15-17, 81 NRC 761 n.24 (2015)
- 10 C.F.R. Part 50, Appendix H, § III.B.3
NRC must preapprove the schedule for removing material samples from the reactor vessel; LBP-15-17, 81 NRC 761 (2015)
surveillance capsule withdrawal schedule is not part of the plant's license; LBP-15-20, 81 NRC 842 (2015)
- 10 C.F.R. Part 50, Appendix H, § III.C
integrated surveillance program among similar reactors is allowed if the reactors have sufficiently similar design and operating features to permit accurate comparisons of the predicted amount of radiation damage; LBP-15-17, 81 NRC 761 n.25 (2015)
- 10 C.F.R. 51.1
regulations in Part 51 implement National Environmental Policy Act § 102(2); LBP-15-5, 81 NRC 264 (2015)
- 10 C.F.R. 51.4
Limited Work Authorization Rule expressly excludes transmission lines from the delineated construction activities that would require NRC approval before being undertaken; CLI-15-1, 81 NRC 10 n.48 (2015)
- 10 C.F.R. 51.10
admissibility of contention that environmental assessment fails to adequately describe or analyze proposed mitigation measures is decided; LBP-15-11, 81 NRC 430 (2015)
admissibility of contention that environmental assessment fails to conduct the required hard look at impacts of the proposed mine and fails to consult with the U.S. Fish & Wildlife Service is decided; LBP-15-11, 81 NRC 443 (2015)
admissibility of contention that environmental assessment fails to provide an analysis of the impacts on the project from earthquakes, especially concerning secondary porosity and adequate confinement is decided; LBP-15-11, 81 NRC 447 (2015)
admissibility of contention that final environmental assessment fails to adequately analyze cumulative impacts is decided; LBP-15-11, 81 NRC 432 (2015)
admissibility of contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with restoration standards and difficulty and cost in achieving

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- the them and the use of the alternative standards permitted under the proposed rules is decided; LBP-15-15, 81 NRC 607, 608 (2015)
- admissibility of contention that NRC Staff must conduct a new baseline groundwater characterization study of the license renewal area rather than relying on the baseline study conducted during the original license application is decided; LBP-15-11, 81 NRC 418 (2015)
- agency is required to consider all reasonable alternatives under the National Environmental Policy Act; LBP-15-15, 81 NRC 607-08 (2015)
- contention alleging that final supplemental environmental impact statement fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies, is decided; LBP-15-16, 81 NRC 659-60 (2015)
- contention that environmental assessment fails to adequately describe air quality impacts is inadmissible as untimely; LBP-15-11, 81 NRC 428 (2015)
- contention that environmental assessment violates the National Environmental Policy Act in its failure to provide an analysis of the groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 424 (2015)
- contention that final environmental assessment fails to adequately analyze all reasonable alternatives is inadmissible; LBP-15-11, 81 NRC 434 (2015)
- contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 434-35 (2015)
- mitigation measures must be discussed in the final supplemental environmental impact statement; LBP-15-16, 81 NRC 687 (2015)
- 10 C.F.R. 51.10(a)
although NRC regulations do not require NRC Staff to analyze the environmental impacts of NRC licensing actions on the environment of foreign nations, Staff extended its outreach to international organizations to inform its analysis of the potential environmental impacts of the project; CLI-15-13, 81 NRC 581 (2015)
- 10 C.F.R. 51.14(b)
when drafting an environmental impact statement, agency's scope of review must include analysis of any connected or cumulative actions to the central proposed action; LBP-15-16, 81 NRC 697 (2015)
- 10 C.F.R. 51.20(a)(1)
environmental impact statement is required when the proposed project is a major federal action significantly affecting the quality of the human environment; LBP-15-15, 81 NRC 616 (2015)
- 10 C.F.R. 51.20(b)(8)
issuing a license to possess and use source material to a uranium milling facility is identified as a major federal action; LBP-15-16, 81 NRC 641 n.123 (2015)
NRC Staff must prepare an environmental impact statement in connection with a license to possess and use source and AEA § 11e(2) byproduct material for the purpose of in situ uranium recovery; LBP-15-3, 81 NRC 83 (2015)
- 10 C.F.R. 51.22(b)
admissibility of contention that final environmental assessment fails to satisfy NRC's requirement for an environmental impact statement when there are unresolved conflicts concerning reasonable alternatives is decided; LBP-15-15, 81 NRC 604, 616 (2015)
- 10 C.F.R. 51.22(c)(21)
license transfer applications need not include an environmental analysis under NEPA; CLI-15-8, 81 NRC 510 (2015)
- 10 C.F.R. 51.23
no additional procedural steps are necessary to add the impacts of continued storage to existing environmental impact statements because this regulation, by its terms, has already done so; CLI-15-10, 81 NRC 542 (2015)
Temporary Storage Rule was vacated; LBP-15-1, 81 NRC 21 (2015)
when considering continued storage in licensing reviews with previously completed final environmental impact statements, NRC Staff is expected to use a consistent and transparent process to ensure that all

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- stakeholders are aware of how the environmental impacts of continued storage are considered in each licensing action affected by this regulation; CLI-15-10, 81 NRC 544 (2015)
- 10 C.F.R. 51.23(b)
absent a rule waiver, NRC Staff is not expected to revisit the impact determinations made in the Continued Storage GEIS as part of its site-specific NEPA reviews; CLI-15-10, 81 NRC 539 n.13 (2015)
because this regulation prescribes a specific procedure for incorporating the environmental impacts of continued storage into a site-specific analysis, this procedure, rather than a procedure set forth in the general provisions of Part 51, governs NRC environmental review; CLI-15-10, 81 NRC 540 (2015)
“deemed incorporated” function of this regulation provides administrative efficiency by adding the environmental impacts of continued storage to site-specific environmental impact statements without additional work by NRC Staff; CLI-15-10, 81 NRC 539 (2015)
environmental impacts of at-reactor and away-from-reactor storage of spent fuel are considered for 60 years after the end of a reactor’s licensed life for operation, an additional 100 years of storage, and the indefinite storage of spent nuclear fuel and incorporated into site-specific environmental impact statements; CLI-15-10, 81 NRC 541 (2015)
environmental impacts of continued storage have been incorporated into the environmental impact statements at issue in the proceedings by operation of law; CLI-15-10, 81 NRC 539 (2015)
impact determinations in the Continued Storage generic environmental impact statement shall be deemed incorporated into the environmental impact statements associated with combined license and license renewal applications; CLI-15-10, 81 NRC 537 (2015)
- 10 C.F.R. 51.28(a)(5)
applicant has no duty to invite affected Indian tribes to participate in the environmental scoping process; LBP-15-5, 81 NRC 280 (2015)
NRC Staff has a duty to invite any affected Indian tribe to participate in the environmental scoping process; LBP-15-5, 81 NRC 279-80 (2015)
- 10 C.F.R. 51.30(a)(1), 51.31(a)
environmental assessment, and associated finding of no significant impact, must contain sufficient discussion of environmental impacts and the reasons why the proposed action will not have a significant effect on the quality of the human environment; LBP-15-13, 81 NRC 471 (2015)
- 10 C.F.R. 51.32
issuance of an environmental assessment is appropriate where NRC Staff determines that the proposed project will result in no significant impacts; LBP-15-11, 81 NRC 415 (2015)
- 10 C.F.R. 51.32(a)(3)
environmental assessment, and associated finding of no significant impact, must contain sufficient discussion of environmental impacts and the reasons why the proposed action will not have a significant effect on the quality of the human environment; LBP-15-13, 81 NRC 471 (2015)
- 10 C.F.R. 51.45
materials license application must provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that cultural and historic resources are identified and protected; LBP-15-16, 81 NRC 643 n.141 (2015)
NRC must prepare an environmental impact statement that adequately evaluates the environmental impacts of relicensing, including impacts to tribal hunting and fishing rights and subsistence consumption; LBP-15-5, 81 NRC 282 (2015)
- 10 C.F.R. 51.45(b)
applicant for a uranium ISR license is required to provide data from a groundwater monitoring program that are sufficient to establish a prelicensing site characterization baseline for assessing the potential effects of facility operations on local groundwater quality; LBP-15-3, 81 NRC 88 (2015)
“baseline” data describe results of applicant’s preoperational or baseline groundwater quality sampling program providing data on project-wide groundwater conditions; LBP-15-16, 81 NRC 660-61 (2015)
environmental reports must contain a description of the proposed action, a statement of its purposes, and a description of the environment affected; LBP-15-3, 81 NRC 83 (2015)
final supplemental environmental impact statement must include an analysis of cultural impacts; LBP-15-16, 81 NRC 650 (2015)
- 10 C.F.R. 51.45(b)(1)-(5)
environmental reports must discuss the five elements of this regulation; LBP-15-3, 81 NRC 83 (2015)

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- 10 C.F.R. 51.45(c)
contention that environmental report does not satisfy NEPA because it does not consider a range of mitigation measures to mitigate the risk of catastrophic fires in densely packed, closed-frame spent fuel storage pools is decided; LBP-15-5, 81 NRC 265 (2015)
environmental report must contain a consideration of alternatives for reducing adverse impacts for all Category 2 license renewal issues in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 260 (2015)
- 10 C.F.R. 51.53(c)
license renewal applicant's environmental report may adopt the findings of the generic environmental impact statement, but must also include site-specific analyses of Category 2 issues; CLI-15-6, 81 NRC 351 (2015)
- 10 C.F.R. 51.53(c)(3)(i)
environmental report for the license renewal stage need not contain environmental analysis of Category 1 issues identified in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 260 (2015)
- 10 C.F.R. 51.53(c)(3)(ii)
environmental report must analyze environmental impacts of a license renewal on matters identified as Category 2 issues in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 260 (2015)
- 10 C.F.R. 51.53(c)(3)(ii)(L)
contention is within the scope of license renewal proceeding because NRC regulations require that the environmental report include a severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 298 (2015)
severe accident mitigation alternatives analysis must be considered as part of the environmental report and, ultimately, as part of NRC Staff's supplemental environmental impact statement for a power reactor license renewal; LBP-15-5, 81 NRC 260 (2015)
- 10 C.F.R. 51.53(c)(3)(iii)
environmental report must contain a consideration of alternatives for reducing adverse impacts for all Category 2 license renewal issues in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 260 (2015)
- 10 C.F.R. 51.60(b)
applicant for a license to possess and use source and AEA § 11e(2) byproduct material for the purpose of in situ uranium recovery must submit an environmental report with its application; LBP-15-3, 81 NRC 82 (2015)
- 10 C.F.R. 51.70
admissibility of contention that environmental assessment fails to adequately describe or analyze proposed mitigation measures is decided; LBP-15-11, 81 NRC 430 (2015)
admissibility of contention that environmental assessment fails to conduct the required hard look at impacts of the proposed mine and fails to consult with the U.S. Fish & Wildlife Service is decided; LBP-15-11, 81 NRC 443 (2015)
admissibility of contention that environmental assessment fails to provide an analysis of the impacts on the project from earthquakes, especially concerning secondary porosity and adequate confinement is decided; LBP-15-11, 81 NRC 447 (2015)
admissibility of contention that final environmental assessment fails to adequately analyze cumulative impacts is decided; LBP-15-11, 81 NRC 432 (2015)
admissibility of contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with restoration standards and difficulty and cost in achieving the them and the use of the alternative standards permitted under the proposed rules is decided; LBP-15-15, 81 NRC 607 (2015)
admissibility of contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with restoration standards and schedules, including delays, resulting from the proposed rules, and failure to describe such impacts in the final EA is decided; LBP-15-15, 81 NRC 608 (2015)
admissibility of contention that NRC Staff must conduct a new baseline groundwater characterization study of the license renewal area rather than relying on the baseline study conducted during the original license application is decided; LBP-15-11, 81 NRC 418 (2015)

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- agency is required to consider all reasonable alternatives under the National Environmental Policy Act; LBP-15-15, 81 NRC 607-08 (2015)
- although NRC has issued a generic environmental impact statement for in situ uranium recovery facilities that assesses potential ISR facility construction/operation/decommissioning impacts, for the initial licensing of each individual ISR facility, NRC Staff will first prepare a draft supplemental environmental impact statement; LBP-15-3, 81 NRC 83 (2015)
- contention alleging that final supplemental environmental impact statement fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies, is decided; LBP-15-16, 81 NRC 659-60 (2015)
- contention that environmental assessment fails to adequately describe air quality impacts is inadmissible as untimely; LBP-15-11, 81 NRC 428 (2015)
- contention that environmental assessment violates the National Environmental Policy Act in its failure to provide an analysis of the groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 424 (2015)
- contention that final environmental assessment fails to adequately analyze all reasonable alternatives is inadmissible; LBP-15-11, 81 NRC 434 (2015)
- contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 434-35 (2015)
- mitigation measures must be discussed in the final supplemental environmental impact statement; LBP-15-16, 81 NRC 687 (2015)
- 10 C.F.R. 51.70(b)
- contention that final environmental assessment fails to present relevant information in a clear and concise manner that is readily accessible to the public and other reviewers is inadmissible; LBP-15-11, 81 NRC 427 (2015)
- 10 C.F.R. 51.71
- admissibility of contention that environmental assessment fails to adequately describe or analyze proposed mitigation measures is decided; LBP-15-11, 81 NRC 430 (2015)
- admissibility of contention that environmental assessment fails to conduct the required hard look at impacts of the proposed mine and fails to consult with the U.S. Fish & Wildlife Service is decided; LBP-15-11, 81 NRC 443 (2015)
- admissibility of contention that environmental assessment fails to provide an analysis of the impacts on the project from earthquakes, especially concerning secondary porosity and adequate confinement is decided; LBP-15-11, 81 NRC 447 (2015)
- admissibility of contention that final environmental assessment fails to adequately analyze cumulative impacts is decided; LBP-15-11, 81 NRC 432 (2015)
- admissibility of contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with restoration standards and difficulty and cost in achieving the them and the use of the alternative standards permitted under the proposed rules is decided; LBP-15-15, 81 NRC 607 (2015)
- admissibility of contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with restoration standards and schedules, including delays, resulting from the proposed rules, and failure to describe such impacts in the final EA is decided; LBP-15-15, 81 NRC 608 (2015)
- admissibility of contention that NRC Staff must conduct a new baseline groundwater characterization study of the license renewal area rather than relying on the baseline study conducted during the original license application is decided; LBP-15-11, 81 NRC 418 (2015)
- agency is required to consider all reasonable alternatives under the National Environmental Policy Act; LBP-15-15, 81 NRC 607-08 (2015)
- contention that environmental assessment fails to adequately describe air quality impacts is inadmissible as untimely; LBP-15-11, 81 NRC 428 (2015)
- contention that environmental assessment violates the National Environmental Policy Act in its failure to provide an analysis of the groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 424 (2015)

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- contention that final environmental assessment fails to adequately analyze all reasonable alternatives is inadmissible; LBP-15-11, 81 NRC 434 (2015)
- contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 434-35 (2015)
- contention that final supplemental environmental impact statement fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies, is decided; LBP-15-16, 81 NRC 659-60 (2015)
- environmental impacts will be considered irrespective of whether a certification or license from the appropriate authority has been obtained; LBP-15-16, 81 NRC 699 (2015)
- mitigation measures must be discussed in the final supplemental environmental impact statement; LBP-15-16, 81 NRC 687 (2015)
- 10 C.F.R. 51.71(a)
- generic environmental impact statement for in-situ leach uranium milling facilities addresses, among other topics, matters specified in section 51.45; LBP-15-3, 81 NRC 83-84 (2015)
- 10 C.F.R. 51.71(b)
- although a draft supplemental environmental impact statement may rely in part on applicant's environmental report, NRC Staff must independently evaluate and be responsible for the reliability of all information used in the DSEIS; LBP-15-3, 81 NRC 84 (2015)
- NRC Staff must include in the final supplemental environmental impact statement an analysis of significant problems and objections raised by any affected Indian tribes, and by other interested persons; LBP-15-16, 81 NRC 650, 655 (2015)
- 10 C.F.R. 51.71(d)
- although license requirements and other environmental quality standards are to be considered in assessing environmental impacts, they do not negate NRC Staff's responsibility to consider all environmental effects; LBP-15-3, 81 NRC 115 (2015)
- analysis for all draft and final environmental impact statements, by virtue of section 51.90, will, to the fullest extent practicable, quantify the various factors considered; LBP-15-3, 81 NRC 115 (2015)
- final supplemental environmental impact statement must include an analysis of cultural impacts; LBP-15-16, 81 NRC 650 (2015)
- petitioners question applicant's failure to consider the qualitative benefits of installing engineered filters; LBP-15-5, 81 NRC 264 (2015)
- to the extent that there are important qualitative considerations or factors that cannot be quantified in the environmental impact statement, those considerations or factors will be discussed in qualitative terms; LBP-15-3, 81 NRC 115 (2015); LBP-15-5, 81 NRC 263 (2015)
- when connected actions have been identified, the agency must evaluate any potential effects in the environmental impact statement; LBP-15-16, 81 NRC 697 (2015)
- where environmental impacts are practically quantifiable, NRC has a duty to discuss them in those terms in the final supplemental environmental impact statement; LBP-15-3, 81 NRC 115 (2015)
- 10 C.F.R. 51.71(d) n.3
- compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act is not a substitute for, and does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality; LBP-15-11, 81 NRC 439 (2015)
- 10 C.F.R. 51.90
- legal requirements applicable to a draft environmental impact statement, as specified in sections 51.70(b) and 51.71, are imposed on a final EIS; LBP-15-3, 81 NRC 115 (2015)
- when connected actions have been identified, the agency must evaluate any potential effects in the environmental impact statement; LBP-15-16, 81 NRC 697 (2015)
- 10 C.F.R. 51.90-94
- contention that final supplemental environmental impact statement fails to comply with NRC regulations 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 is decided; LBP-15-3, 81 NRC 85 (2015)

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- contention that FSEIS fails to analyze environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits is decided; LBP-15-3, 81 NRC 111 (2015)
- intervenor fails to establish the validity of their various challenges to the adequacy of the FSEIS description of the baseline water quality at the ISR site; LBP-15-3, 81 NRC 111 (2015)
- 10 C.F.R. 51.91
additional content is required in a final environmental impact statement compared to a draft EIS; LBP-15-3, 81 NRC 115 n.44 (2015)
- 10 C.F.R. 51.92
when a supplement to a final environmental impact statement is required and what it must contain are outlined; LBP-15-3, 81 NRC 115 n.44 (2015)
- with respect to the need to supplement an issued final EIS, the party offering the new contention has the burden of presenting information sufficient to show that there is a genuine issue regarding whether the NRC Staff should supplement its document; LBP-15-16, 81 NRC 704 (2015)
- 10 C.F.R. 51.92(a)(2)
importing analysis from a previously completed environmental assessment while disregarding intervening events would render meaningless NEPA's requirement to supplement an environmental impact statement or EA; LBP-15-13, 81 NRC 471 n.89 (2015)
- supplementation of a final environmental impact statement is required when a final action has not been taken and there are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; CLI-15-10, 81 NRC 542 (2015)
- 10 C.F.R. 51.93
distribution requirements for a final environmental impact statement (and a supplement thereto) are imposed; LBP-15-3, 81 NRC 115 n.44 (2015)
- 10 C.F.R. 51.94
final environmental impact statement (or supplement thereto) must be considered in the agency's decisionmaking; LBP-15-3, 81 NRC 115 n.44 (2015)
- 10 C.F.R. 51.95(c)
NRC Staff uses applicant's environmental report as a starting point for its own environmental review of a license renewal application, the results of which are published as a supplement to the generic environmental impact statement; CLI-15-6, 81 NRC 351 (2015)
- 10 C.F.R. 51.102(c)
final supplemental environmental impact statement is merged with any relevant licensing board decision; CLI-15-6, 81 NRC 387 (2015)
- initial decision of the presiding officer or final decision of the Commissioners acting as a collegial body will constitute the record of decision; CLI-15-6, 81 NRC 387 (2015)
- this provision replaced a previous version that expressly permitted licensing boards to modify the content of an environmental impact statement; CLI-15-6, 81 NRC 387-88 (2015)
- 10 C.F.R. 51.107(a)
Commission concludes that NRC Staff's review has been adequate to support the findings set forth in this regulation; CLI-15-13, 81 NRC 557, 589 (2015)
- environmental issues that the Commission must consider in the mandatory portion of a combined license proceeding are outlined; CLI-15-13, 81 NRC 560 (2015)
- in uncontested hearings, it is NRC's duty to ensure, among other things, that it has adhered to its obligations under the National Environmental Policy Act; CLI-15-1, 81 NRC 11 n.54 (2015)
- NRC Staff must weigh unavoidable adverse environmental impacts and resource commitments (costs) against the project's benefits; CLI-15-13, 81 NRC 588 (2015)
- 10 C.F.R. 51.120
contention that final environmental assessment fails to present relevant information in a clear and concise manner that is readily accessible to the public and other reviewers is inadmissible; LBP-15-11, 81 NRC 427 (2015)
- 10 C.F.R. Part 51, Subpart A, Appendix A
contention that final environmental assessment fails to present relevant information in a clear and concise manner that is readily accessible to the public and other reviewers is inadmissible; LBP-15-11, 81 NRC 427 (2015)

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- 10 C.F.R. Part 51, Subpart A, Appendix A, § 5
alternatives analysis is the heart of the environmental impact statement; CLI-15-13, 81 NRC 587 (2015)
- 10 C.F.R. Part 51, Subpart A, Appendix B
severe accidents in the spent fuel pools are Category 1 issues that do not need to be included in the
severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 307 (2015)
to challenge a Category 1 issue such as public health, petitioner must request a waiver and show that
unique circumstances warrant a site-specific determination; LBP-15-5, 81 NRC 302 (2015)
- 10 C.F.R. Part 51, Subpart A, Appendix B, n.2
Category 2 issues are reviewed on a site-specific basis because they have not been determined to be
essentially similar for all plants; LBP-15-5, 81 NRC 260 (2015)
- 10 C.F.R. Part 51, Subpart A, Appendix B, tbl. B-1
environmental justice is a Category 2 issue, within the scope of a license renewal proceeding; CLI-15-6,
81 NRC 371 (2015); LBP-15-5, 81 NRC 282 (2015)
environmental report for license renewal must consider alternatives to mitigate severe accidents for all
plants that have not considered such alternatives; LBP-15-5, 81 NRC 274 n.137 (2015)
impacts to subsistence consumption must be evaluated as part of the site-specific environmental justice
analysis; LBP-15-5, 81 NRC 384, 285 (2015)
probability-weighted environmental consequences of severe accidents are small; CLI-15-6, 81 NRC 379
(2015)
severe accident mitigation alternatives fall within Category 2 and must therefore be addressed on a
site-specific basis; LBP-15-5, 81 NRC 260 (2015)
- 10 C.F.R. Part 51, Subpart A, Appendix B, tbl. B-1, n.3
relative to an individual ISR facility, when NRC Staff formulates its draft and final supplemental
environmental impact statement conclusions regarding the environmental impacts of a proposed action or
alternative actions, it uses as guidance a standard scheme to categorize or quantify the impacts;
LBP-15-3, 81 NRC 84 (2015)
- 10 C.F.R. Part 51, Subpart A, Appendix B, tbl. B-1, n.4
shared transmission corridor is an offsite transmission line excluded from environmental impact analysis;
LBP-15-5, 81 NRC 269 (2015)
- 10 C.F.R. Part 52
stringent safety requirements apply to the construction and operation of reactor spent fuel pools and
independent spent fuel storage installations; CLI-15-4, 81 NRC 240 (2015)
- 10 C.F.R. Part 52, Subpart A
if applicant did not pursue an early site permit, all relevant site characteristics, including site geology,
hydrology, seismology, and man-made hazards, as well as potential environmental impacts of the
project, were studied as part of NRC Staff's combined license review and are within the scope of the
Commission decision; CLI-15-13, 81 NRC 559 (2015)
- 10 C.F.R. 52.79(d)(1)
applicants referencing a certified design must provide sufficient information for NRC Staff to determine
whether the site's characteristics fall within the design's parameters; CLI-15-13, 81 NRC 570 n.89
(2015)
- 10 C.F.R. 52.87
independent assessment of the safety aspects of the combined license application is required; CLI-15-13,
81 NRC 559 (2015)
- 10 C.F.R. 52.97(a)
Commission concludes that NRC Staff's review has been adequate to support the findings set forth in this
regulation; CLI-15-13, 81 NRC 557, 589 (2015)
safety issues that the Commission must consider in the mandatory portion of a combined license
proceeding are outlined; CLI-15-13, 81 NRC 560 (2015)
- 10 C.F.R. 52.102, 52.103
decision of the board or Commission becomes the record of decision, which may also incorporate the
final supplemental environmental impact statement; CLI-15-6, 81 NRC 376 (2015)

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- 10 C.F.R. Part 52, Appendix E
under its certified design, the Economic Simplified Boiling Water Reactor could maintain circulation long enough to permit safe shutdown of the reactor even if it were to lose offsite power and all of its backup generators failed to operate; LBP-15-5, 81 NRC 271 (2015)
- 10 C.F.R. 54.3
applicants must reassess any time-limited aging analyses to show either that the analyses will remain valid throughout the period of extended operation or that the effects of aging on the subject component will be managed during that time period; CLI-15-6, 81 NRC 349 n.34 (2015)
- 10 C.F.R. 54.3(a)
NRC's ongoing regulatory process ensures that the current licensing basis of an operating plant remains acceptably safe; LBP-15-5, 81 NRC 259 (2015)
scope of reactor's licensing basis is defined; CLI-15-14, 81 NRC 744 n.19 (2015)
- 10 C.F.R. 54.4
applicant for a renewed license must first identify all structures, systems, and components that serve a function relating directly or indirectly to safety, as defined by this regulation; CLI-15-6, 81 NRC 347 (2015)
safety significance of a structure, system, or component is defined in terms of its safety-related functions, and within the scope of license renewal are included those SSCs whose failure could prevent satisfactory accomplishment of the safety-related function; CLI-15-6, 81 NRC 347 n.25 (2015)
scope of a license renewal safety review is limited to plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited aging analyses; LBP-15-6, 81 NRC 321 (2015)
- 10 C.F.R. 54.4(a)(2)
plant systems, structures, and components within the scope of license renewal are all non-safety-related systems, structures, and components whose failure could prevent satisfactory accomplishment of the capability to shut down the reactor and maintain it in a safe shutdown condition; LBP-15-6, 81 NRC 322 n.46 (2015)
- 10 C.F.R. 54.21(a)
license renewal applicant must perform an integrated plant assessment to identify structures and components that are subject to aging management review; CLI-15-6, 81 NRC 347-48 (2015)
scope of a license renewal safety review is limited to plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited aging analyses; LBP-15-6, 81 NRC 321 (2015)
- 10 C.F.R. 54.21(a)(1)
with respect to the definition of "reasonable assurance," applicant is required to show that safety features will fulfill their intended function, not that every structure will maintain its current licensing basis throughout the renewal period; LBP-15-5, 81 NRC 294 (2015)
- 10 C.F.R. 54.21(a)(1)(i)
aging management review is required for components that function without moving parts and without a change in configuration or properties, and includes a non-exhaustive list of components that either do or do not fit this description; CLI-15-6, 81 NRC 352 (2015); LBP-15-6, 81 NRC 322 (2015)
board compared transformers with other types of components listed in this regulation as expressly subject to aging management review or expressly excluded from aging management review; CLI-15-6, 81 NRC 354 (2015)
board examined how a transformer performs its intended function to determine whether it undergoes a change in configuration or properties; CLI-15-6, 81 NRC 354 (2015)
relay switches and snubbers are not subject to an aging management review; LBP-15-6, 81 NRC 322 (2015)
static components such as transistors and battery chargers are specifically excluded from aging management review; CLI-15-6, 81 NRC 360 n.97 (2015)
structures and components are subject to aging management review if they perform an intended function without moving parts or without a change in configuration or properties; CLI-15-6, 81 NRC 348 (2015)

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- transformer is an active component because it undergoes a change in properties when it performs its intended function; CLI-15-6, 81 NRC 359, 361 (2015)
- 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-15-6, 81 NRC 357 (2015)
- 10 C.F.R. 54.21(a)(1)(ii)
structures and components are subject to aging management review if they are not subject to routine replacement; CLI-15-6, 81 NRC 348 (2015)
- 10 C.F.R. 54.21(a)(3)
contention that applicant has failed to establish in its aging management plan that the effects of aging will be adequately managed for the period of extended operation is inadmissible; LBP-15-6, 81 NRC 324 (2015)
effects of aging must be adequately managed so that intended functions will be maintained consistent with the current licensing basis for the period of extended operation; LBP-15-6, 81 NRC 322-23 (2015)
integrated plant assessment must demonstrate that effects of aging for each structure and component will be managed so that the intended functions will be maintained consistent with the current licensing basis for the period of extended operation; CLI-15-6, 81 NRC 348 n.31 (2015)
license renewal application must demonstrate that licensee will adequately manage effects of aging on passive, long-lived components so that their intended functions will be maintained consistent with the current licensing basis for the period of extended operation; CLI-15-6, 81 NRC 352 (2015)
- 10 C.F.R. 54.21(c)
applicants must reassess any time-limited aging analyses to show either that the analyses will remain valid throughout the period of extended operation or that the effects of aging on the subject component will be managed during that time period; CLI-15-6, 81 NRC 349 n.34 (2015)
contention that license renewal application has failed to establish that the effects of aging on relay switches and snubbers will be adequately managed for the period of extended operation is inadmissible; LBP-15-6, 81 NRC 322 (2015)
scope of a license renewal safety review is limited to plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited aging analyses; LBP-15-6, 81 NRC 321 (2015)
- 10 C.F.R. 54.29
to grant a license renewal, NRC Staff must find that there is reasonable assurance that the effects of aging on relevant systems, structures, and components will be managed during the period of extended operation, that time-limited aging analyses have been identified for review, and that applicable environmental requirements have been met; LBP-15-6, 81 NRC 324 (2015)
- 10 C.F.R. 54.30(b)
allegations of noncompliance with already-issued, existing and open Commission orders are part of the current licensing basis and therefore cannot be challenged in a license renewal proceeding; LBP-15-5, 81 NRC 291 (2015)
compliance with orders issued as part of NRC's ongoing oversight program are enforcement issues that are not within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 291 (2015)
enforcement orders are outside the scope of the license renewal proceeding; LBP-15-5, 81 NRC 292 (2015)
- 10 C.F.R. Part 72
stringent safety requirements apply to the construction and operation of reactor spent fuel pools and independent spent fuel storage installations; CLI-15-4, 81 NRC 240 (2015)
- 10 C.F.R. 72.50(a)
written consent from NRC is required for all license transfers; CLI-15-8, 81 NRC 502 (2015)
- 10 C.F.R. Part 72, Subpart K
general license may be granted to all Part 50 and Part 52 reactor licensees to store spent fuel in an independent spent fuel storage installation; CLI-15-4, 81 NRC 226 n.16 (2015)
- 10 C.F.R. 74.4
"Category IA" material means any strategic special nuclear material directly usable in the manufacture of a nuclear explosive device; CLI-15-9, 81 NRC 516 n.20 (2015)

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- “Category IB” material refers to all strategic special nuclear material other than Category IA material; CLI-15-9, 81 NRC 516 n.20 (2015)
- “controlled access area” is any temporarily or permanently established area that is clearly demarcated, access to which is controlled, and which affords isolation of the material or persons within it; CLI-15-9, 81 NRC 517 n.20 (2015)
- “formula kilogram” means strategic special nuclear material in any combination in a quantity of 1000 grams computed by the formula, grams = (grams contained U-235) + 2.5 (grams U-233 + grams plutonium); CLI-15-9, 81 NRC 516 n.16 (2015)
- “material access area” is any location that contains special nuclear material, within a vault or a building, the roof, walls, and floor of which constitute a physical barrier; CLI-15-9, 81 NRC 517 n.20 (2015)
- “power of detection” means the probability that the critical value of a statistical test will be exceeded when there is an actual loss of a specific quantity of strategic special nuclear material; CLI-15-9, 81 NRC 517 n.20 (2015)
- special nuclear material “item” is any discrete quantity or container of special nuclear material or source material, not undergoing processing, having a unique identity, and also having an assigned element and isotope quantity; CLI-15-9, 81 NRC 516 n.20 (2015)
- “strategic special nuclear material” means uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium; CLI-15-9, 81 NRC 515 n.15 (2015)
- “tamper-safing” refers to use of devices on containers or vaults in a manner and at a time that ensures a clear indication of any violation of the integrity of previously made measurements of special nuclear material within the container or vault; CLI-15-9, 81 NRC 518 n.29 (2015)
- “unit process” means an identifiable segment or segments of processing activities for which the amounts of input and output strategic special nuclear material are based on measurements; CLI-15-9, 81 NRC 516 n.16 (2015)
- “vault” is a windowless enclosure with walls, floor, roof, and door(s) designed and constructed to delay penetration from forced entry; CLI-15-9, 81 NRC 516 n.20 (2015)
- 10 C.F.R. 74.51(a)(1)-(5)
- applicant for a license to possess and use strategic special nuclear material must establish, implement, and maintain an NRC-approved material control and accounting system that will address the loss or theft of such material; CLI-15-9, 81 NRC 515 (2015)
- 10 C.F.R. 74.55(b)
- licensees must verify on a statistical sampling basis, the presence and integrity of strategic special nuclear material items; CLI-15-9, 81 NRC 516 (2015)
- meaning of “verify” in the context of item presence verification is discussed; CLI-15-9, 81 NRC 520 (2015)
- 10 C.F.R. 74.55(b)(1)
- any statistical sampling plan for verifying the presence and integrity of strategic special nuclear material items must have at least 99% power of detecting item losses; CLI-15-9, 81 NRC 516 (2015)
- contention that applicant’s revised material control and accounting plan is deficient because its item monitoring program does not have the capability to verify, on a statistical sampling basis, the presence and integrity of strategic special nuclear material losses that total 5 formula kilograms of plutonium or more, plantwide, within the time frames specified by the regulation is inadmissible; CLI-15-9, 81 NRC 514 (2015)
- 10 C.F.R. 74.57(b)
- contention that applicant’s revised material control and accounting plan is inadequate to satisfy the alarm resolution requirements is inadmissible; CLI-15-9, 81 NRC 514 (2015)
- licensee must provide reasonable assurance that it can achieve the performance objectives set out in this regulation; CLI-15-9, 81 NRC 526 (2015)
- 10 C.F.R. 74.57(e)
- contention that applicant’s revised material control and accounting plan fails to show how confirmation and verification of theft of plutonium will be carried out in the specified timelines is inadmissible; CLI-15-9, 81 NRC 514-15 (2015)
- licensee must be able to rapidly assess the validity of alleged thefts; CLI-15-9, 81 NRC 525 (2015)

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- 10 C.F.R. 75.55(b)
accuracy is an integral component of the portion of the regulatory requirement that addresses item presence verification; CLI-15-9, 81 NRC 524 n.73 (2015)
- 36 C.F.R. 60.4
federal agency must determine whether identified properties are eligible for listing on the National Register based on the criteria in this regulation; LBP-15-16, 81 NRC 638-39 (2015)
- 36 C.F.R. 800.2(c)(2)(ii)(A)
consultation must provide an Indian tribe with a reasonable opportunity to identify its concerns about historic properties, advise on their identification and evaluation, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects; LBP-15-16, 81 NRC 639, 640, 651 (2015)
- 36 C.F.R. 800.2(c)(2)(ii)(C)
consultation with Indian tribes must recognize the government-to-government relationship between the federal government and Indian tribes; LBP-15-16, 81 NRC 639, 651 (2015)
- 36 C.F.R. 800.4(b)
federal agency must make a reasonable and good-faith effort to identify historic properties; LBP-15-16, 81 NRC (2015)
- 36 C.F.R. 800.4(b)(2)
though the materials license has already been issued, the land disturbance in the project area will proceed in stages in compliance with National Historic Preservation Act § 106; LBP-15-16, 81 NRC 657 n.231 (2015)
- 36 C.F.R. 800.4(c), 800.5
federal agency must assess the effects of the undertaking on any eligible historic properties found; LBP-15-16, 81 NRC 639 (2015)
- 36 C.F.R. 800.5(c)
under National Historic Preservation Act, federal agency must avoid or mitigate any adverse effects of its undertaking; LBP-15-16, 81 NRC 639 (2015)
under National Historic Preservation Act, federal agency must determine whether the effect of its undertaking will be adverse; LBP-15-16, 81 NRC 639 (2015)
- 36 C.F.R. 800.8(c)(1)(v)
in consultation with identified parties, agency must develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effects of the undertaking on historic properties and describe them in the [environmental assessment or draft environmental impact statement; LBP-15-16, 81 NRC 639 n.110 (2015)
- 36 C.F.R. 800.9(a)
federal agency must assess the effects of the undertaking on any eligible historic properties found; LBP-15-16, 81 NRC 639 (2015)
- 36 C.F.R. 800.9(b)
under National Historic Preservation Act, federal agency must determine whether the effect of its undertaking will be adverse; LBP-15-16, 81 NRC 639 (2015)
- 36 C.F.R. 800.9(c)
under National Historic Preservation Act, federal agency must avoid or mitigate any adverse effects of its undertaking; LBP-15-16, 81 NRC 639 (2015)
- 36 C.F.R. 800.13, 800.14(b)(1)
programmatic agreement may be used to implement the NHPA § 106 process in situations where the effects to historic properties cannot be fully determined prior to the approval of an undertaking, such as where an applicant proposes a phased approach to developing its project; LBP-15-16, 81 NRC 640 (2015)
- 40 C.F.R. Part 61, Subpart W
radon emissions are regulated by EPA; LBP-15-16, 81 NRC 702 (2015)
- 40 C.F.R. 146.4(b)(1)
in exempting an aquifer from MCLs, EPA has to find that the aquifer cannot and will not serve as a source of drinking water because it is mineral producing and can be demonstrated to contain minerals that, considering their quantity and location, are expected to be commercially producible; LBP-15-3, 81 NRC 119 n.47 (2015)

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- 40 C.F.R. 264.97(a)(1)(i)
determination of background groundwater quality to include sampling of wells that are hydraulically upgradient of the waste management area is not required if non-upgradient well sampling will provide an indication of background groundwater quality that is representative, or more representative, than that provided by upgradient wells; LBP-15-3, 81 NRC 95-96 (2015)
water samples taken from one well located hydrologically upgradient are part of the groundwater sampling protocol; LBP-15-3, 81 NRC 95 (2015)
- 40 C.F.R. 1501.7
under NEPA, defining the scope of effects of a project requires engagement with governments of affected tribes through an early and open process aimed at identifying concerns, potential impacts, relevant effects of past actions, and possible alternative actions; LBP-15-16, 81 NRC 650 (2015)
- 40 C.F.R. 1502.9(c)(1)(ii)
agencies shall prepare supplements to either draft or final environmental impact statements if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; LBP-15-13, 81 NRC 471 n.89 (2015)
importing analysis from a previously completed environmental assessment while disregarding intervening events would render meaningless NEPA's requirement to supplement an environmental impact statement or EA; LBP-15-13, 81 NRC 471 n.89 (2015)
- 40 C.F.R. 1502.14
agency violates NEPA by failing to rigorously explore and objectively evaluate all reasonable alternatives to the proposed action; LBP-15-15, 81 NRC 607 n.57 (2015)
environmental impacts of the proposal and the alternatives shall include appropriate mitigation measures; LBP-15-16, 81 NRC 687 n.434 (2015)
- 40 C.F.R. 1502.16
NEPA requires acknowledgment of tribal hunting and fishing rights, as well as an analysis of how the project will affect those rights; LBP-15-5, 81 NRC 282 (2015)
- 40 C.F.R. 1502.16(h)
mitigation discussion is required only in environmental impact statements; LBP-15-11, 81 NRC 431 n.190 (2015)
scientific and analytical section backing up the proposal and alternatives section of NEPA document must discuss any means to mitigate adverse environmental impacts not previously covered; LBP-15-16, 81 NRC 687 n.434 (2015)
- 40 C.F.R. 1502.22
inadequacy in the severe accident mitigation alternatives analysis is material if license renewal applicant failed to consider complete information without justifying why particular information was omitted; LBP-15-5, 81 NRC 298 (2015)
- 40 C.F.R. 1505.2
at the time of its decision, each agency shall prepare a concise public record of decision; LBP-15-16, 81 NRC 694 n.486 (2015)
- 40 C.F.R. 1505.2(c)
agency's record of decision must include a concise discussion of mitigation measures; LBP-15-16, 81 NRC 687 n.434 (2015)
monitoring and enforcement program must be adopted where applicable for any mitigation; LBP-15-16, 81 NRC 695 n.496, 696 (2015)
- 40 C.F.R. 1505.3
agencies may provide for monitoring to ensure that their decisions are carried out and should do so in important cases; LBP-15-16, 81 NRC 696 (2015)
- 40 C.F.R. 1505.3(c)
lead agency must make available to the public the results of relevant monitoring of mitigation measures; LBP-15-16, 81 NRC 695 n.497 (2015)
- 40 C.F.R. 1506.2(a)
NEPA encourages state participation when appropriate and authorized; LBP-15-11, 81 NRC 439 n.248 (2015)

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- 40 C.F.R. 1506.2(b)
coordination between a federal agency and a state requires active involvement between the two in order for the federal agency to meet its independent review burden; LBP-15-11, 81 NRC 439 n.248 (2015)
- 40 C.F.R. 1506.5
agency conducting a NEPA review shall independently evaluate the information submitted and shall be responsible for its accuracy; LBP-15-11, 81 NRC 439 n.248 (2015)
- 40 C.F.R. 1506.6
NRC must make a diligent effort to involve the public in implementation of NEPA procedures; LBP-15-16, 81 NRC 695 n.497 (2015)
- 40 C.F.R. 1508.7
“cumulative impacts” result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions; LBP-15-16, 81 NRC 697 (2015)
- 40 C.F.R. 1508.8(b)
adverse environmental effects that must be assessed under NEPA include aesthetic, historic, cultural, economic, social, or health effects; LBP-15-16, 81 NRC 637 (2015)
- 40 C.F.R. 1508.9, 1508.10, 1508.11, 1508.13
“environmental document” includes environmental assessment, environmental impact statement, finding of no significant impact, and notice of intent; LBP-15-16, 81 NRC 650 n.184 (2015)
- 40 C.F.R. 1508.20
mitigation under NEPA is defined; LBP-15-16, 81 NRC 687 (2015)
- 40 C.F.R. 1508.22
“environmental document” includes environmental assessment, environmental impact statement, finding of no significant impact, and notice of intent; LBP-15-16, 81 NRC 650 n.184 (2015)
- 40 C.F.R. 1508.25
non-NRC permits are interdependent parts of applicant’s proposed action and thus are connected actions; LBP-15-16, 81 NRC 700 (2015)
when drafting an environmental impact statement, agency’s scope of review must include analysis of any connected or cumulative actions to the central proposed action; LBP-15-16, 81 NRC 697 (2015)
- 40 C.F.R. 1508.25(a)(1)
when connected actions have been identified, the agency must evaluate any potential effects in the environmental impact statement; LBP-15-16, 81 NRC 697 (2015)
- 40 C.F.R. 1508.25(a)(1)(i)-(iii)
scope of an environmental impact statement includes connected actions, which means that they are closely related and therefore should be discussed in the same impact statement; LBP-15-16, 81 NRC 697 (2015)
- 44 C.F.R. Part 350
radiological emergency response plan was developed by the State and approved by the Federal Emergency Management Agency to ensure that the State is prepared to handle the offsite effects of a radiological emergency; LBP-15-4, 81 NRC 165 (2015)
- 50 C.F.R. 17.11
whooping crane and black-footed ferret are listed as threatened or endangered under the Endangered Species Act; LBP-15-11, 81 NRC 445 (2015)
- 50 C.F.R. 402.13
“informal” consultation is an optional process that includes all discussions, correspondence, etc., between the U.S. Fish and Wildlife Service and the federal agency designed to assist the federal agency in determining whether formal consultation or a conference is required with the Service under section 402.13; LBP-15-11, 81 NRC 445 n.298 (2015)
- 50 C.F.R. 402.13(a)
when engaging in informal consultation, an agency must provide its determination as to whether the proposed action will affect threatened and endangered species to U.S. Fish & Wildlife Service and request FWS concurrence; LBP-15-11, 81 NRC 444 (2015)
- 50 C.F.R. 402.14
consultation with U.S. Fish & Wildlife Service is legally mandated for any agency action that may affect listed species or critical habitat; LBP-15-11, 81 NRC 445 (2015)

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50 C.F.R. 402.14(a)

only species listed as threatened or endangered under the Endangered Species Act are covered by the act's formal consultation requirements; LBP-15-11, 81 NRC 445 (2015)

50 C.F.R. 402.14(b)(1)

concurrence by U.S. Fish and Wildlife Service discharges NRC's consultation responsibilities; LBP-15-11, 81 NRC 445 (2015)

federal agency need not initiate formal consultation if, as a result of the preparation of a biological assessment under section 402.12 or as a result of informal consultation with the FWS under section 402.13, the federal agency determines, with the written concurrence of the U.S. Fish and Wildlife Service Director, that the proposed action is not likely to adversely affect any listed species or critical habitat; LBP-15-11, 81 NRC 445 (2015)

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- Administrative Procedure Act, 5 U.S.C. § 552(b)
purpose of notice of proposed rulemaking is not to set binding law or policy, but instead to provide interested members of the public an opportunity to comment in a meaningful way on the agency's proposal; LBP-15-15, 81 NRC 611 (2015)
- Administrative Procedure Act, 5 U.S.C. § 553
Continued Storage Rule and supporting generic environmental impact statement to assess the environmental impacts of spent fuel storage after the end of a reactor's license term were approved; CLI-15-10, 81 NRC 537 (2015)
- Administrative Procedure Act, 5 U.S.C. § 553(b)(3)
agency need not submit a full draft of a rule in a notice of proposed rulemaking; LBP-15-15, 81 NRC 611 (2015)
even a statement of the subjects and issues involved in a proposed rulemaking can suffice as long as it provides notice to the public; LBP-15-15, 81 NRC 611 (2015)
- Administrative Procedure Act, 5 U.S.C. § 556(d)
proponent of a rule or order has the burden of proof; LBP-15-2, 81 NRC 57 n.63 (2015)
- Administrative Procedure Act, 5 U.S.C. § 558(c)
when licensee has made timely and sufficient application for a license renewal, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency; LBP-15-2, 81 NRC 50 n.10, 57 n.66 (2015); LBP-15-11, 81 NRC 404 n.2 (2015)
- Administrative Procedure Act, 5 U.S.C. § 706(2)
agency's failure to adequately validate a quantitative model on which it relies may lead the reviewing court to conclude that the agency's decision is arbitrary, capricious, or contrary to law; LBP-15-20, 81 NRC 854 n.151 (2015)
- American Indian Religious Freedom Act, Pub. L. No. 95-341, 92 Stat. 469 (1978) (codified at 42 U.S.C. § 1996 (2012))
federal policy supports special consideration where tribal religious exercise is threatened; LBP-15-16, 81 NRC 640-41 (2015)
- Archaeological Resources Protection Act, 16 U.S.C. § 470aa et seq.
historic properties may be protected under this statute; LBP-15-2, 81 NRC 52 (2015)
- Atomic Energy Act, 42 U.S.C. §§ 2011-2297h-13 (2012)
basis for NRC authority to regulate the use of special nuclear material in facilities such as nuclear power reactors is established; CLI-15-4, 81 NRC 231 n.47 (2015)
- Atomic Energy Act, 11e(2), 42 U.S.C. § 2014(e)(2)
"byproduct material" is categorized as tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-15-11, 81 NRC 435 n.218 (2015); LBP-15-16, 81 NRC 626 n.2 (2015)
- Atomic Energy Act, 11z, 42 U.S.C. § 2014(z)
"source material" is defined; LBP-15-16, 81 NRC 626 (2015)
- Atomic Energy Act, 57c(2), 42 U.S.C. § 2077(c)(2)
licensee must show with reasonable assurance that its proposed methodology for material control and accounting will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public; CLI-15-9, 81 NRC 517 (2015)

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Atomic Energy Act, 103, 42 U.S.C. § 2133 (2012)

NRC is prohibited from issuing a license if doing so would be inimical to the common defense and security or the health and safety of the public; CLI-15-4, 81 NRC 233 (2015)
statutory findings required by this section apply specifically to the proposed activities and activities under such licenses, but do not apply to disposal activities that might result from the operation of a licensed facility; CLI-15-4, 81 NRC 233 (2015)

Atomic Energy Act, 42 U.S.C. § 2133(b)

NRC is authorized to accord protection from radiological injury to both health and property interests; LBP-15-17, 81 NRC 776 (2015)

Atomic Energy Act, 103d, 42 U.S.C. § 2133(d)

NRC is prohibited from issuing a utilization or production facility license to any alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; CLI-15-7, 81 NRC 482, 485, 486 n.29, 491, 495 n.83 (2015)

Atomic Energy Act, 104d, 42 U.S.C. § 2134(d)

NRC is prohibited from issuing licenses for medical therapy and research and development facilities to any alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; CLI-15-7, 81 NRC 482 (2015)

Atomic Energy Act, 161, 42 U.S.C. § 2201 (2012)

general scope of the NRC's authority is established, but it does not discuss spent fuel disposal; CLI-15-4, 81 NRC 233 (2015)

Atomic Energy Act, 42 U.S.C. § 2201(b)

NRC is authorized to accord protection from radiological injury to both health and property interests; LBP-15-17, 81 NRC 776 (2015)

Atomic Energy Act, 182, 42 U.S.C. § 2232 (2012)

information is specified that must be provided by an applicant for a license and it has no reference to spent fuel disposal; CLI-15-4, 81 NRC 233-34 (2015)

Atomic Energy Act, 182a, 42 U.S.C. § 2232 (2012)

NRC can issue nuclear power reactor licenses to applicants only upon a finding that utilization of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public; CLI-15-4, 81 NRC 231 (2015)

Atomic Energy Act, 184, 42 U.S.C. § 2234

written consent from NRC is required for all direct or indirect license transfers; CLI-15-8, 81 NRC 502 (2015)

Atomic Energy Act, 189a, 42 U.S.C. § 2239(a)

Commission refers a limited portion of the hearing request to the licensing board to determine whether petitioner has identified an NRC activity that requires an opportunity to request an adjudicatory hearing; CLI-15-14, 81 NRC 730 (2015)

hearing must be held on each application to construct a nuclear power plant, regardless of whether an interested member of the public requests a hearing on the application; CLI-15-13, 81 NRC 559-60 (2015)

Atomic Energy Act, 189a(1)(A), 42 U.S.C. § 2239(a)(1)(A)

Congress intentionally limited the opportunity for a hearing to certain designated agency actions which do not include exemptions; LBP-15-18, 81 NRC 797 n.20 (2015)

NRC must afford interested persons an opportunity for a hearing on the granting, suspending, revoking, or amending of any license; CLI-15-5, 81 NRC 334 (2015); LBP-15-16, 81 NRC 636 (2015); LBP-15-18, 81 NRC 797 n.19 (2015)

NRC must provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-15-17, 81 NRC 770 (2015)

participation in a licensing proceeding requires a demonstration of standing; LBP-15-17, 81 NRC 769-70 (2015)

petitioner must address its hearing request to a matter that triggers a hearing opportunity; CLI-15-5, 81 NRC 333 (2015)

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- requirement to demonstrate standing is derived from instruction to NRC to provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-15-5, 81 NRC 255 (2015)
- Comprehensive Environmental Compensation and Liabilities Act, 42 U.S.C. §§ 9601, 9675
- proper sampling plan for establishing baseline values is described; LBP-15-3, 81 NRC 92 (2015)
- Endangered Species Act, 7(a)(2), 16 U.S.C. § 1536(a)(2)
- agency 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 destruction or adverse modification of critical habitat of such species; CLI-15-13, 81 NRC 584 (2015)
- consultation with Fish and Wildlife Service is legally mandated for any agency action that may affect listed species or critical habitat; LBP-15-11, 81 NRC 443 (2015)
- Energy Policy Act of 2005, Pub. L. 109-58, 119 Stat. 594 (2005)
- Congress has left intact both NRC's and the court's interpretation of the Atomic Energy Act with respect to a spent fuel disposal safety finding at the time of reactor licensing; CLI-15-4, 81 NRC 228, 234 (2015)
- Energy Reorganization Act of 1974, 42 U.S.C. §§ 5801-5891 (2012)
- basis for NRC authority to regulate the use of special nuclear material in facilities such as nuclear power reactors is established; CLI-15-4, 81 NRC 231 n.47 (2015)
- Exec. Order No. 12898
- NRC Staff examined special pathways of exposure that could lead to a higher level of radiation exposure in minority and low-income populations in the area, including subsistence consumption of fish, native vegetation, surface waters, sediments, and local produce; CLI-15-6, 81 NRC 373 (2015)
- order did not, in itself, create new substantive authority for federal agencies and thus NRC determined that it would endeavor to carry out the environmental justice principles as part of the agency's responsibilities under NEPA; CLI-15-6, 81 NRC 369 (2015)
- Exec. Order No. 13007, 61 Fed. Reg. 26,771 (May 24, 1996), *reprinted in* 42 U.S.C. § 1996 (2012)
- federal policy supports special consideration where tribal religious exercise is threatened; LBP-15-16, 81 NRC 640-41 (2015)
- Exec. Order No. 13175, 65 Fed. Reg. 67,249, 67,250 (Nov. 6, 2000)
- regular and meaningful consultation and collaboration with tribal officials is to take place through an accountable process at each agency; LBP-15-16, 81 NRC 640 (2015)
- Federal Register Act, 44 U.S.C. § 1507
- publication in the Federal Register is legally sufficient notice to all affected people; LBP-15-5, 81 NRC 280 n.181 (2015)
- National Environmental Policy Act, 42 U.S.C. § 4331(b)(4)
- agencies must take a hard look at preserving important historic and cultural aspects of our national heritage; LBP-15-16, 81 NRC 655 n.218 (2015)
- National Environmental Policy Act, 102, 42 U.S.C. § 4332 (2012)
- Continued Storage Rule and supporting generic environmental impact statement to assess the environmental impacts of spent fuel storage after the end of a reactor's license term were approved; CLI-15-10, 81 NRC 537 (2015)
- National Environmental Policy Act, 102(2)(A), 42 U.S.C. § 4332(2)(A)
- agencies 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-15-13, 81 NRC 586 (2015)
- National Environmental Policy Act, 42 U.S.C. § 4332(2)(C)
- federal agencies must prepare a detailed environmental impact statement for proposed actions significantly affecting the quality of the human environment; LBP-15-16, 81 NRC 637 (2015)
- National Environmental Policy Act, 42 U.S.C. § 4332(2)(C)(ii)
- environmental documents must include a detailed statement by the responsible official on any adverse environmental effects that cannot be avoided should the proposal be implemented; LBP-15-16, 81 NRC 687 n.433 (2015)
- National Environmental Policy Act, 102(2)(C)(ii)-(v), 42 U.S.C. § 4332(2)(C)(ii)-(v)
- NRC Staff must assess the relationship between local short-term uses and long-term productivity of the environment, consider alternatives, and describe the unavoidable adverse environmental impacts and the

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STATUTES

- irreversible and irretrievable commitments of resources associated with the proposed action; CLI-15-13, 81 NRC 587 (2015)
- National Environmental Policy Act, 42 U.S.C. § 4332(2)(C)(iii)
alternatives discussion need not include every possible alternative, but rather every reasonable alternative; LBP-15-3, 81 NRC 104 (2015)
- National Environmental Policy Act, 42 U.S.C. § 4332(2)(D)
non-NEPA document, let alone one prepared and adopted by a state government, cannot satisfy a federal agency's obligations under NEPA; LBP-15-11, 81 NRC 430 (2015)
- National Environmental Policy Act, 42 U.S.C. § 4332(2)(D)(ii)
NEPA encourages state participation when appropriate and authorized, but coordination between a federal agency and a state requires active involvement between the two in order for the federal agency to meet its independent review burden; LBP-15-11, 81 NRC 439 n.248 (2015)
- National Environmental Policy Act, 102(2)(E), 42 U.S.C. § 4332(2)(E)
agencies must study, develop, and describe appropriate alternatives to proposed actions; CLI-15-13, 81 NRC 587 (2015)
- National Historic Preservation Act, 16 U.S.C. § 470 et seq.
NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 52 (2015)
- National Historic Preservation Act, 16 U.S.C. § 470a(d)(6)(B)
federal agencies must consult with any Indian tribe that attaches religious and cultural significance to the sites; LBP-15-16, 81 NRC 639, 651 (2015)
- National Historic Preservation Act, 106, 16 U.S.C. § 470f
demolition of a historic unit to build a new unit will result in a finding of adverse effect under applicable criteria in 36 C.F.R. 800.5; CLI-15-13, 81 NRC 580-81 (2015)
- prior to approving any undertaking, federal agencies must take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register; LBP-15-16, 81 NRC 639 (2015)
- Native American Graves Protection and Repatriation Act, 25 U.S.C. § 3001 et seq.
historic properties may be protected under this statute; LBP-15-2, 81 NRC 52 (2015)
- Nuclear Waste Policy Act of 1982, Pub. L. No. 97-425, 96 Stat. 2201 (1982)
Congress has left intact both NRC's and the court's interpretation of the Atomic Energy Act with respect to a spent fuel disposal safety finding at the time of reactor licensing; CLI-15-4, 81 NRC 228, 234 (2015)
- Nuclear Waste Policy Act of 1982, 114, 42 U.S.C. § 10134 (2012)
responsibility for constructing and operating a waste repository was assigned to the Department of Energy, not the NRC; CLI-15-4, 81 NRC 241-42 (2015)
- Resource Conservation and Recovery Act, 42 U.S.C. § 6901 et seq.,
admissibility of contention that environmental assessment fails to adequately describe and analyze the impacts of maintaining post-operational wellfields as long-term hazardous waste facilities is decided; LBP-15-15, 81 NRC 606 (2015)
- proper sampling plan for establishing baseline groundwater values is described; LBP-15-3, 81 NRC 92 (2015)
- Treaty of Fort Laramie with Sioux, Etc., Sept. 17, 1851, 11 Stat. 749
Indian tribe's treaty-based claims of ownership of mining site and international treaty-based claims cannot support admission of environmental assessment contention; LBP-15-11, 81 NRC 411 (2015)
- Treaty with the Sioux — Brule, Oglala, Miniconjou, Yanktonai, Hunkpapa, Blackfeet, Cuthead, Two Kettle, Sans Arcs, and Santee — and Arapaho, Apr. 29, 1868, 15 Stat. 635
Indian tribe's treaty-based claims of ownership of mining site and international treaty-based claims cannot support admission of environmental assessment contention; LBP-15-11, 81 NRC 411 (2015)

LEGAL CITATIONS INDEX OTHERS

- Council on Environmental Quality and California Governor's Office of Planning and Research, *NEPA Handbook, NEPA and CEQA: Integrating Federal and State Environmental Reviews* 17 (Feb. 2014), available at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/handbooks>
- agencies can, consistent with NEPA regulations, incorporate by reference analyses and information from existing documents into an environmental assessment or environmental impact statement provided the material has been appropriately cited and described; LBP-15-11, 81 NRC 440 n.258 (2015)
- Fed. R. Evid. 103(a)(1)
- board considered evidence submitted with petitioner's reply to which opposing parties didn't object; LBP-15-5, 81 NRC 289 n.252 (2015)
- objection not timely made is waived; LBP-15-20, 81 NRC 859 n.184 (2015)
- Memorandum on Government-to-Government Relations with Native American Tribal Governments, 30 Weekly Comp. Pres. Doc. 936 (May 2, 1994)
- agencies are to ensure that the federal government operates within a government-to-government relationship with federally recognized Native American tribes, reflecting respect for the rights of self-government due the sovereign tribal governments; LBP-15-16, 81 NRC 639-40 (2015)
- Office of the Federal Register, *A Guide to the Rulemaking Process*, at 3-4 (2011), available at https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf
- advance notice of proposed rulemaking is a formal invitation to participate in shaping the proposed rule; LBP-15-15, 81 NRC 612 n.100 (2015)
- Pierce, Richard J., Jr., *Administrative Law* § 7.3 (5th Ed. 2010)
- purpose of notice of proposed rulemaking is not to set binding law or policy, but instead to provide interested members of the public an opportunity to comment in a meaningful way on the agency's proposal; LBP-15-15, 81 NRC 611 & n.94 (2015)
- requirement for a notice of proposed rulemaking is to sufficiently and fairly apprise interested parties of the issues involved, rather than to specify every precise proposal that the agency may ultimately adopt; LBP-15-15, 81 NRC 611 n.94 (2015)
- Sen. Doc. No. 248, 79 Cong. 200, 248 (1946)
- legislative history of the Administrative Procedure Act emphasized the notice requirement for proposed rulemaking in order to fairly apprise the public of the agency's potential action; LBP-15-15, 81 NRC 611 n.92 (2015)
- 1 Wigmore, J., *Evidence* 18 (3d ed. 1940)
- in absence of objection, hearsay evidence is treated as being properly admitted and may be given such probative effect and value to which it is entitled; LBP-15-20, 81 NRC 859 n.184 (2015)

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ABEYANCE OF CONTENTION

Commission directed all licensing boards to reject pending waste confidence contentions that had been held in abeyance, because the generic impact determinations have been the subject of extensive public participation in the rulemaking process and therefore are excluded from litigation in individual proceedings; LBP-15-1, 81 NRC 15 (2015)

Commission directed that all spent fuel storage contentions be held in abeyance; CLI-15-6, 81 NRC 340 (2015); LBP-15-1, 81 NRC 15 (2015)

ABEYANCE OF PROCEEDING

in NEPA context, path that licensee and NRC Staff must follow relative to a license condition is sufficiently clear that continuing to hold the hearing open while it is completed would be an unnecessary extension of the adjudicatory process; LBP-15-3, 81 NRC 65 (2015)

ACCIDENTS

contention that does not dispute any specific portion of applicant's fuel handling accident analysis is inadmissible for lack of a genuine dispute; LBP-15-18, 81 NRC 793 (2015)

ACCIDENTS, SEVERE

agency conducting a NEPA analysis must examine both the probability of a given harm occurring and the consequences of that harm if it does occur; CLI-15-6, 81 NRC 340 (2015)

because the probability of a spent fuel pool accident causing significant harm is remote, there is no need for applicants to assess mitigation alternatives as part of license renewal; LBP-15-5, 81 NRC 249 (2015)

board improperly allowed petitioner to challenge the generic environmental impact statement's finding regarding severe accident consequences; CLI-15-6, 81 NRC 340 (2015)

even if a site would not be totally evacuated, a fission product release from one unit would likely contaminate the entire site, with the result that both units could be out of operation for years; LBP-15-5, 81 NRC 249 (2015)

generic environmental impact statement findings with respect to severe accident consequences are not subject to challenge in individual license renewal proceedings; CLI-15-6, 81 NRC 340 (2015)

in the event of a severe accident in an AP1000, squib valves, which are explosively activated, reduce pressure and inject water as needed into the reactor vessel; CLI-15-13, 81 NRC 555 (2015)

license renewal provisions cover environmental issues relating to onsite spent fuel storage generically, and all such issues, including accident risk, fall outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

licensees of boiling water reactors with Mark I and II containments are required to design and install a venting system that provides venting capability from the wetwell during severe accident conditions; DD-15-1, 81 NRC 193 (2015)

NRC guidance documents outline the process licensees use to define and deploy strategies to enhance their ability to cope with beyond-design-basis external events, including station blackout; DD-15-5, 81 NRC 877 (2015)

NRC has addressed pressure suppression containment system vulnerability to early failure under severe accident conditions, including overpressurization, in NUREG-0474; DD-15-1, 81 NRC 193 (2015)

NRC imposed requirements to provide makeup water independent of offsite power and the normal emergency a.c. power sources to maintain or restore spent fuel pool cooling capability in the event of an accident; DD-15-1, 81 NRC 193 (2015)

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only if the probability of a severe accident is so small as to be effectively zero could NRC Staff dispense with the consequences portion of the analysis; CLI-15-6, 81 NRC 340 (2015)

post-Fukushima spent fuel pool concerns are being addressed through rulemaking on mitigation of beyond-design-basis events; DD-15-1, 81 NRC 193 (2015)

probability-weighted environmental consequences of severe accidents are small; CLI-15-6, 81 NRC 340 (2015)

request that NRC immediately revoke prior preapproval of the hardened vent system or direct torus vent system at each GE BWR Mark I unit has been addressed by an order modifying licenses; DD-15-1, 81 NRC 193 (2015)

spent fuel pool accidents are Category 1 issues that do not need to be included in the severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 249 (2015)

See also Fukushima Accident; Severe Accident Mitigation Alternatives; Severe Accident Mitigation Alternatives Analysis

ACCOUNTABILITY

regular and meaningful consultation and collaboration with tribal officials is to take place through an accountable process at each agency; LBP-15-16, 81 NRC 618 (2015)

ACTIVE COMPONENTS

board examined how a transformer performs its intended function to determine whether it undergoes a change in configuration or properties; CLI-15-6, 81 NRC 340 (2015)

such components are excluded from aging management review on the basis of existing regulatory requirements for maintenance and monitoring of structures, systems, and components; CLI-15-6, 81 NRC 340 (2015)

transformer is an active component because it undergoes a change in properties when it performs its intended function; CLI-15-6, 81 NRC 340 (2015)

ADJUDICATORY HEARINGS

debating compliance with another agency's proposed policies before they have been finalized would subject administrative agencies to needless and repetitive litigation; LBP-15-15, 81 NRC 598 (2015)

final no significant hazards consideration determination allows the Commission to issue the challenged license amendment before the petitioner's request for a hearing is adjudicated; LBP-15-17, 81 NRC 753 (2015)

final no significant hazards consideration determination does not either prevent the adjudication from proceeding or restrict the licensing board's substantive determination on public health and safety issues; LBP-15-17, 81 NRC 753 (2015)

ADJUDICATORY PROCEEDINGS

agency has discretion to choose between rulemaking and adjudication; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

hearing on environmental issues focus entirely on the adequacy of NRC Staff's work; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

hearing on environmental issues must await issuance of final environmental impact statement; LBP-15-3, 81 NRC 65 (2015)

NRC licensing proceedings are limited to the scope of admitted contentions; CLI-15-9, 81 NRC 512 (2015)

objectives of the NRC adjudicatory procedures and policies include producing an informed adjudicatory record that supports agency decisionmaking on public health and safety, the common defense and security, and the environment; LBP-15-20, 81 NRC 829 (2015)

precedence requires a licensing board to let EPA's rulemaking run its course, allowing intelligent resolution of any remaining claims instead of piecemeal and repetitive litigation; LBP-15-15, 81 NRC 598 (2015)

See also Combined License Proceedings; Evidentiary Hearings; Materials License Amendment Proceedings; Operating License Amendment Proceedings; Operating License Proceedings; Operating License Renewal Proceedings; Subpart L Proceedings; Suspension of Proceeding; Termination Of Proceeding

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ADMINISTRATIVE PROCEDURE ACT

Continued Storage Rule and supporting generic environmental impact statement to assess the environmental impacts of spent fuel storage after the end of a reactor's license term were approved; CLI-15-10, 81 NRC 535 (2015)

legislative history of the Act emphasized the notice requirement for proposed rulemaking in order to fairly apprise the public of the agency's potential action; LBP-15-15, 81 NRC 598 (2015)

no more than a description of the subjects and issues involved in a notice of proposed rulemaking is required; LBP-15-15, 81 NRC 598 (2015)

proponent of a rule or order has the burden of proof; LBP-15-2, 81 NRC 48 (2015)

"rule" is broadly defined to include nearly every statement an agency may make; LBP-15-15, 81 NRC 598 (2015)

when licensee has made timely and sufficient application for a renewal, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency; LBP-15-2, 81 NRC 48 (2015); LBP-15-11, 81 NRC 401 (2015)

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

independent assessment by ACRS of the safety aspects of a combined license application is required; CLI-15-13, 81 NRC 555 (2015)

ADVISORY COUNCIL ON HISTORIC PRESERVATION

Council on Environmental Quality and the ACHP regulations provide guidance on agency compliance with NEPA and are not binding on NRC when the agency has not expressly adopted them, but are entitled to considerable deference; LBP-15-16, 81 NRC 618 (2015)

AFFIDAVITS

evidence accompanying motions 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; LBP-15-14, 81 NRC 591 (2015)

evidence contained in affidavits accompanying motions to reopen must meet admissibility standards; LBP-15-14, 81 NRC 591 (2015)

factual support is not necessary at the contention filing stage to show that a genuine dispute exists and need not be in affidavit or formal evidentiary form or of the quality necessary to withstand a summary disposition motion; LBP-15-11, 81 NRC 401 (2015)

failure of organization member to provide an exact address in her affidavit is not a limiting concern; LBP-15-17, 81 NRC 753 (2015)

motions to reopen must also be accompanied by affidavits that set forth the factual and/or technical bases for movant's claim; LBP-15-14, 81 NRC 591 (2015)

petitioning member's affidavit must be sufficiently specific to show frequent contact within 50 miles of the plant; LBP-15-17, 81 NRC 753 (2015)

to obtain waiver of a rule, the allegation of special circumstances must be set forth with particularity and supported by an affidavit or other proof; LBP-15-5, 81 NRC 249 (2015)

AGING MANAGEMENT

active components are excluded from aging management review on the basis of existing regulatory requirements for maintenance and monitoring of structures, systems, and components; CLI-15-6, 81 NRC 340 (2015)

aging management review is required for components that function without moving parts and without a change in configuration or properties, and includes a non-exhaustive list of components that either do or do not fit this description; CLI-15-6, 81 NRC 340 (2015)

applicants must reassess any time-limited aging analyses to show either that the analyses will remain valid throughout the period of extended operation or that the effects of aging on the subject component will be managed during that time period; CLI-15-6, 81 NRC 340 (2015)

attempts by petitioners to challenge aspects of an aging management plan that they could have challenged earlier were rejected; LBP-15-1, 81 NRC 15 (2015)

because petitioner has not shown how a proposed plan would fail to ensure that buried pipes continue to fulfill their intended safety purposes, the contention is inadmissible; LBP-15-5, 81 NRC 249 (2015)

board compared transformers with other types of components listed in 10 C.F.R. 54.21(a)(1)(i) as expressly subject to or excluded from aging management review; CLI-15-6, 81 NRC 340 (2015)

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Commission distinguishes between aging management issues, reviewed at the time of license renewal, and operational issues, reviewed at all times as part of the current licensing basis; LBP-15-5, 81 NRC 249 (2015)

effects of aging must be adequately managed so that intended functions will be maintained consistent with the current licensing basis for the period of extended operation; LBP-15-6, 81 NRC 314 (2015)

focus of the license renewal regulations in 10 C.F.R. Part 54 is to ensure that licensee can manage the effects of aging on certain long-lived, passive components that are important to safety; CLI-15-6, 81 NRC 340 (2015)

goal of NRC's license renewal safety review is to ensure that licensee can successfully manage the detrimental effects of aging; CLI-15-6, 81 NRC 340 (2015)

integrated plant assessment must demonstrate that effects of aging for each structure and component will be managed so that the intended functions will be maintained consistent with the current licensing basis for the period of extended operation; CLI-15-6, 81 NRC 340 (2015)

intervenors' requests for more testing, more methods of testing, and more information, without an explanation of why the current program is inadequate, do not create a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 15 (2015)

it makes no sense to spend the parties' and NRC's own valuable resources litigating allegations of current deficiencies in a proceeding that is directed to future-oriented issues of aging; LBP-15-6, 81 NRC 314 (2015)

license renewal applicant must perform an integrated plant assessment to identify structures and components that are subject to aging management review; CLI-15-6, 81 NRC 340 (2015)

license renewal applicants must demonstrate how their programs will be effective in managing the effects of aging during the proposed period of extended operation, at a detailed component and structure level, rather than at a more generalized system level; LBP-15-5, 81 NRC 249 (2015)

license renewal application must demonstrate that licensee will adequately manage effects of aging on passive, long-lived components so that their intended functions will be maintained consistent with the current licensing basis for the period of extended operation; CLI-15-6, 81 NRC 340 (2015)

licensee commitment to develop a program by the time the 20-year extension begins does not demonstrate that the effects of aging will be adequately managed; LBP-15-1, 81 NRC 15 (2015)

petitioners have the burden of going forward, which requires them to provide factual allegations or expert testimony to show a potential deficiency in applicant's aging management plan; LBP-15-5, 81 NRC 249 (2015)

plant systems, structures, and components within the scope of license renewal are all non-safety-related SSCs whose failure could prevent the capability to shut down the reactor and maintain it in a safe shutdown condition; LBP-15-6, 81 NRC 314 (2015)

scope of a license renewal safety review is limited to plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited aging analyses; LBP-15-6, 81 NRC 314 (2015)

static components such as transistors and battery chargers are specifically excluded from aging management review; CLI-15-6, 81 NRC 340 (2015)

structures and components are subject to aging management review if they are not subject to routine replacement; CLI-15-6, 81 NRC 340 (2015)

structures and components are subject to aging management review if they perform an intended function without moving parts or without a change in configuration or properties; CLI-15-6, 81 NRC 340 (2015)

to evaluate a power reactor license renewal application, NRC reviews management of aging effects and time-limited aging analysis of particular safety-related functions of the plant's systems, structures, and components and environmental impacts and alternatives to the proposed action; LBP-15-5, 81 NRC 249 (2015)

to grant a license renewal, NRC Staff must find that there is reasonable assurance that the effects of aging on relevant systems, structures, and components will be managed during the period of extended operation, that time-limited aging analyses have been identified for review, and that applicable environmental requirements have been met; LBP-15-6, 81 NRC 314 (2015)

transformer is an active component because it undergoes a change in properties when it performs its intended function; CLI-15-6, 81 NRC 340 (2015)

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transformers perform their intended function through a change in state similar to switchgears, power supplies, battery chargers, and power inverters which have been excluded from aging management review; CLI-15-6, 81 NRC 340 (2015)

See also Time Limited Aging Analyses

AGREEMENT STATE PROGRAMS

NRC's transfer of regulatory authority to the State of New Jersey is now final and the licensing board no longer has the jurisdiction it had retained over the proceeding, and the board terminates the proceeding; LBP-15-10, 81 NRC 399 (2015)

AGREEMENTS

arrangements for requesting and effectively using assistance resources should be identified and supported by appropriate letters of agreement; LBP-15-18, 81 NRC 793 (2015)

programmatic agreement may be used to implement the NHPA § 106 process in situations where the effects on historic properties cannot be fully determined prior to approval of an undertaking, such as where an applicant proposes a phased approach to developing its project; LBP-15-16, 81 NRC 618 (2015)

AIR POLLUTION

contention that environmental assessment fails to adequately describe air quality impacts is inadmissible as untimely; LBP-15-11, 81 NRC 401 (2015)

contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 401 (2015)

ALARA

to have an alternate concentration limit approved, licensee must demonstrate that the hazardous constituent value is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the ACL is not exceeded; LBP-15-3, 81 NRC 65 (2015)

ALGAL BLOOMS

contention that environmental report failed to explain whether a discharge pipe with phosphoric acid as a corrosion inhibitor would increase algae production and potential for toxic algal blooms is admissible; LBP-15-5, 81 NRC 249 (2015)

contention that NRC Staff's environmental assessment fails to consider that applicant's use of copper sulfate to control algae blooms will increase reactor operating temperatures in relation to waste is inadmissible; LBP-15-13, 81 NRC 456 (2015)

harmful algae blooms from *Lyngbya wollei* are unlikely to form in unsheltered areas; LBP-15-5, 81 NRC 249 (2015)

ALTERNATE CONCENTRATION LIMITS

admissibility of contention that environmental assessment fails to adequately describe and analyze aquifer restoration goals in light of new standards for determining ACLs is decided; LBP-15-15, 81 NRC 598 (2015)

bounding analysis provided in final supplemental environmental impact statement, as supplemented in the record, provides sufficient information about a reasonable range of hazardous constituent concentration values associated with potential post-operational ACLs so as to provide an appropriate NEPA assessment of the environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits; LBP-15-3, 81 NRC 65 (2015)

challenge to use of ACL is an impermissible challenge to an NRC regulation, which is not subject to attack in any adjudicatory proceeding; LBP-15-11, 81 NRC 401 (2015)

nineteen factors must be considered in making the "present and potential hazard" finding requisite to Commission approval of an ACL; LBP-15-3, 81 NRC 65 (2015)

NRC regulations explicitly allow the use of ACLs for hazardous constituents; LBP-15-11, 81 NRC 401 (2015)

restoration to an ACL is permitted only when restoration to a primary or the secondary Table 5C standard is not practically achievable; LBP-15-3, 81 NRC 65 (2015)

to have an ACL approved, licensee must demonstrate that the hazardous constituent value is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not

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pose a substantial present or potential hazard to human health or the environment as long as the ACL is not exceeded; LBP-15-3, 81 NRC 65 (2015)

AMENDMENT OF CONTENTIONS

eight-factor test that allowed a board to consider new or amended contentions that did not meet the three requirements for admissibility of late-filed contentions available under 10 C.F.R. 2.309(f)(2) is no longer available; LBP-15-1, 81 NRC 15 (2015)

new or amended contention is considered timely if it is filed within 60 days of the date when the material information first became available to the moving party through service, publication, or any other means; LBP-15-1, 81 NRC 15 (2015)

new or amended contentions must satisfy the substantive contention admissibility standards, and failure to meet any of them renders contentions inadmissible; LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

once the deadline for filing petitions to intervene has passed, a party may file new or amended contentions if it is able to demonstrate good cause by meeting three requirements; LBP-15-1, 81 NRC 15 (2015)

proponents of new or amended contentions are required to demonstrate good cause for their filing, which includes a demonstration that the information on which the new or amended contention is based is materially different from information previously available; CLI-15-1, 81 NRC 1 (2015)

AMENDMENT OF REGULATIONS

amended regulations apply to obligations and disputes that arise after the effective date of the regulation; LBP-15-1, 81 NRC 15 (2015)

amendment of 10 C.F.R. 2.309 in 2012 was to simplify the rules, not fundamentally change the rationale boards use to admit new/amended contentions; LBP-15-11, 81 NRC 401 (2015)

contentions proposed after the filing deadline, which would have been allowable under the previous 10 C.F.R. 2.309(f)(2) requirements, will also be allowable under the current section 2.309(c)(1) requirements; LBP-15-11, 81 NRC 401 (2015)

definition of byproduct material in 10 C.F.R. 40.4 was clarified by adding the clause “including discrete surface wastes resulting from uranium solution extraction processes”; LBP-15-16, 81 NRC 618 (2015)

if a board issues a scheduling order before the effective date of the final rule that incorporates 10 C.F.R. 2.336(d), which currently requires parties to update their disclosures every 14 days, that obligation would change to every month on a day specified by the board, unless the parties agree otherwise, once the effective date of the rule is reached; LBP-15-1, 81 NRC 15 (2015)

it is for the Commission, not licensing boards, to revise its rulings; LBP-15-18, 81 NRC 793 (2015)

AMENDMENTS

See Operating License Amendments

AMICUS CURIAE

it is within Commission discretion to grant leave for participation as amicus curiae; CLI-15-1, 81 NRC 1 (2015)

state government may file an amicus brief within the time allowed to the party whose position the brief will support; CLI-15-2, 81 NRC 213 (2015)

AMICUS PLEADINGS

although NRC rules do not provide for filing of amicus briefs in this circumstance, as a matter of discretion the Commission has reviewed the brief; CLI-15-5, 81 NRC 329 (2015)

briefs may be filed for matters taken up at Commission discretion or sua sponte; CLI-15-4, 81 NRC 221 (2015); CLI-15-10, 81 NRC 535 (2015)

nonparties may file a brief if a matter is taken up by the Commission under 10 C.F.R. 2.341 or sua sponte; CLI-15-1, 81 NRC 1 (2015); CLI-15-5, 81 NRC 329 (2015)

APPEALS

any other party to the proceeding may file an answer supporting or opposing Commission review; CLI-15-6, 81 NRC 340 (2015)

appeal as of right from a licensing board ruling on an intervention petition is permitted only in two limited circumstances; LBP-15-1, 81 NRC 15 (2015)

Commission affirmed board’s standing ruling, but declined to accept review of challenges to the board’s admission of two contentions because petitioner had failed to perfect its appeal by challenging the validity of the board’s admissibility rulings regarding other contentions; LBP-15-3, 81 NRC 65 (2015)

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APPEALS, INTERLOCUTORY

limited appeal right attaches only when the board has fully ruled on the initial intervention petition, i.e., when it has admitted or rejected all proposed contentions; LBP-15-1, 81 NRC 15 (2015)

APPELLATE BRIEFS

arguments not raised before the board or not clearly articulated in the petition for review are deemed waived; LBP-15-5, 81 NRC 249 (2015)

Commission requests briefing from NRC Staff on the circumstances, if any, NRC Staff would judge a potentially cost-beneficial mitigation alternative to warrant further NRC consideration outside of the license renewal review, either via a backfit analysis or as part of another process; CLI-15-3, 81 NRC 217 (2015)

Commission requests briefing from NRC Staff on whether it has a process in place to follow up with licensee to determine which potentially cost-beneficial mitigation alternatives ultimately were found by licensee to be cost-beneficial, if any, and which alternatives, if any, licensee implemented; CLI-15-3, 81 NRC 217 (2015)

parties are directed to provide further briefing on questions relating to severe accident decontamination time values and costs used in the SAMA analysis; CLI-15-2, 81 NRC 213 (2015)

APPELLATE REVIEW

although contention ultimately was resolved in NRC Staff's favor, Commission takes review as a matter of discretion because the board's ruling raises substantial questions of precedential importance; CLI-15-6, 81 NRC 340 (2015)

Commission affords substantial deference to licensing boards' contention admission decisions; CLI-15-6, 81 NRC 340 (2015)

Commission defers to board's factual findings unless they are clearly erroneous and generally steps in only to correct factual findings not even plausible in light of the record reviewed in its entirety, e.g., where it appears that the board has overlooked or misunderstood important evidence; CLI-15-6, 81 NRC 340 (2015)

Commission gives substantial deference to licensing board findings of fact, and will not overturn a board's factual findings unless they are not even plausible in light of the record viewed in its entirety; CLI-15-9, 81 NRC 512 (2015)

Commission reviews board's legal rulings de novo and will reverse those rulings if they are contrary to established law; CLI-15-6, 81 NRC 340 (2015)

Commission reviews questions of law de novo, but defers to a board's findings with respect to the underlying facts unless they are clearly erroneous; CLI-15-9, 81 NRC 512 (2015)

important questions of law and material fact merit Commission review; CLI-15-6, 81 NRC 340 (2015)

petition for review will be granted at Commission discretion upon a showing that petitioner has raised a substantial question as to any of the five factors of 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-15-2, 81 NRC 213 (2015); CLI-15-9, 81 NRC 512 (2015)

review is granted where petitions for review raise substantial questions of law and procedure; CLI-15-6, 81 NRC 340 (2015)

standard for showing clear error is difficult to meet, requiring that intervenors demonstrate that the board's determination is not even plausible in light of the record as a whole; CLI-15-9, 81 NRC 512 (2015)

APPLICANTS

as proponent of the agency action at issue, applicant generally has the burden of proof in a licensing proceeding; LBP-15-3, 81 NRC 65 (2015)

boards cannot assume that applicants will not comply with its regulatory responsibilities, including its license conditions; LBP-15-3, 81 NRC 65 (2015)

burden of providing reasonable assurance that the current licensing basis will be maintained throughout the renewal period falls on applicant; LBP-15-5, 81 NRC 249 (2015)

in assessing whether applicant/licensee adequately carries out a licensing directive, boards are to assume that NRC Staff will be fair and judge the matter of applicant/licensee's compliance on the merits; LBP-15-3, 81 NRC 65 (2015)

in the absence of some showing of substantial prior misdeeds, applicant/licensee will be presumed to follow the agency's regulatory requirements, including the directives in its license; LBP-15-3, 81 NRC 65 (2015)

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it is the duty of NRC Staff, not applicant, to consult with interested tribes concerning the proposed site in the context of a National Historic Preservation Act contention; LBP-15-5, 81 NRC 249 (2015)
proponent of the agency action, applicant generally has the burden of proof in a licensing proceeding; LBP-15-16, 81 NRC 618 (2015)

relative to factual matters, to carry burden of proof, NRC Staff and/or applicant must establish that its position is supported by a preponderance of the evidence; LBP-15-3, 81 NRC 65 (2015)
there is nothing in the record to suggest that applicant or NRC Staff will not act in good faith to ensure that applicant's regulatory responsibilities, including its license conditions, are honored, and the board cannot assume noncompliance; LBP-15-11, 81 NRC 401 (2015)
unless the presiding officer otherwise orders, applicant or the proponent of an order has the burden of proof; LBP-15-2, 81 NRC 48 (2015)

APPROVAL OF LICENSE

final no significant hazards consideration determination allows the Commission to issue the challenged license amendment before the petitioner's request for a hearing is adjudicated; LBP-15-17, 81 NRC 753 (2015)

NEPA requires that agencies take a hard look at the environmental effects of actions even after a proposal has received initial approval; LBP-15-16, 81 NRC 618 (2015)

NRC Staff is instructed to promptly issue its approval or denial of an application consistent with its findings, despite the pendency of a hearing; LBP-15-16, 81 NRC 618 (2015)

though the materials license has already been issued, the land disturbance in the project area will proceed in stages in compliance with National Historic Preservation Act § 106; LBP-15-16, 81 NRC 618 (2015)

ARCHAEOLOGICAL RESOURCES PROTECTION ACT

NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 48 (2015)

ASME CODE

after the rulemaking is completed, licensees for new reactors will be required to comply with the ASME code preservice and inservice surveillance provisions for squib valves; CLI-15-13, 81 NRC 555 (2015)

if part of a reactor pressure vessel is expected to fall below the 50 ft-lb standard, licensee must demonstrate that lower values of Charpy upper-shelf energy will provide margins of safety against fracture equivalent to those required by the ASME Boiler and Pressure Vessel Code; LBP-15-20, 81 NRC 829 (2015)

latest edition and addenda of the ASME Boiler and Pressure Vessel Code has been incorporated by reference in 10 C.F.R. 50.55a(b)(2); LBP-15-20, 81 NRC 829 (2015)

minimum frequency with which surveillance capsules must be tested is set by ASTM Standard E 185 (1982 version), which is incorporated into Appendix H; LBP-15-20, 81 NRC 829 (2015)

NRC Staff is incorporating the 2012 edition of the ASME Code by reference into 10 C.F.R. 50.55a; CLI-15-13, 81 NRC 555 (2015)

ASSUMPTION OF COMPLIANCE

in setting license conditions, NRC Staff may assume that a licensee will comply with all requirements imposed by the license; LBP-15-16, 81 NRC 618 (2015)

NRC generally presumes that licensees will comply with its regulations; LBP-15-16, 81 NRC 618 (2015)

there is nothing in the record to suggest that applicant or NRC Staff will not act in good faith to ensure that applicant's regulatory responsibilities, including its license conditions, are honored, and the board cannot assume noncompliance; LBP-15-11, 81 NRC 401 (2015)

ATOMIC ENERGY ACT

agency actions not formally labeled as license amendments nevertheless can constitute de facto license amendments and accordingly trigger hearing rights for the public under section 189a; CLI-15-5, 81 NRC 329 (2015)

basis for NRC authority to regulate use of special nuclear material in facilities such as nuclear power reactors is established; CLI-15-4, 81 NRC 221 (2015)

"byproduct material" refers to the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed for its source material content; LBP-15-16, 81 NRC 618 (2015)

SUBJECT INDEX

Commission refers a limited portion of the hearing request to the licensing board to determine whether petitioner has identified an NRC activity that requires an opportunity to request an adjudicatory hearing; CLI-15-14, 81 NRC 729 (2015)

Congress did not intend to require a demonstration that nuclear wastes could safely be disposed of before licensing of nuclear plants was permitted; CLI-15-4, 81 NRC 221 (2015)

finding of reasonable assurance that highly hazardous and long-lived radioactive materials can be disposed of safely is not a prerequisite to licensing; CLI-15-4, 81 NRC 221 (2015)

general scope of NRC's authority is established in section 161, but it does not discuss spent fuel disposal; CLI-15-4, 81 NRC 221 (2015)

hearing must be held on each application to construct a nuclear power plant, regardless of whether an interested member of the public requests a hearing on the application; CLI-15-13, 81 NRC 555 (2015)

hearing rights are provided in licensing actions concerning the granting, suspending, revoking, or amending of any license upon the request of any person whose interest may be affected by the proceeding; CLI-15-5, 81 NRC 329 (2015); LBP-15-16, 81 NRC 618 (2015); LBP-15-17, 81 NRC 753 (2015); LBP-15-18, 81 NRC 793 (2015)

information is specified in section 182 that must be provided by license applicant and it has no reference to spent fuel disposal; CLI-15-4, 81 NRC 221 (2015)

intervenors litigated whether the performance-based licensing complies with the Atomic Energy Act and National Environmental Policy Act, and whether undue discretion was accorded to licensee; LBP-15-16, 81 NRC 618 (2015)

it is fair to read the AEC and NRC history as a de facto acquiescence in and ratification of the Commission's licensing procedure by Congress; CLI-15-4, 81 NRC 221 (2015)

license amendments are not contingent upon any additional safety determination regarding spent fuel storage; CLI-15-4, 81 NRC 221 (2015)

licensee must show with reasonable assurance that its proposed methodology for material control and accounting will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public; CLI-15-9, 81 NRC 512 (2015)

licensing actions that alter the terms of a license or otherwise authorize additional operating activities trigger hearing rights for the public under section 189a; CLI-15-5, 81 NRC 329 (2015)

NRC can issue nuclear power reactor licenses to applicants only upon a finding that utilization of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public; CLI-15-4, 81 NRC 221 (2015)

NRC is not required, as a precondition to issuing or renewing operating licenses for nuclear power plants, to make definitive findings concerning technical feasibility of a repository for the disposal of spent nuclear fuel; CLI-15-4, 81 NRC 221 (2015)

NRC is prohibited from issuing a utilization or production facility license to any alien or any corporation or other entity if the Commission knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; CLI-15-7, 81 NRC 481 (2015)

NRC Staff oversight activities normally conducted to ensure that licensees comply with existing NRC requirements and license conditions do not typically trigger an opportunity for a hearing; CLI-15-5, 81 NRC 329 (2015)

"owned, controlled, or dominated" refers to relationships in which the will of one party is subjugated to the will of another; CLI-15-7, 81 NRC 481 (2015)

participation in a licensing proceeding requires a demonstration of standing; LBP-15-17, 81 NRC 753 (2015)

petitioner must address its hearing request to a matter that triggers a hearing opportunity; CLI-15-5, 81 NRC 329 (2015)

petitioners asserted that NRC actions following the events of September 11, 2001, and the accident at Fukushima Dai-ichi were insufficient to satisfy NRC's general obligation to protect public health and safety; CLI-15-4, 81 NRC 221 (2015)

requirement to demonstrate standing is derived from instruction to NRC to provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-15-5, 81 NRC 249 (2015)

"source material" is defined as uranium being extracted through the ISL process; LBP-15-16, 81 NRC 618 (2015)

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statutory findings required by section 103 do not apply to disposal activities that might result from operation of a licensed facility; CLI-15-4, 81 NRC 221 (2015)
unless the safety findings prescribed by the Act and the regulations can be made, the reactor does not obtain a license, no matter how badly it is needed; CLI-15-4, 81 NRC 221 (2015)
written consent from NRC is required for all direct or indirect license transfers; CLI-15-8, 81 NRC 500 (2015)

BACKFITTING

Commission requests briefing from NRC Staff on the circumstances, if any, Staff would judge a potentially cost-beneficial mitigation alternative to warrant further NRC consideration outside of license renewal review, either via a backfit analysis or as part of another process; CLI-15-3, 81 NRC 217 (2015)

BENEFIT-COST ANALYSIS

Commission requests briefing from NRC Staff on the circumstances, if any, NRC Staff would judge a potentially cost-beneficial mitigation alternative to warrant further NRC consideration outside of the license renewal review, either via a backfit analysis or as part of another process; CLI-15-3, 81 NRC 217 (2015)
Commission requests briefing from NRC Staff on the level of uncertainty that NRC Staff considers acceptable for the implementation cost portion of the cost-benefit analysis, and why; CLI-15-3, 81 NRC 217 (2015)
Commission requests briefing from NRC Staff on whether it has a process in place to follow up with licensee to determine which potentially cost-beneficial mitigation alternatives ultimately were found by licensee to be cost-beneficial, if any, and which alternatives, if any, licensee implemented; CLI-15-3, 81 NRC 217 (2015)
contention that population used for analysis might underestimate the exposed population in a severe accident and, in turn, underestimate the benefit achieved in implementing a severe accident mitigation alternatives analysis is admissible; LBP-15-5, 81 NRC 249 (2015)
it must be genuinely plausible that revising the severe accident mitigation alternatives analysis would change the outcome so that one or more of the SAMA candidates that applicant evaluated and rejected would become cost-beneficial; LBP-15-5, 81 NRC 249 (2015)
NRC Staff must weigh unavoidable adverse environmental impacts and resource commitments (costs) against the project's benefits; CLI-15-13, 81 NRC 555 (2015)
one cost that must be weighed by decisionmakers is the cost of uncertainty; LBP-15-3, 81 NRC 65 (2015)
petitioner need not rerun applicant's own cost-benefit calculations, but must do more than merely suggest that additional factors be evaluated or that different analytical techniques be used; LBP-15-5, 81 NRC 249 (2015)
petitioner's failure to address applicant's supplemental economic analyses, demonstrate specific knowledge of the analyses, and not indicate, even broadly that the SAMA economic cost-benefit conclusions are not sufficiently conservative renders a contention inadmissible; LBP-15-5, 81 NRC 249 (2015)
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 alternatives candidates evaluated, no purpose would be served to further refine the SAMA analysis; LBP-15-5, 81 NRC 249 (2015)

BIOLOGICAL ASSESSMENT

federal agency need not initiate formal consultation if, as a result of the preparation of a biological assessment under section 402.12 or as a result of informal consultation with FWS under section 402.13, the federal agency determines, with the written concurrence of the U.S. Fish and Wildlife Service Director, that the proposed action is not likely to adversely affect any listed species or critical habitat; LBP-15-11, 81 NRC 401 (2015)

BOILING-WATER REACTORS

as part of the NRC post-Fukushima lessons-learned activities, NRC is requiring all licensees to reevaluate seismic hazards at their sites, and to this end, issued a request for information; DD-15-1, 81 NRC 193 (2015)
contention that environmental report fails to accurately and thoroughly conduct severe accident mitigation alternatives analysis to design vulnerability of GE Mark I BWR pressure suppression containment

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system and environmental consequences of a to-be-anticipated severe accident post-Fukushima Daiichi fails to present a genuine material dispute; LBP-15-5, 81 NRC 249 (2015)

existing containment vent systems at BWRs with Mark I containments provide a capability to vent the containment under design-basis conditions; DD-15-1, 81 NRC 193 (2015)

licensees of boiling water reactors with Mark I and II containments are required to design and install a venting system that provides venting capability from the wetwell during severe accident conditions; DD-15-1, 81 NRC 193 (2015)

NRC addressed concerns about flooding at GE Mark I and II BWRs through a request for information; DD-15-1, 81 NRC 193 (2015)

parameters from which ERDS transmits data points for BWRs are identified in 10 C.F.R. Part 50, App. E, § VI.2(a)(ii); LBP-15-4, 81 NRC 156 (2015)

request for additional instrumentation for all Mark I spent fuel storage pools has been addressed through an order modifying licenses with regard to reliable spent fuel pool instrumentation; DD-15-1, 81 NRC 193 (2015)

request that NRC immediately revoke prior preapproval of the hardened vent system or direct torus vent system at each GE BWR Mark I unit has been addressed by an order modifying licenses with regard to reliable hardened containment vents capable of operation under severe accident conditions; DD-15-1, 81 NRC 193 (2015)

request that NRC order the immediate suspension of the operating licenses of all General Electric BWRs that use the Mark I primary containment system, citing the Fukushima Dai-ichi accident in Japan as its rationale basis, is resolved; DD-15-1, 81 NRC 193 (2015)

structural integrity of GE Mark I BWR spent fuel pools and spent fuel management in dry storage casks are discussed; DD-15-1, 81 NRC 193 (2015)

BRIEFS

Commission directs litigants to provide either a joint stipulation that local union's appeal should be dismissed or briefing on the question whether the appeal should be dismissed as moot and the proceeding terminated; CLI-15-16, 81 NRC 810 (2015)

Commission exercises its discretion to consider briefs that were not filed via the agency's E-Filing system; LBP-15-4, 81 NRC 156 (2015)

See also Appellate Briefs; Reply Briefs

BURDEN OF PERSUASION

petitioner's burden on a contention of omission is to identify the omission and the supporting reasons for petitioners' belief that the application fails to contain information on a relevant matter as required by law; LBP-15-5, 81 NRC 249 (2015)

stay movant has the burden on the four factors of 10 C.F.R. 2.1213(d); LBP-15-2, 81 NRC 48 (2015)

BURDEN OF PROOF

as proponent of the agency action, applicant generally has the burden in a licensing proceeding; LBP-15-2, 81 NRC 48 (2015); LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

because NRC Staff relies heavily on applicant's environmental report in preparing the environmental impact statement, should applicant become a proponent of a particular challenged position set forth in the EIS, applicant also has the burden on that matter; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

burden of NEPA compliance lies with NRC Staff; LBP-15-2, 81 NRC 48 (2015); LBP-15-3, 81 NRC 65 (2015)

licensee generally bears the ultimate burden of proof, but intervenors must give some basis for further inquiry; LBP-15-5, 81 NRC 249 (2015)

once challenged, there is no presumption that an environmental report is correct or accurate, with applicant, as the proponent of the license, bearing the burden of proof; LBP-15-2, 81 NRC 48 (2015)

petitioners have the burden of going forward, which requires them to provide factual allegations or expert testimony to show a potential deficiency in applicant's aging management plan; LBP-15-5, 81 NRC 249 (2015)

relative to factual matters, to carry burden of proof, NRC Staff and/or applicant must establish that its position is supported by a preponderance of the evidence; LBP-15-3, 81 NRC 65 (2015)

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to the extent petitioner is challenging the adequacy of computer modeling of plume variability, petitioner bears the burden of providing evidence specific to the license renewal application; LBP-15-5, 81 NRC 249 (2015)

when NEPA contentions are involved, the burden of proof shifts to NRC Staff; LBP-15-16, 81 NRC 618 (2015)

BYPRODUCT MATERIALS

“byproduct material” is categorized as tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-15-11, 81 NRC 401 (2015)

definition of byproduct material was clarified in 10 C.F.R. 40.4 by adding the clause “including discrete surface wastes resulting from uranium solution extraction processes”; LBP-15-16, 81 NRC 618 (2015)

tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed for its source material content are defined as “byproduct materials”; LBP-15-16, 81 NRC 618 (2015)

BYPRODUCT MATERIALS LICENSES

applicant for a license to possess and use source and AEA §11e(2) byproduct material for the purpose of in situ uranium recovery must submit an environmental report with its application; LBP-15-3, 81 NRC 65 (2015)

NRC Staff must prepare an environmental impact statement in connection with a license to possess and use source and AEA §11e(2) byproduct material for the purpose of in situ uranium recovery; LBP-15-3, 81 NRC 65 (2015)

CABLES

inspection to determine effects of wet or underwater conditions on underground safety-related electrical cables is discussed; DD-15-1, 81 NRC 193 (2015)

CANADA

although NRC regulations do not require NRC Staff to analyze the environmental impacts of NRC licensing actions on the environment of foreign nations, the Staff extended its outreach to international organizations to inform its analysis of the potential environmental impacts of the project; CLI-15-13, 81 NRC 555 (2015)

proximity of the nuclear power plant site to the Canadian border is considered in the contexts of environmental and safety reviews; CLI-15-13, 81 NRC 555 (2015)

CASE MANAGEMENT

although boards are accorded considerable discretion to manage proceedings before them, they need not exercise it; LBP-15-15, 81 NRC 598 (2015)

boards are given broad discretion in the conduct of NRC adjudicatory proceedings, and the Commission generally defers to board case-management decisions; LBP-15-15, 81 NRC 598 (2015)

boards have the authority to reformulate contentions to consolidate issues for a more efficient proceeding; LBP-15-17, 81 NRC 753 (2015)

boards have the power to take necessary and appropriate actions consistent with the Atomic Energy Act to conduct a fair hearing; LBP-15-15, 81 NRC 598 (2015)

CERTIFICATION

licensee must provide certifications when a nuclear power station has permanently ceased power operations and all fuel has been permanently removed from the reactor vessel and placed in the spent fuel pool; DD-15-1, 81 NRC 193 (2015)

See also Design Certification

CERTIFIED QUESTIONS

referred rulings or certified questions must raise significant and novel legal or policy issues or issues whose early resolution would materially advance the orderly disposition of the proceeding; CLI-15-1, 81 NRC 1 (2015)

CIVIL PENALTIES

NRC’s policy of imposing graduated civil penalties takes into account the gravity of the violation as the primary consideration and the ability to pay as a secondary consideration; DD-15-3, 81 NRC 713 (2015)

petitioner’s request to impose a \$10 million fine on licensee is denied; DD-15-3, 81 NRC 713 (2015)

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COLOCATED UNITS

admissibility of contention that severe accident mitigation alternatives analysis fails to evaluate the impact that a severe accident at one unit would have on the operation of a proposed nearby unit is decided; LBP-15-5, 81 NRC 249 (2015)

even if a site would not be totally evacuated, a fission product release from one unit would likely contaminate the entire site, with the result that both units could be out of operation for years; LBP-15-5, 81 NRC 249 (2015)

“synergistic” refers to the joint action of different parts or sites which, acting together, enhance the effects of one or more individual sites; LBP-15-5, 81 NRC 249 (2015)

COMBINED LICENSE APPLICATION

although the Commission found NRC Staff’s review of combined license applications rigorous, it imposed a condition requiring implementation of a squib-valve surveillance program prior to fuel load; CLI-15-13, 81 NRC 555 (2015)

applicants referencing a certified design must provide sufficient information for NRC Staff to determine whether the site’s characteristics fall within the design’s parameters; CLI-15-13, 81 NRC 555 (2015)

Commission does not review combined license application de novo, but rather considers the sufficiency of NRC Staff’s review of the application; CLI-15-13, 81 NRC 555 (2015)

hearing must be held on each application to construct a nuclear power plant, regardless of whether an interested member of the public requests a hearing on the application; CLI-15-13, 81 NRC 555 (2015)

impact determinations in the Continued Storage generic environmental impact statement shall be deemed incorporated into the associated environmental impact statements; CLI-15-10, 81 NRC 535 (2015)

independent assessment of the safety aspects of the combined license application is required; CLI-15-13, 81 NRC 555 (2015)

information is specified in Atomic Energy Act § 182 that must be provided by applicant for a license and it has no reference to spent fuel disposal; CLI-15-4, 81 NRC 221 (2015)

inservice testing and inspection program for squib valves in combined license applications is discussed; CLI-15-13, 81 NRC 555 (2015)

NRC Staff review relative to regulatory actions that NRC has taken in response to lessons learned from the Fukushima Dai-ichi accident is discussed; CLI-15-13, 81 NRC 555 (2015)

COMBINED LICENSE PROCEEDINGS

environmental issues that the Commission must consider in the mandatory portion of a combined license proceeding are outlined; CLI-15-13, 81 NRC 555 (2015)

generic analyses of the environmental impacts of continued storage and disposal in the context of NRC reactor licensing proceedings are acceptable; CLI-15-4, 81 NRC 221 (2015)

hearing must be held on each application to construct a nuclear power plant, regardless of whether an interested member of the public requests a hearing on the application; CLI-15-13, 81 NRC 555 (2015)

safety issues that the Commission must consider in the mandatory portion of a combined license proceeding are outlined; CLI-15-13, 81 NRC 555 (2015)

COMBINED LICENSES

challenges in maintaining knowledge gained during the combined license review if construction is delayed are discussed; CLI-15-13, 81 NRC 555 (2015)

if applicant did not pursue an early site permit, all relevant site characteristics, including site geology, hydrology, seismology, and man-made hazards, as well as potential environmental impacts of the project, were studied as part of NRC Staff’s combined license review and are within the scope of the Commission decision; CLI-15-13, 81 NRC 555 (2015)

license holder under Part 50 or a combined license under Part 52 shall follow and maintain the effectiveness of an emergency plan that meets the requirements in Part 50, Appendix E; LBP-15-4, 81 NRC 156 (2015)

COMMON DEFENSE AND SECURITY

foreign ownership, control, or domination analysis should be given an orientation toward safeguarding the national defense and security; CLI-15-7, 81 NRC 481 (2015)

licensee must show with reasonable assurance that its proposed methodology for material control and accounting will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public; CLI-15-9, 81 NRC 512 (2015)

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NRC can issue nuclear power reactor licenses to applicants only upon a finding that utilization of special nuclear material will be in accord with the common defense and security and will provide adequate protection of public health and safety; CLI-15-4, 81 NRC 221 (2015)

COMMON-MODE FAILURES

admissibility of contention that common-mode failures and/or mutually exacerbating catastrophes are entitled to severe accident mitigation alternatives analysis is decided; LBP-15-5, 81 NRC 249 (2015)

COMMUNICATIONS

adequate provisions must exist for prompt communications among principal response organizations to emergency personnel and to the public; LBP-15-4, 81 NRC 156 (2015)

COMPLIANCE

activities associated with, and data coming from, precensuring groundwater monitoring activities are associated with compliance with the dictates of 10 C.F.R. Part 40, Appendix A, Criterion 7; LBP-15-3, 81 NRC 65 (2015)

after the rulemaking is completed, licensees for new reactors will be required to comply with the ASME code preservice and inservice surveillance provisions for squib valves; CLI-15-13, 81 NRC 555 (2015)

allegations of noncompliance with already-issued, existing, and open Commission orders are part of the current licensing basis and therefore cannot be challenged in a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

boards cannot assume that applicants will not comply with their regulatory responsibilities, including their license conditions; LBP-15-3, 81 NRC 65 (2015)

Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses or NRC regulations; LBP-15-4, 81 NRC 156 (2015)

debating compliance with another agency's proposed policies before they have been finalized would subject administrative agencies to needless and repetitive litigation; LBP-15-15, 81 NRC 598 (2015)

if petitioner has a credible basis to question the adequacy of licensee's compliance with 10 C.F.R. 50.54(q)(3), it may petition for enforcement action; LBP-15-4, 81 NRC 156 (2015)

in assessing whether applicant/licensee adequately carries out a licensing directive, boards are to assume that NRC Staff will be fair and judge the matter of applicant/licensee's compliance on the merits; LBP-15-3, 81 NRC 65 (2015)

in the absence of some showing of substantial prior misdeeds, applicant/licensee will be presumed to follow the agency's regulatory requirements, including the directives in its license; LBP-15-3, 81 NRC 65 (2015)

licensees may follow regulatory guides to determine equivalent safety margins, or may use any other methods, procedures, or selection of materials data and transients to demonstrate compliance; LBP-15-20, 81 NRC 829 (2015)

noncompliance with orders issued as part of NRC's ongoing oversight program are enforcement issues that are not within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

NRC guidance documents are not legally binding, and compliance with them is not required; LBP-15-20, 81 NRC 829 (2015)

petitioners can raise compliance issues only under 10 C.F.R. 2.206, which would allow them to petition NRC to take an enforcement action; LBP-15-5, 81 NRC 249 (2015)

post-licensing, preoperational activities conducted to comply with Part 40, Appendix A, Criterion 7 are associated with compliance with the dictates of 10 C.F.R. Part 40, Appendix A, Criteria 5B and 7A; LBP-15-3, 81 NRC 65 (2015)

See also Assumption of Compliance

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT

proper sampling plan for establishing baseline values is described; LBP-15-3, 81 NRC 65 (2015)

COMPUTER MODELING

nonstatic nature of a website, in the absence of a stand-alone compact disc/digital video disc that would allow the board or parties to run a locked-down version of the website application, prevents consideration as evidence; LBP-15-3, 81 NRC 65 (2015)

to the extent petitioner is challenging the adequacy of computer modeling of plume variability, petitioner bears the burden of providing evidence specific to the license renewal applicant; LBP-15-5, 81 NRC 249 (2015)

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CONFIDENTIAL INFORMATION

flooded hazard reevaluation report contains security-related information, and so a portion of the document is not publicly available; DD-15-5, 81 NRC 877 (2015)

CONFIRMATORY ACTION LETTER

NRC Staff inspections and CALs are oversight activities normally conducted to ensure that licensees comply with existing NRC requirements and license conditions and therefore do not typically trigger the opportunity for a hearing under the AEA; CLI-15-5, 81 NRC 329 (2015)

CONNECTED ACTIONS

action lacks independent utility when it would be irrational or unwise to pursue the action without the presence of the EIS-generating central action; LBP-15-16, 81 NRC 618 (2015)

connected actions are closely related and therefore should be discussed in the same environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

non-NRC permits are interdependent parts of applicant's proposed action and thus are connected actions; LBP-15-16, 81 NRC 618 (2015)

when drafting an environmental impact statement, agency's scope of review must include analysis of any cumulative actions or actions connected to the central proposed action; LBP-15-16, 81 NRC 618 (2015)

CONSIDERATION OF ALTERNATIVES

admissibility of contention that final environmental assessment fails to satisfy NRC's requirement for an environmental impact statement when there are unresolved conflicts concerning reasonable alternatives is decided; LBP-15-15, 81 NRC 598 (2015)

agency is required to consider all reasonable alternatives under the National Environmental Policy Act; LBP-15-15, 81 NRC 598 (2015)

alternative energy sources that will be dependent on future environmental safeguards and technological developments may be excluded from the NEPA alternatives discussion; LBP-15-3, 81 NRC 65 (2015)

alternatives discussion need not include every possible alternative, but rather every reasonable alternative; LBP-15-3, 81 NRC 65 (2015)

considering the reasonable alternatives analysis, it is only in the depth of the consideration and in the level of detail provided in the corresponding environmental documents that an environmental assessment and an environmental impact statement will differ; LBP-15-11, 81 NRC 401 (2015)

contention that final environmental assessment fails to adequately analyze all reasonable alternatives is inadmissible; LBP-15-11, 81 NRC 401 (2015)

discussion of alternatives that present severe engineering requirements or are imprudent for reasons including their high cost, safety hazards, and operational difficulties is excluded under NEPA; LBP-15-3, 81 NRC 65 (2015)

environmental report must contain a consideration of alternatives for reducing adverse impacts for all Category 2 license renewal issues in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 249 (2015)

in consultation with identified parties, agency must develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effects of the undertaking on historic properties and describe them in the environmental assessment or draft environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

intervenors fail to specify what other alternatives to the license renewal application should be discussed in the draft supplemental environmental impact statement, much less show that any proposed alternative would satisfy the purpose of applicant's proposed action; LBP-15-1, 81 NRC 15 (2015)

it is not enough to demonstrate a theoretical possibility that wind farms spread across a wide area could provide consistent power, but rather petitioners must show concretely that wind could be a reliable, commercially viable source of baseload power during the license renewal period; LBP-15-5, 81 NRC 249 (2015)

NEPA does not require consideration of alternatives that are technologically unproven; LBP-15-3, 81 NRC 65 (2015)

NEPA requires federal agencies to take a hard look at the environmental impacts of a proposed action, as well as reasonable alternatives to that action; LBP-15-3, 81 NRC 65 (2015)

NEPA requires that an actual range of alternatives be considered, so that agencies are precluded from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only applicant's proposed project; LBP-15-15, 81 NRC 598 (2015)

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reasonable alternatives under NEPA do not include alternatives that are impractical, that present unique problems, or that cause extraordinary costs; LBP-15-3, 81 NRC 65 (2015)

See also Severe Accident Mitigation Alternatives Analysis

CONSTRUCTION

challenges in maintaining knowledge gained during the combined license review if construction is delayed are discussed; CLI-15-13, 81 NRC 555 (2015)

commencement of construction is prohibited prior to a NEPA determination; LBP-15-16, 81 NRC 618 (2015)

in situ recovery license applicant is barred from installing a complete wellfield and associated monitor well networks until after a license is issued; LBP-15-3, 81 NRC 65 (2015)

Limited Work Authorization Rule expressly excludes transmission lines from delineated construction activities that would require NRC approval before being undertaken; CLI-15-1, 81 NRC 1 (2015)

nothing in the definition of “construction” in 10 C.F.R. 40.4 precludes the installation of wells or the use of monitoring protocols as needed to provide those background data; LBP-15-3, 81 NRC 65 (2015)

site exploration, including preconstruction monitoring to establish background information related to the environmental impacts of construction or operation or the protection of environmental values, is not included in the definition of construction; LBP-15-3, 81 NRC 65 (2015)

CONSTRUCTION OF MEANING

although petitioner bears the burden of establishing standing, licensing boards should construe petitioner’s standing arguments in favor of petitioner; LBP-15-13, 81 NRC 456 (2015)

meaning of “verify” in the context of item presence verification is discussed; CLI-15-9, 81 NRC 512 (2015)

principle of *expressio unis est exclusio alterius* is discussed; LBP-15-11, 81 NRC 401 (2015)

regulation’s title can aid in construing regulatory text; LBP-15-4, 81 NRC 156 (2015)

See also Statutory Construction

CONSTRUCTION PERMITS

in determining whether a license amendment, construction permit, or early site permit will be issued to applicant, the Commission is guided by the considerations that govern issuance of initial licenses, construction permits, or early site permits to the extent applicable and appropriate; LBP-15-20, 81 NRC 829 (2015)

CONSULTATION DUTY

admissibility of contention that environmental assessment failed to conduct the required hard look at impacts of the proposed mine and fails to consult with the U.S. Fish & Wildlife Service is decided; LBP-15-11, 81 NRC 401 (2015)

agencies are to ensure that the federal government operates within a government-to-government relationship with federally recognized Native American tribes, reflecting respect for the rights of self-government due the sovereign tribal governments; LBP-15-16, 81 NRC 618 (2015)

concurrence by U.S. Fish and Wildlife Service discharges NRC’s consultation responsibilities; LBP-15-11, 81 NRC 401 (2015)

consultation must provide an Indian tribe with a reasonable opportunity to identify its concerns about historic properties, advise on their identification and evaluation, articulate its views on the undertaking’s effects on such properties, and participate in the resolution of adverse effects; LBP-15-16, 81 NRC 618 (2015)

consultation with U.S. Fish & Wildlife Service is legally mandated for any agency action that may affect listed species or critical habitat; LBP-15-11, 81 NRC 401 (2015)

contention claiming that NRC Staff’s consultation was inadequate does not ripen until issuance of NRC Staff’s draft environmental impact statement; LBP-15-5, 81 NRC 249 (2015)

federal agency is required to consult if an action may affect listed species or designated critical habitat, even if the effects are expected to be beneficial; LBP-15-11, 81 NRC 401 (2015)

federal agency must consult with any Indian tribe that attaches religious and cultural significance to potentially impacted historic properties; LBP-15-16, 81 NRC 618 (2015)

federal agency need not initiate formal consultation if, as a result of the preparation of a biological assessment under section 402.12 or as a result of informal consultation with the FWS under section 402.13, the federal agency determines, with the written concurrence of the U.S. Fish and Wildlife

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Service Director, that the proposed action is not likely to adversely affect any listed species or critical habitat; LBP-15-11, 81 NRC 401 (2015)

if an agency determines that a particular action will have no effect on an endangered or threatened species, the U.S. Fish & Wildlife Service consultation requirements are not triggered; LBP-15-11, 81 NRC 401 (2015)

in consultation with identified parties, agency must develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effects of the undertaking on historic properties and describe them in the environmental assessment or draft environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

“informal” consultation is an optional process that includes all discussions, correspondence, etc., between the U.S. Fish and Wildlife Service and the federal agency designed to assist the federal agency in determining whether formal consultation or a conference is required with the Service under section 402.13; LBP-15-11, 81 NRC 401 (2015)

issue of alleged failure to consult with a tribe is material and within the scope of materials license proceeding; LBP-15-16, 81 NRC 618 (2015)

it is the duty of NRC Staff, not applicant, to consult with interested tribes concerning the proposed site in the context of a National Historic Preservation Act contention; LBP-15-5, 81 NRC 249 (2015)

only species listed as threatened or endangered under the Endangered Species Act are covered by the Act’s formal consultation requirements; LBP-15-11, 81 NRC 401 (2015)

under NEPA, defining the scope of effects of a project requires engagement with governments of affected tribes through an early and open process aimed at identifying concerns, potential impacts, relevant effects of past actions, and possible alternative actions; LBP-15-16, 81 NRC 618 (2015)

when engaging in informal consultation, an agency must provide its determination as to whether the proposed action will affect threatened and endangered species to U.S. Fish & Wildlife Service and request FWS concurrence; LBP-15-11, 81 NRC 401 (2015)

CONTAINMENT

contention claiming that modifications to repair or replace inadequate structural beams and columns is more appropriately presented as a request for enforcement action; CLI-15-5, 81 NRC 329 (2015)

request for enforcement action based on support beam deficiencies, flood protection inadequacy, flood risks from upstream dams, and primary reactor containment electrical penetration seals containing Teflon is denied because petitioner’s requests have been addressed through other actions; DD-15-4, 81 NRC 869 (2015)

request that NRC immediately revoke prior preapproval of the hardened vent system or direct torus vent system at each GE BWR Mark I unit has been addressed by an order modifying licenses with regard to reliable hardened containment vents capable of operation under severe accident conditions; DD-15-1, 81 NRC 193 (2015)

request that NRC order the immediate suspension of the operating licenses of all General Electric boiling-water reactors that use the Mark I primary containment system citing the Fukushima Dai-ichi accident in Japan as its rationale basis is resolved; DD-15-1, 81 NRC 193 (2015)

CONTAINMENT DESIGN

contention that environmental report fails to accurately and thoroughly conduct severe accident mitigation alternatives analysis to design vulnerability of GE Mark I boiling water reactor pressure suppression containment system and environmental consequences of a to-be-anticipated severe accident post-Fukushima Daiichi fails to present a genuine material dispute; LBP-15-5, 81 NRC 249 (2015)

existing containment vent systems at BWRs with Mark I containments provide a capability to vent the containment under design-basis conditions; DD-15-1, 81 NRC 193 (2015)

CONTAINMENT SYSTEMS

licensees of boiling water reactors with Mark I and II containments are required to design and install a venting system that provides venting capability from the wetwell during severe accident conditions; DD-15-1, 81 NRC 193 (2015)

NRC has addressed pressure suppression containment system vulnerability to early failure under severe accident conditions including overpressurization in NUREG-0474; DD-15-1, 81 NRC 193 (2015)

CONTENTIONS

admissible contention is required for grant of a hearing request; LBP-15-17, 81 NRC 753 (2015)

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although environmental contentions are, in essence, challenges to NRC Staff's compliance with NEPA, those contentions must be raised, if possible, in response to applicant's environmental report; CLI-15-1, 81 NRC 1 (2015); LBP-15-19, 81 NRC 815 (2015)

boards have the authority to reformulate contentions to consolidate issues for a more efficient proceeding; LBP-15-17, 81 NRC 753 (2015)

contention that final supplemental environmental impact statement lacks an adequate baseline groundwater characterization or fails to demonstrate that groundwater samples were collected in a scientifically defensible manner is decided; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

contention that FSEIS fails to analyze environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits is decided; LBP-15-3, 81 NRC 65 (2015)

contentions of omission and contentions of inadequacy are defined; LBP-15-5, 81 NRC 249 (2015)

intervenor fail to establish the validity of their various challenges to the adequacy of the FSEIS description of the baseline water quality at the in situ recovery site; LBP-15-3, 81 NRC 65 (2015)

intervenor opposed renewal of the nuclear power plant license, and proposed new contentions for increased ultrasonic testing of sand bed epoxy coating integrity; LBP-15-1, 81 NRC 15 (2015)

nothing in 10 C.F.R. Part 40, Appendix A, Criterion 5B precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in applicant's precertification program were adequate to provide the necessary information to properly characterize the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 65 (2015)

to the extent NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in the adjudicatory process; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

when the adequacy of an EIS mitigation strategy is challenged, the determining issue is whether the agency took a sufficiently hard look at environmental consequences, and ensured that its decision was supported by a completely informed record; LBP-15-16, 81 NRC 618 (2015)

See also Abeyance of Contention; Amendment of Contentions

CONTENTIONS, ADMISSIBILITY

absent a waiver, contentions that raise a direct or indirect challenge to a Commission regulation must be rejected; LBP-15-4, 81 NRC 156 (2015)

adequacy of NRC Staff's review is not a litigable issue in a licensing case; CLI-15-9, 81 NRC 512 (2015)

admissibility of contention that a license amendment will be required for licensee to update and maintain accurate design basis documents is decided; CLI-15-5, 81 NRC 329 (2015)

admissibility of contention that applicant submit a decommissioning plan and updated financial plans related to decommissioning is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental assessment fails to adequately describe and analyze aquifer restoration goals in light of new standards for determining alternative control limits is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental assessment fails to adequately describe and analyze impacts of maintaining post-operational wellfields as long-term hazardous waste facilities is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental assessment fails to adequately describe or analyze proposed mitigation measures is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that environmental assessment fails to conduct the required hard look at impacts of the proposed mine and failed to consult with the U.S. Fish & Wildlife Service is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that environmental assessment fails to analyze impacts on the project from earthquakes, especially concerning secondary porosity and adequate confinement is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that environmental assessment fails to describe and analyze the environmental impacts of new porosity and permeability in the aquifer caused by mining activity is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental documents and associated monitoring values and restoration goals rely on baseline data calculations that are inadequate and unacceptable is decided; LBP-15-15, 81 NRC 598 (2015)

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admissibility of contention that environmental documents lack an adequate description of financial assurances to cover costs of restoration and long-term monitoring of up to 30 years is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental report lacks site-specific safety and environmental findings regarding spent fuel storage and disposal is decided; LBP-15-5, 81 NRC 249 (2015)

admissibility of contention that final environmental assessment fails to adequately analyze cumulative impacts is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that final environmental assessment fails to adequately evaluate adverse impacts on public health and safety is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with restoration standards and difficulty and cost in achieving them and the use of the alternative standards permitted under the proposed rules is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that licensee is undertaking modifications for protection against severe flooding in the event of upstream dam failures that will require a license amendment is decided; CLI-15-5, 81 NRC 329 (2015)

admissibility of contention that NRC Staff must conduct a new baseline groundwater characterization study of the license renewal area rather than relying on the baseline study conducted during the original license application is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that severe accident mitigation alternatives analysis fails to evaluate the impact that a severe accident at one unit would have on the operation of a proposed nearby unit is decided; LBP-15-5, 81 NRC 249 (2015)

admissibility requirement generally is fulfilled when the sponsor of an otherwise acceptable contention provides a brief recitation of the factors underlying the contention or references to documents and texts that provide such reasons; LBP-15-1, 81 NRC 15 (2015)

admissible contentions must meet all six pleading requirements of 10 C.F.R. 2.309(f)(1); LBP-15-5, 81 NRC 249 (2015); LBP-15-17, 81 NRC 753 (2015); LBP-15-18, 81 NRC 793 (2015); LBP-15-20, 81 NRC 829 (2015)

admission of a "placeholder" contention is not necessary to ensure that petitioner's challenges to the Continued Storage Rule and GEIS receive a full and fair airing; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

admitted contentions challenging applicant's environmental report may function as challenges to similar portions of NRC Staff's NEPA document; LBP-15-11, 81 NRC 401 (2015)

allegations of inadequacies and omissions in NRC Staff's environmental assessment satisfy the requirement to provide a specific statement of the issue of law or fact to be raised; LBP-15-13, 81 NRC 456 (2015)

allegations of noncompliance with already-issued, existing, and open Commission orders are part of the current licensing basis and therefore cannot be challenged in a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

alleged facts and expert opinions in intervention petition and associated exhibits are sufficient to satisfy regulatory requirements; LBP-15-13, 81 NRC 456 (2015)

although an admissible contention requires no more than some minimal factual and legal foundation in support, the Commission expects that in almost all instances petitioner must go beyond merely quoting a request for additional information to justify admission; LBP-15-1, 81 NRC 15 (2015)

although boards do not decide the merits or resolve conflicting evidence at the contention admission stage, materials cited as the basis for a contention are subject to scrutiny by the board to determine whether they actually support the facts alleged; LBP-15-20, 81 NRC 829 (2015)

although intervenors disagree with applicant's opportunistic inspection strategy for managing rebar corrosion, they merely assert, and do not plausibly explain, how applicant's approach will lead to a material safety impact; LBP-15-1, 81 NRC 15 (2015)

amendment of 10 C.F.R. 2.309 in 2012 was to simplify the rules, not fundamentally change the rationale boards use to admit new/amended contentions; LBP-15-11, 81 NRC 401 (2015)

any contention that fails to directly controvert the application or environmental impact statement, or mistakenly asserts the application does not address a relevant issue, will be dismissed; LBP-15-1, 81 NRC 15 (2015)

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applicability of a guidance document may be challenged in an individual proceeding; LBP-15-20, 81 NRC 829 (2015)

applicant's decision to improve an existing program to promote health and safety or to boost public support and confidence does not ordinarily confer an automatic opportunity to advance a new contention; LBP-15-1, 81 NRC 15 (2015)

at the contention admission stage, intervenors need not marshal their evidence as though preparing for an evidentiary hearing; LBP-15-20, 81 NRC 829 (2015)

at the contention filing stage the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion; LBP-15-1, 81 NRC 15 (2015)

attempts by petitioners to challenge aspects of an aging management plan that they could have challenged earlier is rejected; LBP-15-1, 81 NRC 15 (2015)

because of the need to provide specific support for a contention in order to raise a genuine dispute, the genuine dispute admissibility requirement is sometimes discussed together with the requirement for petitioners and intervenors to provide alleged factual or expert support for their allegations; LBP-15-1, 81 NRC 15 (2015)

because petitioner has not shown how a proposed plan would fail to ensure that buried pipes continue to fulfill their intended safety purposes, the contention is inadmissible; LBP-15-5, 81 NRC 249 (2015)

because the shield building functions as a radiation and biological shield, failure or collapse of the shield building due to cracking propagation could lead to health and safety impacts, and thus petitioner's contention concerns a matter that could impact the grant or denial of a pending license application; LBP-15-1, 81 NRC 15 (2015)

board admitted a contention without deciding if it was a contention of omission or a contention of inadequacy; LBP-15-5, 81 NRC 249 (2015)

board declines to entertain contentions based on little more than speculation, which represent negligible knowledge of the issues being challenged; LBP-15-1, 81 NRC 15 (2015)

board examines the information, facts, and expert opinions provided by petitioners to confirm that they do indeed provide adequate support for the contention; LBP-15-20, 81 NRC 829 (2015)

board improperly allowed petitioner to challenge the generic environmental impact statement's generic finding regarding severe accident consequences; CLI-15-6, 81 NRC 340 (2015)

board may appropriately view petitioner's support for its contention in a light favorable to petitioner, but cannot do so by ignoring the requirements in 10 C.F.R. 2.309(f)(1); LBP-15-5, 81 NRC 249 (2015); LBP-15-17, 81 NRC 753 (2015)

board may construe an admitted contention contesting applicant's environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the need for intervenors to file a new or amended contention; LBP-15-11, 81 NRC 401 (2015)

boards may afford an interested state, local governmental body, and federally recognized Indian tribe that has not been admitted as a party under section 2.309 a reasonable opportunity to participate in a hearing; LBP-15-19, 81 NRC 815 (2015)

boards may examine both the statements in the document that support petitioner's assertions and those that do not; LBP-15-20, 81 NRC 829 (2015)

boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015)

Category 1 issues are not subject to challenge in a relicensing proceeding, absent a waiver under 10 C.F.R. 2.335, because they involve environmental effects that are essentially similar for all plants and need not be assessed repeatedly on a site-specific basis; LBP-15-5, 81 NRC 249 (2015)

challenge to use of an alternate concentration limit is an impermissible challenge to an NRC regulation, which is not subject to attack in any adjudicatory proceeding; LBP-15-11, 81 NRC 401 (2015)

challenges based on 10 C.F.R. 50.61a and the question of whether applicant demonstrated substantial advantage under 10 C.F.R. Part 50, Appendix H as a reason to not test capsules are beyond the scope of a license amendment proceeding, which concerns compliance with Appendix G of 10 C.F.R. Part 50; LBP-15-20, 81 NRC 829 (2015)

challenges to admissibility on the ground that it does not include an adequate basis because it does not include sufficient facts, evidence, or supporting factual information are misguided; LBP-15-20, 81 NRC 829 (2015)

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challenges to emergency planning fall outside the scope of a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

challenges to licensee actions taken under 10 C.F.R. 50.59 may only be taken by means of a petition for enforcement action under 10 C.F.R. 2.206; CLI-15-5, 81 NRC 329 (2015)

challenges to the agency's regulations are not allowed; LBP-15-3, 81 NRC 65 (2015)

claims of past and current mismanagement are outside the scope of the license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

Commission affirmed the board's standing ruling, but declined to accept review of challenges to the board's admission of two contentions because petitioner had failed to perfect its appeal by challenging the validity of the board's admissibility rulings regarding other contentions; LBP-15-3, 81 NRC 65 (2015)

Commission affords substantial deference to licensing boards' contention admission decisions; CLI-15-6, 81 NRC 340 (2015)

Commission approval of a rule waiver could allow a contention on a Category 1 issue to proceed where special circumstances exist; CLI-15-6, 81 NRC 340 (2015)

Commission chose to review intervenors' motion along with similar motions in other proceedings and associated petitions to suspend reactor licensing pending issuance of waste confidence safety findings; CLI-15-6, 81 NRC 340 (2015)

Commission denied motions for leave to file new contentions concerning the Continued Storage Rule; LBP-15-7, 81 NRC 391 (2015); LBP-15-9, 81 NRC 396 (2015)

Commission denied petition to supplement and declined to admit "placeholder" contention; CLI-15-13, 81 NRC 555 (2015)

Commission directed all licensing boards to reject pending waste confidence contentions that had been held in abeyance, because the generic impact determinations have been the subject of extensive public participation in the rulemaking process and therefore are excluded from litigation in individual proceedings; LBP-15-1, 81 NRC 15 (2015); LBP-15-5, 81 NRC 249 (2015)

Commission exercised its supervisory authority and dismissed proposed waste confidence safety contention and denied suspension petitions; CLI-15-13, 81 NRC 555 (2015)

concerns with the current design and operation of a nuclear power plant are more properly addressed through a petition for enforcement action; LBP-15-13, 81 NRC 456 (2015)

concurrent with approval of the final Continued Storage Rule and companion Generic Environmental Impact Statement, the Commission lifted the suspension on final licensing decisions and directed that the proposed spent fuel storage contentions be dismissed; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

contention about a matter not covered by a specific rule need only allege that the matter poses a significant safety problem; LBP-15-17, 81 NRC 753 (2015); LBP-15-20, 81 NRC 829 (2015)

contention admissibility criteria are strict by design but should not be turned into a fortress to deny intervention; LBP-15-20, 81 NRC 829 (2015)

contention admissibility requirements seek to ensure that NRC hearings adjudicate genuine, substantive safety and environmental issues placed in contention by qualified intervenors; CLI-15-8, 81 NRC 500 (2015)

contention admission stage is not the appropriate point at which to evaluate witness credibility or to weigh competing evidence, but an expert must provide a reasoned basis or explanation for opinions in support of a contention; LBP-15-17, 81 NRC 753 (2015)

contention admission standards are strict by design and exist to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

contention alleging a material deficiency must link the claimed deficiency to a public health and safety or an environmental impact; LBP-15-1, 81 NRC 15 (2015)

contention alleging that environmental assessment has not adequately addressed environmental impacts associated with saltwater intrusion arising from saline water migration from the plant into surrounding waters, and applicant's use of aquifer withdrawals to lower salinity and temperature is admissible; LBP-15-13, 81 NRC 456 (2015)

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contention bases that do not pertain specifically to the license renewal application do not provide sufficient information to demonstrate a genuine dispute with the applicant on a material issue and is thus inadmissible; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

contention challenging applicant's safety culture and claiming to rely on NRC Staff's Safety Evaluation Report is inadmissible because the SER did not discuss safety culture as a general matter and could not serve as a reasonably apparent foundation for a safety culture contention; LBP-15-11, 81 NRC 401 (2015)

contention claiming that modifications to repair or replace inadequate structural beams and columns is more appropriately presented as a request for enforcement action; CLI-15-5, 81 NRC 329 (2015)

contention claiming that NRC Staff's consultation was inadequate does not ripen until issuance of NRC Staff's draft environmental impact statement; LBP-15-5, 81 NRC 249 (2015)

contention contesting adequacy of licensee's equivalent margins analysis is not a challenge to 10 C.F.R. Part 50, Appendix H; LBP-15-20, 81 NRC 829 (2015)

contention fails because it contests NRC Staff's safety review rather than the license renewal application; LBP-15-15, 81 NRC 598 (2015)

contention is within the scope of license renewal proceeding because NRC regulations require that the environmental report include a severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 249 (2015)

contention must explain what specific deficiencies exist and why they materially impact the license renewal application or environmental impact statement; LBP-15-1, 81 NRC 15 (2015)

contention must provide more than a bare assertion and must explain the supporting reasons for the dispute; LBP-15-1, 81 NRC 15 (2015)

contention of omission claims that the application fails to contain information on a relevant matter as required by law and provides the supporting reasons for petitioner's belief; LBP-15-5, 81 NRC 249 (2015)

contention of omission on a matter related to the National Environmental Policy Act must describe the information that should have been included in applicant's environmental report and provide the legal basis that requires the omitted information to be included; LBP-15-5, 81 NRC 249 (2015)

contention quotes text from a notice of proposed rulemaking, but it never ties the statements from the NOPR to any specific section of the environmental assessment, and thus fails to raise a genuine dispute with the EA; LBP-15-15, 81 NRC 598 (2015)

contention rule is strict by design; CLI-15-8, 81 NRC 500 (2015)

contention rule reflects a deliberate effort to prevent the major adjudicatory delays caused in the past by ill-defined or poorly supported contentions that were admitted for hearing although based on little more than speculation; CLI-15-8, 81 NRC 500 (2015)

contention that applicant failed to discuss a report on a recently identified seismic fault near the plant is inadmissible; LBP-15-20, 81 NRC 829 (2015)

contention that applicant failed to establish in its aging management plan that the effects of aging will be adequately managed for the period of extended operation is inadmissible; LBP-15-6, 81 NRC 314 (2015)

contention that applicant's revised material control and accounting plan fails to show how confirmation and verification of theft of plutonium will be carried out in the specified timelines is inadmissible; CLI-15-9, 81 NRC 512 (2015)

contention that applicant's revised material control and accounting plan is inadequate to satisfy the alarm resolution requirements is inadmissible; CLI-15-9, 81 NRC 512 (2015)

contention that applicant's severe accident mitigation alternatives analysis is significantly flawed because of the use of inaccurate factual assumptions about population is inadmissible; LBP-15-5, 81 NRC 249 (2015)

contention that DEIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that they will change the plume dynamics of the industrial wastewater facility/cooling canal contaminant plume is inadmissible; LBP-15-19, 81 NRC 815 (2015)

contention that DEIS must identify the percentage of radial collector well water drawn from underneath the industrial wastewater facility is inadmissible; LBP-15-19, 81 NRC 815 (2015)

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contention that does not actually challenge any specific part of the integrated plant assessment or time-limited aging analyses fails to demonstrate the existence of a genuine dispute; LBP-15-6, 81 NRC 314 (2015)

contention that does not dispute any specific portion of applicant's fuel handling accident analysis is inadmissible for lack of a genuine dispute; LBP-15-18, 81 NRC 793 (2015)

contention that environmental assessment fails to adequately describe air quality impacts is inadmissible as untimely; LBP-15-11, 81 NRC 401 (2015)

contention that environmental assessment violates the National Environmental Policy Act in its failure to analyze groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 401 (2015)

contention that environmental report does not satisfy NEPA because it does not consider a range of measures to mitigate the risk of catastrophic fires in densely packed, closed-frame spent fuel storage pools is decided; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report fails to accurately and thoroughly conduct severe accident mitigation alternatives analysis on design vulnerability of GE Mark I boiling water reactor pressure suppression containment system and environmental consequences of a to-be-anticipated severe accident post-Fukushima Daiichi fails to present a genuine material dispute; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report fails to explain whether a discharge pipe with phosphoric acid as a corrosion inhibitor would increase algae production and potential for toxic algal blooms is admissible; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report is inadequate insofar as it does not consider the risk of spent fuel pool fires is inadmissible; LBP-15-5, 81 NRC 249 (2015)

contention that environmental review documents fail to identify source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene in groundwater is inadmissible as untimely; LBP-15-19, 81 NRC 815 (2015)

contention that final environmental assessment fails to adequately analyze all reasonable alternatives is inadmissible; LBP-15-11, 81 NRC 401 (2015)

contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 401 (2015)

contention that final environmental assessment fails to present relevant information in a clear and concise manner that is readily accessible to the public and other reviewers is inadmissible; LBP-15-11, 81 NRC 401 (2015)

contention that final safety analysis report is deficient because it does not include information provided in applicant's seismic evaluation process report is rejected; LBP-15-14, 81 NRC 591 (2015)

contention that license renewal application has failed to establish that the effects of aging on relay switches and snubbers will be adequately managed for the period of extended operation is inadmissible; LBP-15-6, 81 NRC 314 (2015)

contention that NRC Staff's environmental assessment fails to consider that applicant's use of copper sulfate to control algae blooms will increase reactor operating temperatures in relation to waste is inadmissible; LBP-15-13, 81 NRC 456 (2015)

contention that operating license should not be renewed unless and until applicant establishes that the plant can withstand and be safely shut down following an earthquake is not within the scope of a license renewal proceeding; LBP-15-6, 81 NRC 314 (2015)

contention that population used for analysis might underestimate the exposed population in a severe accident and, in turn, underestimate the benefit achieved in implementing a severe accident mitigation alternatives analysis is admissible; LBP-15-5, 81 NRC 249 (2015)

contention that regulatory provisions are themselves insufficient to protect the public health and safety constitutes an improper collateral attack upon NRC regulations; LBP-15-4, 81 NRC 156 (2015)

contention that supplementation of the environmental impact statement is necessary to allow members of the public to lodge placeholder contentions challenging Commission reliance, in individual licensing proceedings, on the continued storage GEIS and Continued Storage Rule is inadmissible; CLI-15-10, 81 NRC 535 (2015)

contention where a fisheries biologist opined that applicant lacked adequate data on which to conclude that impacts on the aquatic environment were insignificant is admissible; LBP-15-20, 81 NRC 829 (2015)

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contention where arguments and expert testimony were copied, largely without change, from another proceeding and failed to offer information specific to the challenged license renewal application is inadmissible; CLI-15-6, 81 NRC 340 (2015)

contentions calling for requirements in excess of those imposed by NRC regulations will be rejected as a collateral attack on the regulations; LBP-15-4, 81 NRC 156 (2015)

contentions challenging applicable statutory requirements or Commission regulations are not admissible in NRC adjudications; LBP-15-5, 81 NRC 249 (2015)

contentions must be raised at the earliest possible opportunity; CLI-15-1, 81 NRC 1 (2015)

contentions must meet the six pleading criteria of 10 C.F.R. 2.309(f)(1)(i)-(vi), and failure to meet any of them renders the contention inadmissible; LBP-15-1, 81 NRC 15 (2015); LBP-15-4, 81 NRC 156 (2015); LBP-15-6, 81 NRC 314 (2015); LBP-15-16, 81 NRC 618 (2015)

contentions must provide sufficient information to show a genuine dispute with applicant on a material issue of law or fact; CLI-15-8, 81 NRC 500 (2015)

contentions proposed after the filing deadline, which would have been allowable under the previous 10 C.F.R. 2.309(f)(2) requirements, will also be allowable under the current section 2.309(c)(1) requirements; LBP-15-11, 81 NRC 401 (2015)

contentions relying on information and findings discussed in the notice of proposed rulemaking, as opposed to tentative rules or policy determinations, are not timely filed; LBP-15-15, 81 NRC 598 (2015)

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; LBP-15-1, 81 NRC 15 (2015)

contentions should refer to portions of the application that petitioner disputes along with supporting reasons for each dispute, and if petitioner believes that an application fails altogether to contain information required by law, petitioner must identify each failure and provide supporting reasons for that belief; CLI-15-8, 81 NRC 500 (2015)

contentions that are the subject of general rulemaking by NRC may not be litigated in individual licensing proceedings; LBP-15-4, 81 NRC 156 (2015); LBP-15-17, 81 NRC 753 (2015)

contentions that fall outside the specified scope of the proceeding are inadmissible; LBP-15-20, 81 NRC 829 (2015)

contentions that request more testing, more methods of testing, and more information, without explaining why the current program is inadequate, are inadmissible; LBP-15-20, 81 NRC 829 (2015)

crux of the “genuine dispute” prong under 10 C.F.R. 2.309(f)(1)(vi) is the requirement for specificity, that a contention must have more than general allegations; LBP-15-1, 81 NRC 15 (2015)

current licensing basis issues cannot be challenged in license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

eight-factor test that allowed a board to consider new or amended contentions that did not meet the three requirements for admissibility of late-filed contentions available under 10 C.F.R. 2.309(f)(2) is no longer available; LBP-15-1, 81 NRC 15 (2015)

enforcement orders are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

environmental contentions are expected in response to applicant’s or NRC Staff’s environmental reviews, and contentions regarding their adequacy cannot be expected to be proffered at an earlier stage of the proceeding before the documents are available; LBP-15-11, 81 NRC 401 (2015)

environmental justice is a Category 2 issue, within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

environmental waste confidence contentions are dismissed; CLI-15-6, 81 NRC 340 (2015)

even if a contention provided information not discussed in the environmental report, it is still not admissible if it fails to provide a reasoned basis or explanation for why the ER is wrong; LBP-15-5, 81 NRC 249 (2015)

even if contentions are based on NRC Staff’s FSEIS, intervenor still bears the responsibility of demonstrating that a new contention merits admission and meets all six pleading requirements; LBP-15-16, 81 NRC 618 (2015)

evidence contained in affidavits accompanying motions to reopen must meet admissibility standards; LBP-15-14, 81 NRC 591 (2015)

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except as provided in section 2.335(b)-(d), no rule or regulation of the Commission, or any provision thereof, concerning the licensing of production and utilization facilities is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding subject to Part 2; LBP-15-4, 81 NRC 156 (2015); LBP-15-6, 81 NRC 314 (2015)

expert witness must have enough knowledge in the subject area to allow him to proffer an expert opinion for the purposes of determining contention admissibility; LBP-15-20, 81 NRC 829 (2015)

facts put forward by intervenor should plausibly indicate why a program is inadequate; LBP-15-20, 81 NRC 829 (2015)

facts relied on to support a contention of omission need not show that the facility cannot be safely operated, but only that the application is incomplete; LBP-15-5, 81 NRC 249 (2015)

factual support is not necessary at the contention filing stage to show that a genuine dispute exists and need not be in affidavit or formal evidentiary form or of the quality necessary to withstand a summary disposition motion; LBP-15-11, 81 NRC 401 (2015)

failure to comply with any of the section 2.309(f)(1) requirements renders a contention inadmissible; LBP-15-13, 81 NRC 456 (2015); LBP-15-19, 81 NRC 815 (2015)

failure to offer factual support for the proposition that applicant's inputs for evacuation times are flawed or unreasonable or that its sensitivity analysis of these inputs was incorrect renders a contention inadmissible; LBP-15-5, 81 NRC 249 (2015)

failure to reference specific sources showing that wind or other renewables are viable sources of baseload power within the service area, renders a contention inadmissible; LBP-15-5, 81 NRC 249 (2015)

following adoption of a revised Continued Storage Rule, boards were ordered to reject continued storage contentions pending before them, except contentions unresolved by the Continued Storage Rule; CLI-15-6, 81 NRC 340 (2015)

generalized economic cost arguments, unsupported by asserted facts or expert opinion, are insufficient to show a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 15 (2015)

generic determinations are appropriately excluded from litigation in individual proceedings; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

generic environmental impact statement findings with respect to severe accident consequences are not subject to challenge in individual license renewal proceedings; CLI-15-6, 81 NRC 340 (2015)

generic environmental impact statement for ISL mining is subject to an appropriate challenge in an adjudicatory proceeding; LBP-15-11, 81 NRC 401 (2015)

genuine dispute prong of 10 C.F.R. 2.309(f)(1)(vi) requires a nexus between alleged deficiencies and a material consequence; LBP-15-1, 81 NRC 15 (2015)

good cause doesn't exist where petitioner's late-filed contention is due to careless inadvertence and not, as petitioner claimed, attributable to technical difficulties with the E-Filing system; LBP-15-4, 81 NRC 156 (2015)

good cause for a newly proposed contention exists when information on which it is based was not previously available and is materially different than information previously available and has been submitted in a timely fashion based on the availability of the subsequent information; LBP-15-1, 81 NRC 15 (2015); LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

hearing request is granted where petitioners have submitted a timely petition, established representational standing, and proffered an admissible contention; LBP-15-20, 81 NRC 829 (2015)

if a contention makes a prima facie allegation that the application omits information required by law, it necessarily presents a genuine dispute with applicant on a material issue and raises an issue plainly material to an essential finding of regulatory compliance needed for license issuance; LBP-15-5, 81 NRC 249 (2015)

if a petitioner submits a proposed contention after the initial filing deadline announced in the applicable Federal Register notice for submitting a hearing petition, it will not be entertained absent a determination by the presiding officer that petitioner has demonstrated good cause; LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

if applicant cures the omission cited in a contention, the contention will become moot unless revised by intervenors; LBP-15-5, 81 NRC 249 (2015)

if applicant's enhanced monitoring program is inadequate, then applicant's unenhanced monitoring program embodied in its license renewal application was *a fortiori* inadequate, and intervenors had a regulatory obligation to challenge it in their original petition to intervene; LBP-15-1, 81 NRC 15 (2015)

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if intervenor cannot meet the requirements for filing a contention under the new section 2.309(c)(1), he or she can still take advantage of an extension request if unanticipated events, such as a weather event or unexpected health issues, prevented the participant from filing for a reasonable period of time after the deadline; LBP-15-1, 81 NRC 15 (2015)

if intervenors sought to introduce new issues, then they should have filed a new or amended contention; CLI-15-9, 81 NRC 512 (2015)

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, late-filing standards are no bar to the admission of properly supported contentions; LBP-15-11, 81 NRC 401 (2015)

in addition to being timely, new contention must satisfy the six-factor admissibility standard; LBP-15-19, 81 NRC 815 (2015)

in explaining why there is a genuine material dispute, contention must give the board a reason to believe that the alleged deficiency will lead to a material safety or environmental outcome, based on factual or expert support; LBP-15-1, 81 NRC 15 (2015)

in interpreting the scope of an admitted contention, boards look back to the bases set forth in support of the contention; CLI-15-9, 81 NRC 512 (2015)

inadequacy in the severe accident mitigation alternatives analysis is material if license renewal applicant failed to consider complete information without justifying why particular information was omitted; LBP-15-5, 81 NRC 249 (2015)

Indian tribe's treaty-based claims of ownership of mining site and international treaty-based claims cannot support admission of environmental assessment contention; LBP-15-11, 81 NRC 401 (2015)

intervenor must do more than point to issues with the shield building, but must also indicate what is wrong with applicant's response and its amended inspection program and why intervenor believes the particular inspection program makes the license renewal application unacceptable; LBP-15-1, 81 NRC 15 (2015)

intervenors' reliance on long-available documents regarding leakages and notices of violation made a contention untimely as filed; LBP-15-11, 81 NRC 401 (2015)

intervenors are not allowed to postpone filing a contention challenging environmental or safety information or analysis until Staff issues some document that collects, summarizes, and places into context the facts supporting that contention; LBP-15-11, 81 NRC 401 (2015)

intervenors fail to specify what other alternatives to the license renewal application should be discussed in the draft supplemental environmental impact statement, much less show that any proposed alternative would satisfy the purpose of applicant's proposed action; LBP-15-1, 81 NRC 15 (2015)

intervenors must develop a fact-based argument that actually and specifically challenges the application; LBP-15-1, 81 NRC 15 (2015)

intervenors were correct to file contentions on a newly adopted rule because, unlike a proposed rule, it now has indisputable legal effect; LBP-15-15, 81 NRC 598 (2015)

intervenors' allegations are viewed in a light favorable to intervenors; LBP-15-11, 81 NRC 401 (2015)

intervenors' allegations do not plausibly indicate that the shield building would lose its functionality under the proposed aging management plan; LBP-15-1, 81 NRC 15 (2015)

intervenors' requests for more testing, more methods of testing, and more information, without an explanation of why the current program is inadequate, do not create a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 15 (2015)

intervention petition was not sufficiently specific when it merely repeated the contents of petitioner's earlier petition concerning a prior license amendment; LBP-15-17, 81 NRC 753 (2015)

intervention petitioner may not attack generic NRC requirements or regulations or express generalized grievances about NRC policies; CLI-15-9, 81 NRC 512 (2015)

issuance of a request for additional information does not alone establish deficiencies in an application or that NRC Staff will go on to find any of applicant's clarifications, justifications, or other responses to be unsatisfactory; CLI-15-8, 81 NRC 500 (2015)

issue raised must fall within the scope of the proceeding and be material to the findings that the NRC must make; CLI-15-8, 81 NRC 500 (2015)

issues addressed in a separate proceeding are beyond the scope of a later proceeding; LBP-15-20, 81 NRC 829 (2015)

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it is a well-established principle that a petitioner in an adjudicatory proceeding cannot use one regulation to challenge another without first obtaining a waiver by showing special circumstances; LBP-15-4, 81 NRC 156 (2015)

it is not enough to demonstrate a theoretical possibility that wind farms spread across a wide area could provide consistent power, but rather petitioners must show concretely that wind could be a reliable, commercially viable source of baseload power during the license renewal period; LBP-15-5, 81 NRC 249 (2015)

it is the duty of NRC Staff, not applicant, to consult with interested tribes concerning the proposed site in the context of a National Historic Preservation Act contention; LBP-15-5, 81 NRC 249 (2015)

it makes no sense to spend the parties' and NRC's own valuable resources litigating allegations of current deficiencies in a proceeding that is directed to future-oriented issues of aging; LBP-15-6, 81 NRC 314 (2015)

it must be genuinely plausible that revising the severe accident mitigation alternatives analysis would change the outcome so that one or more of the SAMA candidates that applicant evaluated and rejected would become cost-beneficial; LBP-15-5, 81 NRC 249 (2015)

licensing board concluded that information on a website cited by intervenors, instead of supporting intervenors' claim, contradicted it; LBP-15-20, 81 NRC 829 (2015)

licensing board failed to provide sufficient justification for rejecting a challenge to applicant's meteorological model where petitioners pointed to site-specific meteorological patterns to argue that the model and inputs were inaccurate and insufficiently conservative; LBP-15-20, 81 NRC 829 (2015)

licensing board may appropriately view petitioner's supporting information in a light favorable to the petitioner, but may not do so by ignoring other admissibility requirements; LBP-15-1, 81 NRC 15 (2015); LBP-15-19, 81 NRC 815 (2015); LBP-15-20, 81 NRC 829 (2015)

licensing boards should not accept in individual licensing proceedings contentions that are or are about to become the subject of general rulemaking by the Commission; CLI-15-9, 81 NRC 512 (2015); CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

licensing proceedings are not the appropriate venue for generic rulemaking issues; CLI-15-9, 81 NRC 512 (2015)

litigants may not challenge a rule in NRC adjudicatory proceedings absent a showing of special circumstances; CLI-15-1, 81 NRC 1 (2015)

material difference must exist between information on which a contention is based and information that was previously available, e.g., a difference between the environmental report and the draft EIS or the draft EIS and the final EIS; CLI-15-1, 81 NRC 1 (2015)

"materiality" requires petitioner to show why the alleged error or omission is of possible significance to the result of the proceeding; LBP-15-20, 81 NRC 829 (2015)

mere notice pleading is insufficient, but requirement for contention specificity and factual support rather than vague or conclusory statements is not intended to prevent intervention when material and concrete issues exist; LBP-15-20, 81 NRC 829 (2015)

merits questions cannot be resolved at the contention admission stage of the proceeding; LBP-15-20, 81 NRC 829 (2015)

migration of a contention is appropriate only where the environmental analysis or discussion at issue is essentially in pari materia with applicant's analysis or discussion that is the focus of the contention; LBP-15-11, 81 NRC 401 (2015)

migration tenet applies when information in the draft environmental impact statement is sufficiently similar to information in applicant's environmental report, and allows previously admitted contentions challenging the environmental report to apply to relevant portions of the DSEIS; LBP-15-16, 81 NRC 618 (2015)

motion to reopen that relates to a contention not previously in controversy must satisfy the section 2.309(c) requirements for new or amended contentions filed after the original hearing petition deadline; LBP-15-14, 81 NRC 591 (2015)

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-15-1, 81 NRC 15 (2015)

new arguments may not be raised in replies; LBP-15-17, 81 NRC 753 (2015)

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new contention is inadmissible because it relies on information that is not materially different from information previously available and already in the record; LBP-15-11, 81 NRC 401 (2015); LBP-15-16, 81 NRC 618 (2015)

new information on the need to supplement an issued final EIS must point to impacts that affect the quality of the human environment in a significant manner or to a significant extent not already considered; LBP-15-16, 81 NRC 618 (2015)

new or amended contention is considered timely if it is filed within 60 days of the date when the material information first became available to movant through service, publication, or any other means; LBP-15-1, 81 NRC 15 (2015)

new or amended contentions must satisfy the substantive contention admissibility standards, and failure to meet any of them renders a contention inadmissible; LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

no finding on emergency planning is necessary for issuance of a renewed nuclear power reactor operating license; CLI-15-6, 81 NRC 340 (2015)

no NRC rule or regulation, or any provision thereof, concerning the licensing of production and utilization facilities is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding; LBP-15-5, 81 NRC 249 (2015); LBP-15-17, 81 NRC 753 (2015)

no significant hazards consideration determination is a procedural decision barred from litigation; LBP-15-13, 81 NRC 456 (2015); LBP-15-17, 81 NRC 753 (2015)

NRC deliberately raised the admission standards for contentions to obviate serious hearing delays caused in the past by poorly defined or poorly supported contentions; LBP-15-1, 81 NRC 15 (2015)

NRC rules of practice are designed to avoid unfocused inquiry in contested proceedings; CLI-15-1, 81 NRC 1 (2015)

NRC Staff's first attempt to analyze a NEPA issue gives rise to an intervenor's first opportunity to raise contentions on the adequacy of this assessment; LBP-15-11, 81 NRC 401 (2015)

NRC Staff's safety analysis and environmental analysis occur separately, and intervenors are expected to raise safety challenges in response to the safety reports and environmental challenges in response to the environmental statements; LBP-15-11, 81 NRC 401 (2015)

once the deadline for filing petitions to intervene has passed, a party may file new or amended contentions if it is able to demonstrate good cause by meeting three requirements; LBP-15-1, 81 NRC 15 (2015)

party may petition the Commission for permission to challenge a rule, but that party must make a showing of special circumstances; LBP-15-5, 81 NRC 249 (2015)

petitioner cannot cure a deficient contention with new arguments not presented in the initial petition; LBP-15-4, 81 NRC 156 (2015)

petitioner has not satisfied reopening standards because it has not raised a significant environmental issue and has not demonstrated that a materially different result would be likely if the contention had been considered initially; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

petitioner may file new contentions if there are data or conclusions in the draft or final environmental impact statement or environmental assessment that differ significantly from data or conclusions in applicant's documents; LBP-15-11, 81 NRC 401 (2015)

petitioner may not provide support for a contention in its reply; LBP-15-5, 81 NRC 249 (2015)

petitioner may not rely on general allegations, but must show specific ties to NRC regulatory requirements or to safety in general to demonstrate a genuine dispute of fact or law; LBP-15-20, 81 NRC 829 (2015)

petitioner must demonstrate that a contention asserts an issue of law or fact that is material to the findings NRC must make to support the action that is involved in the proceeding; LBP-15-20, 81 NRC 829 (2015)

petitioner must demonstrate that a contention of omission is within the scope of the proceeding; LBP-15-5, 81 NRC 249 (2015)

petitioner must explain the basis for each proffered contention by stating alleged facts or expert opinions that support petitioner's position and on which petitioner intends to rely in litigating the contention at hearing; CLI-15-8, 81 NRC 500 (2015); LBP-15-5, 81 NRC 249 (2015)

petitioner must provide factual evidence or supporting documents that produce some doubt about the adequacy of a specified portion of applicant's documents or that provide supporting reasons that tend to

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show that there is some specified omission from applicant's documents; LBP-15-20, 81 NRC 829 (2015)

petitioner must show that a genuine dispute exists on a material issue of law or fact relating to the application; LBP-15-19, 81 NRC 815 (2015)

petitioner need not rerun applicant's own cost-benefit calculations, but must do more than merely suggest that additional factors be evaluated or that different analytical techniques be used; LBP-15-5, 81 NRC 249 (2015)

petitioner that fails to provide sufficient factual or expert support for the claims in its contention in contravention of section 2.309(f)(1)(v) also may have failed to show a genuine dispute with the application as required under section 2.309(f)(1)(vi); LBP-15-1, 81 NRC 15 (2015)

petitioner's burden on a contention of omission is to identify the omission and the supporting reasons for petitioners' belief that the application fails to contain information on a relevant matter as required by law; LBP-15-5, 81 NRC 249 (2015)

petitioner's failure to address applicant's supplemental economic analyses, demonstrate specific knowledge of the analysis, and not indicate, even broadly, that the SAMA economic cost-benefit conclusions are not sufficiently conservative renders a contention inadmissible; LBP-15-5, 81 NRC 249 (2015)

petitioner's issue of NRC Staff's compliance with its NEPA obligation to undertake a full evaluation of the environmental impacts associated with a proposed federal action is within the scope of an operating license amendment proceeding and material to the findings NRC must make; LBP-15-13, 81 NRC 456 (2015)

petitioners are not barred from contending that additional testing is necessary to show margins of safety equivalent to those of the ASME BPV Code, Section XI, Appendix G because petitioners allege noncompliance with 10 C.F.R. Part 50, Appendix G and not Appendix H; LBP-15-20, 81 NRC 829 (2015)

petitioners are not required at the contention admission stage to prove their case on the merits or even to provide expert or factual support as strong as that necessary to withstand a summary disposition motion; LBP-15-20, 81 NRC 829 (2015)

petitioners are obliged to present factual allegations and/or expert opinion necessary to support their contentions; LBP-15-1, 81 NRC 15 (2015)

petitioners are required to make a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate; LBP-15-20, 81 NRC 829 (2015)

petitioners are required to provide sufficient factual support to demonstrate a genuine dispute; LBP-15-20, 81 NRC 829 (2015)

petitioners can raise compliance issues only under 10 C.F.R. 2.206, which would allow them to petition NRC to take an enforcement action; LBP-15-5, 81 NRC 249 (2015)

petitioners cannot challenge an NRC regulation without first obtaining a waiver; LBP-15-20, 81 NRC 829 (2015)

petitioners cannot rely on a late attempt to reinvigorate thinly supported contentions by presenting entirely new arguments in reply briefs; LBP-15-4, 81 NRC 156 (2015)

petitioners do not need to cite a specific portion of the application to support a contention of omission; LBP-15-5, 81 NRC 249 (2015)

petitioners have not raised an issue material to findings that NRC must make to support final decisions and they are unable to satisfy contention admissibility standards or meet the criteria to reopen a closed record; CLI-15-4, 81 NRC 221 (2015)

petitioners may challenge a Staff guidance document such as a Regulatory Guide; LBP-15-20, 81 NRC 829 (2015)

petitioners may raise contentions seeking correction of significant inaccuracies and omissions in the environmental report; LBP-15-5, 81 NRC 249 (2015)

petitioners may raise issues not addressed by a specific regulation when unique features in the facility or ongoing development of a generic solution mean that there are some gaps in the regulatory scheme that must be addressed on a case-by-case basis; LBP-15-20, 81 NRC 829 (2015)

petitioners must do more than rest on the mere existence of requests for additional information as a basis for their contention; CLI-15-8, 81 NRC 500 (2015)

petitioners must offer more than speculation at the contention admission stage; LBP-15-5, 81 NRC 249 (2015)

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petitioners must provide a concise statement of the alleged facts or expert opinions that support their position on the issue, together with references to the specific sources and documents, on which they intend to rely to support their position on the issue; LBP-15-5, 81 NRC 249 (2015); LBP-15-20, 81 NRC 829 (2015)

petitioners must provide site-specific support to show that the severe accident mitigation alternatives analysis is unreasonable; LBP-15-5, 81 NRC 249 (2015)

petitioners question applicant's failure to consider the qualitative benefits of installing engineered filters; LBP-15-5, 81 NRC 249 (2015)

petitioners who choose to wait to raise contentions that could have been raised earlier risk the possibility that there will not be a material difference between the application and NRC Staff's review documents, thus rendering any newly proposed contention on previously available information impermissibly late; CLI-15-1, 81 NRC 1 (2015)

petitioners' argument that power reactor is being operated as a test reactor reflects a misreading of 10 C.F.R. 50.59; LBP-15-20, 81 NRC 829 (2015)

petitioners' contention challenges the sufficiency of the equivalent margins analysis to provide reasonable assurance of reactor safety and is therefore within the scope of the proceeding; LBP-15-20, 81 NRC 829 (2015)

placeholder contentions that challenge the 2014 Continued Storage Rule and associated Generic Environmental Impact Statement for Continued Storage are inadmissible; CLI-15-15, 81 NRC 803 (2015)

pleading requirements calling for a recitation of facts or expert opinion supporting the issue raised are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-15-5, 81 NRC 249 (2015); LBP-15-11, 81 NRC 401 (2015)

pleadings submitted by pro se petitioners are afforded greater leniency than petitions drafted with the assistance of counsel; LBP-15-13, 81 NRC 456 (2015)

pointing to alleged new and significant information is not enough to allow boards to adjudicate an issue resolved generically by regulation; LBP-15-5, 81 NRC 249 (2015)

proponents of new or amended contentions are required to demonstrate good cause for their filing, which includes a demonstration that the information on which the new or amended contention is based is materially different from information previously available; CLI-15-1, 81 NRC 1 (2015)

proposed rule or proposed law may not support an admissible contention because its ultimate effect is at best speculative; LBP-15-15, 81 NRC 598 (2015)

proposed rules are not binding upon administrative agencies and are not ripe for review by NRC boards; LBP-15-15, 81 NRC 598 (2015)

providing any material or document as a basis for a contention without setting forth an explanation of its significance, is inadequate to support admission of that contention; LBP-15-20, 81 NRC 829 (2015)

purpose of 10 C.F.R. 2.309(f)(1) is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-15-5, 81 NRC 249 (2015)

radiological claims that represent a direct challenge to prior license amendments authorizing extended power uprates are outside the scope of a license amendment proceeding; LBP-15-13, 81 NRC 456 (2015)

regulations can be challenged only under extremely limited circumstances; LBP-15-5, 81 NRC 249 (2015)

reply brief may not be used to present entirely new arguments in support of an existing contention or to propose a new contention, but board may consider information in a reply that legitimately amplifies an issue presented in the original petition; LBP-15-5, 81 NRC 249 (2015)

requirement for brief explanation of the basis for a contention merely requires an explanation of the rationale or theory of the contention; LBP-15-20, 81 NRC 829 (2015)

requirement that a contention refer to specific portions of the application ensures that the board will be able to determine whether the contention is within the scope of the proceeding and that applicant knows which portions of the application it must defend; LBP-15-20, 81 NRC 829 (2015)

requirement that a contention refer to specific portions of the application is satisfied when a commonsense reading of the petition makes abundantly clear which sections of the application petitioners are challenging, even though petitioners do not specifically cite particular sections; LBP-15-20, 81 NRC 829 (2015)

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requirements for an admissible contention are provided in 10 C.F.R. 2.309(f)(i)-(vi); CLI-15-8, 81 NRC 500 (2015)

requiring petitioners to proffer conclusive support for the effect of their proposed contention would improperly require boards to adjudicate the merits of contentions before admitting them; LBP-15-20, 81 NRC 829 (2015)

results of review by NRC Staff and Indian tribe of applicant's newly disclosed well log data did not paint a seriously different picture of the environmental landscape; LBP-15-16, 81 NRC 618 (2015)

rules on contention admissibility are strict by design; LBP-15-5, 81 NRC 249 (2015); LBP-15-17, 81 NRC 753 (2015)

safety culture issues are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

safety issue that does not involve aging management issues is outside the scope of the license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

severe accident mitigation alternatives analysis issues can present difficult judgment calls at the contention admission stage; LBP-15-5, 81 NRC 249 (2015)

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-15-1, 81 NRC 15 (2015)

some reasonably specific factual or legal basis is required; CLI-15-8, 81 NRC 500 (2015)

standards are strict by design; LBP-15-19, 81 NRC 815 (2015)

subject matter of contentions must impact the grant or denial of a pending license application; LBP-15-20, 81 NRC 829 (2015)

support for a contention must be provided when the contention is filed, not at some later date; LBP-15-5, 81 NRC 249 (2015)

there must be some significant link between a claimed deficiency and NRC's ultimate determination whether applicant will adequately protect the health and safety of the public and the environment; LBP-15-20, 81 NRC 829 (2015)

thinly supported contention is inadmissible; CLI-15-6, 81 NRC 340 (2015)

to challenge a Category 1 issue such as public health, petitioner must request a waiver and show that unique circumstances warrant a site-specific determination; LBP-15-5, 81 NRC 249 (2015)

to eliminate the inadmissible issue of tribal notification and to clarify the scope of the subsistence consumption issue, board narrows and reformulates a contention; LBP-15-5, 81 NRC 249 (2015)

to gain the admission of a new or amended contention, a party must meet the requirements of 10 C.F.R. 2.309(c) and (f); LBP-15-16, 81 NRC 618 (2015)

to meet the section 2.309(f)(1)(v) requirement for providing factual and expert support, petitioners must proffer at least some minimal factual and legal foundation in support of their contentions; LBP-15-1, 81 NRC 15 (2015)

to raise a genuine dispute on a material issue of law or fact, a properly formulated contention must challenge specific portions of, or alleged omissions from, the application or the agency's environmental impact statement, and provide reasons in support; LBP-15-1, 81 NRC 15 (2015)

to the extent a contention would require licensee to maintain the ERDS link or to create another ERDS-like system after its reactor is permanently shut down and defueled, it is an impermissible collateral attack on a regulation; LBP-15-4, 81 NRC 156 (2015)

to the extent petitioner is challenging the adequacy of computer modeling of plume variability, petitioner bears the burden of providing evidence specific to the license renewal applicant; LBP-15-5, 81 NRC 249 (2015)

two issues in one contention are best evaluated as separate contentions; LBP-15-5, 81 NRC 249 (2015)

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 for hearing; LBP-15-5, 81 NRC 249 (2015)

when an application is alleged to be deficient, petitioner must identify the deficiencies and provide supporting reasons for its position that such information is required; LBP-15-1, 81 NRC 15 (2015)

when an NRC regulation permits use of a particular analysis, a contention asserting that a different analysis or technique should be used is inadmissible because it indirectly attacks NRC's regulations; LBP-15-17, 81 NRC 753 (2015); LBP-15-20, 81 NRC 829 (2015)

SUBJECT INDEX

when 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-15-1, 81 NRC 15 (2015)

where petition fails on the merits, the Commission need not address procedural issues; CLI-15-10, 81 NRC 535 (2015)

with respect to the need to supplement an issued final EIS, the party offering the new contention has the burden of presenting information sufficient to show that there is a genuine issue regarding whether the NRC Staff should supplement its document; LBP-15-16, 81 NRC 618 (2015)

CONTENTIONS, LATE-FILED

contention that environmental assessment fails to adequately describe air quality impacts is inadmissible as untimely; LBP-15-11, 81 NRC 401 (2015)

contentions relying on information and findings discussed in the notice of proposed rulemaking, as opposed to tentative rules or policy determinations, are not timely filed; LBP-15-15, 81 NRC 598 (2015)

eight-factor test that allowed a board to consider new or amended contentions that did not meet the three requirements for admissibility of late-filed contentions available under 10 C.F.R. 2.309(f)(2) is no longer available; LBP-15-1, 81 NRC 15 (2015)

good cause doesn't exist where petitioner's late-filed contention is due to careless inadvertence and not, as petitioner claimed, attributable to technical difficulties with the E-Filing system; LBP-15-4, 81 NRC 156 (2015)

good cause for a newly proposed contention exists when information on which it is based was not previously available and is materially different than information previously available and has been submitted in a timely fashion based on the availability of the subsequent information; LBP-15-1, 81 NRC 15 (2015); LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

if a party submits a proposed contention after the initial filing deadline announced in the applicable Federal Register notice for submitting a hearing petition, it will not be entertained absent a determination by the presiding officer that a participant has demonstrated good cause; LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

if applicant's enhanced monitoring program is inadequate, then applicant's unenhanced monitoring program embodied in its license renewal application was *a fortiori* inadequate, and intervenors had a regulatory obligation to challenge it in their original petition to intervene; LBP-15-1, 81 NRC 15 (2015)

if intervenors sought to introduce new issues, then they should have filed a new or amended contention; CLI-15-9, 81 NRC 512 (2015)

in addition to being timely, new contention must satisfy the six-factor admissibility standard; LBP-15-19, 81 NRC 815 (2015)

material difference must exist between information on which a contention is based and information that was previously available, e.g., a difference between the environmental report and the draft EIS or the draft EIS and the final EIS; CLI-15-1, 81 NRC 1 (2015)

most important among the late-filing factors is demonstration of good cause; LBP-15-1, 81 NRC 15 (2015)

motion to reopen that relates to a contention not previously in controversy must satisfy the section 2.309(c) requirements for new or amended contentions filed after the original hearing petition deadline; LBP-15-14, 81 NRC 591 (2015)

new contention is inadmissible because it relies on information that is not materially different from information previously available and already in the record; LBP-15-16, 81 NRC 618 (2015)

new contentions cannot be based on previously available information; LBP-15-11, 81 NRC 401 (2015)

new or amended contention is considered timely if it is filed within 60 days of the date when the material information first became available to the moving party through service, publication, or any other means; LBP-15-1, 81 NRC 15 (2015)

new or amended contentions must satisfy the substantive contention admissibility standards and failure to meet any of them renders a contention inadmissible; LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

once the deadline for filing petitions to intervene has passed, a party may file new or amended contentions if it is able to demonstrate good cause by meeting three requirements; LBP-15-1, 81 NRC 15 (2015); LBP-15-19, 81 NRC 815 (2015)

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petitioner may file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement or environmental assessment that differ significantly from data or conclusions in applicant's documents; LBP-15-11, 81 NRC 401 (2015)

petitioners who choose to wait to raise contentions that could have been raised earlier risk the possibility that there will not be a material difference between the application and NRC Staff's review documents, thus rendering any newly proposed contention based on previously available information impermissibly late; CLI-15-1, 81 NRC 1 (2015)

proponents of new or amended contentions are required to demonstrate good cause for their filing, which includes a demonstration that the information on which the new or amended contention is based is materially different from information previously available; CLI-15-1, 81 NRC 1 (2015)

requirements for demonstrating good cause are the same as the requirements for filing late contentions previously available under section 2.309(f)(2)(i)-(iii); LBP-15-1, 81 NRC 15 (2015)

section 2.309(c)(1)(iii) does not stipulate what is considered timely, and the board looks to Commission precedent; LBP-15-11, 81 NRC 401 (2015)

to gain the admission of a new or amended contention, a party must meet the requirements of 10 C.F.R. 2.309(c) and (f); LBP-15-16, 81 NRC 618 (2015)

when a contention is considered to be timely filed is not specified in 10 C.F.R. 2.309(c)(1)(iii); LBP-15-15, 81 NRC 598 (2015)

CONTESTED LICENSE APPLICATIONS

NRC rules of practice are designed to avoid unfocused inquiry in contested proceedings; CLI-15-1, 81 NRC 1 (2015)

CONTINUED STORAGE RULE

absent a rule waiver, NRC Staff is not expected to revisit the impact determinations made in the Continued Storage GEIS as part of its site-specific NEPA reviews; CLI-15-10, 81 NRC 535 (2015)

admission of a "placeholder" contention is not necessary to ensure that petitioner's challenges to the Continued Storage Rule and GEIS receive a full and fair airing; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

assumptions used in the analysis of impacts of continued storage of spent fuel are sufficiently conservative to bound the impacts such that variances that may occur between sites are unlikely to result in environmental impact determinations greater than those presented in the continued storage generic environmental impact statement; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

because 10 C.F.R. 51.23(b) prescribes a specific procedure for incorporating the environmental impacts of continued storage into a site-specific analysis, this procedure, rather than a procedure set forth in the general provisions of Part 51, governs NRC environmental review; CLI-15-10, 81 NRC 535 (2015)

Commission adopted a generic environmental impact statement to identify and analyze the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-12, 81 NRC 452 (2015)

Commission denied motions for leave to file new contentions concerning the Continued Storage Rule; LBP-15-7, 81 NRC 391 (2015)

Commission denied petition to supplement and declined to admit "placeholder" contention; CLI-15-13, 81 NRC 555 (2015)

Commission directed licensing boards to reject pending waste confidence contentions after adopting a generic environmental impact statement to identify and analyze environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-5, 81 NRC 249 (2015)

concurrent with approval of the final Continued Storage Rule and companion Generic Environmental Impact Statement, the Commission lifted the suspension on final licensing decisions and directed that the proposed spent fuel storage contentions be dismissed; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

contention that supplementation of the environmental impact statement is necessary to allow members of the public to lodge placeholder contentions challenging Commission reliance, in individual licensing proceedings, on the continued storage GEIS and Continued Storage Rule is inadmissible; CLI-15-10, 81 NRC 535 (2015)

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“deemed incorporated” function of 10 C.F.R. 51.23(b) provides administrative efficiency by adding the environmental impacts of continued storage to site-specific environmental impact statements without additional work by the Staff; CLI-15-10, 81 NRC 535 (2015)

environmental impacts of continued storage have been incorporated into the environmental impact statements at issue in the proceedings by operation of law; CLI-15-10, 81 NRC 535 (2015)

following adoption of a revised Continued Storage Rule, boards were ordered to reject continued storage contentions pending before them, except contentions unresolved by the Continued Storage Rule; CLI-15-6, 81 NRC 340 (2015)

generic analyses of the environmental impacts of continued storage and disposal in the context of NRC reactor licensing proceedings are acceptable; CLI-15-4, 81 NRC 221 (2015)

generic environmental impact statement for spent fuel pools is not limited to discussing only normal operations, but also discusses potential accidents and other nonroutine events, and thus need not be included in the severe accident mitigation alternatives analysis for license renewal; LBP-15-5, 81 NRC 249 (2015)

impact determinations in the continued storage generic environmental impact statement shall be deemed incorporated into the environmental impact statements associated with combined license and license renewal applications; CLI-15-10, 81 NRC 535 (2015)

impacts of continued storage will not vary significantly across sites and can be analyzed generically; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

members of the public had the opportunity to fully participate in the Continued Storage rulemaking proceeding; CLI-15-10, 81 NRC 535 (2015)

NRC adopted a generic environmental impact statement identifying and analyzing environmental impacts of continued storage of spent nuclear fuel and associated revisions to the Temporary Storage Rule in 10 C.F.R. 51.23; LBP-15-1, 81 NRC 15 (2015)

NRC adopted a generic environmental impact statement to identify and analyze environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-5, 81 NRC 249 (2015)

NRC need not undertake incorporation by reference of a generic environmental impact statement where the Commission has already taken public comment and performed a comprehensive analysis of the environmental consequences of continued spent fuel storage; CLI-15-10, 81 NRC 535 (2015)

placeholder contentions that challenge the 2014 Continued Storage Rule and associated Generic Environmental Impact Statement for Continued Storage are inadmissible; CLI-15-15, 81 NRC 803 (2015)

rule and supporting generic environmental impact statement to assess the environmental impacts of spent fuel storage after the end of a reactor’s license term were approved; CLI-15-10, 81 NRC 535 (2015)

rule makes generic safety findings concerning feasibility and capacity of spent fuel disposal; LBP-15-9, 81 NRC 396 (2015)

to the extent NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in the adjudicatory process; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

when considering continued storage in licensing reviews with previously completed final environmental impact statements, NRC Staff is expected to use a consistent and transparent process to ensure that all stakeholders are aware of how the environmental impacts of continued storage are considered in each affected licensing action; CLI-15-10, 81 NRC 535 (2015)

CONTROL RODS
See Reactor Control Rods

CONTROLLED ACCESS
term is defined as any temporarily or permanently established area that is clearly demarcated, access to which is controlled, and which affords isolation of the material or persons within it; CLI-15-9, 81 NRC 512 (2015)

COOLANT
petitioners’ concerns about tube leaks, unplanned power changes, and potential primary coolant contamination did not constitute any violations that were more than minor; DD-15-2, 81 NRC 205 (2015)

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COOLANT SYSTEM, MAIN

licensee's operation of primary coolant pumps contrary to plant licensing and the FSAR is a violation of 10 C.F.R. Part 50, Appendix B, Criterion III; DD-15-3, 81 NRC 713 (2015)
request for immediate action to prevent restart because a piece of primary coolant pump impeller was lodged between the reactor vessel and the flow skirt is denied; DD-15-3, 81 NRC 713 (2015)
request for licensee to replace the primary coolant pumps with others designed for their intended duty is denied; DD-15-3, 81 NRC 713 (2015)

COOLING SYSTEMS

See Spent Fuel Cooling System

CORROSION

although intervenors disagree with applicant's opportunistic inspection strategy for managing rebar corrosion, they merely assert, and do not plausibly explain, how applicant's approach will lead to a material safety impact; LBP-15-1, 81 NRC 15 (2015)

COST-BENEFIT ANALYSIS

See Benefit-Cost Analysis

COSTS

generalized economic cost arguments, unsupported by asserted facts or expert opinion, are insufficient to show a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 15 (2015)

COUNCIL ON ENVIRONMENTAL QUALITY

Advisory Council on Historic Preservation regulations provide guidance on agency compliance with NEPA and are not binding on NRC when the agency has not expressly adopted them, but are entitled to considerable deference; LBP-15-16, 81 NRC 618 (2015)

NRC has not expressly adopted CEQ regulations, but they are entitled to considerable deference; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

CRACKING

because the shield building functions as a radiation and biological shield, failure or collapse of the shield building due to cracking propagation could lead to health and safety impacts and thus petitioner's contention concerns a matter that could impact the grant or denial of a pending license application; LBP-15-1, 81 NRC 15 (2015)

board has ample authority to ensure that evidence offered concerning microcracking is limited to that specific material issue and does not stray into issues outside the scope of the license amendment proceeding; LBP-15-20, 81 NRC 829 (2015)

directing NRC Staff to investigate a safety issue that the board could not reach through the adjudicatory process may put the Commission in a position, after receiving views of applicant if it desired, to assure itself about the significance, or lack thereof, of the shield building cracking issues raised by intervenors, and to direct such followup proceedings, if any, as it might deem appropriate; LBP-15-1, 81 NRC 15 (2015)

CULTURAL RESOURCES

agencies must take a hard look at preserving important historic and cultural aspects of our national heritage; LBP-15-16, 81 NRC 618 (2015)

agency failed to take a hard look at cumulative impacts on cultural resources under NEPA even though the agency had satisfied its obligations under NHPA to consult with the tribe; LBP-15-16, 81 NRC 618 (2015)

consultation must provide an Indian tribe with a reasonable opportunity to identify its concerns about historic properties, advise on their identification and evaluation, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects; LBP-15-16, 81 NRC 618 (2015)

federal agencies must consult with any Indian tribe that attaches religious and cultural significance to the sites; LBP-15-16, 81 NRC 618 (2015)

final supplemental environmental impact statement must include an analysis of cultural impacts; LBP-15-16, 81 NRC 618 (2015)

harming Native American artifacts would constitute an irreparable injury because artifacts are, by their nature, unique, and their historical and cultural significance make them difficult to value monetarily; LBP-15-2, 81 NRC 48 (2015)

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irreparable harm element of the test for issuance of injunctive relief was met where the tribe's evidence showed that a phase of the project would involve damage to at least one known site, and virtually ensure some loss or damage; LBP-15-2, 81 NRC 48 (2015)

materials license application must provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that cultural and historic resources are identified and protected; LBP-15-16, 81 NRC 618 (2015)

NRC Staff must include in the final supplemental environmental impact statement an analysis of significant problems and objections raised by any affected Indian tribes, and by other interested persons; LBP-15-16, 81 NRC 618 (2015)

NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 48 (2015)
overall record for the licensing action includes a complete analysis of the cultural resources; LBP-15-16, 81 NRC 618 (2015)

preliminary injunction halting a solar energy project was granted based on a tribal claim that the project would not avoid most of the 459 cultural sites identified, and that the NEPA and NHPA process had been insufficient; LBP-15-2, 81 NRC 48 (2015)

CULTURAL SENSITIVITY

agencies are to ensure that the federal government operates within a government-to-government relationship with federally recognized Native American tribes, reflecting respect for the rights of self-government due the sovereign tribal governments; LBP-15-16, 81 NRC 618 (2015)

federal agencies must consult with any Indian tribe that attaches religious and cultural significance to potentially impacted historic properties; LBP-15-16, 81 NRC 618 (2015)

federal policy supports special consideration where tribal religious exercise is threatened; LBP-15-16, 81 NRC 618 (2015)

CUMULATIVE IMPACTS ANALYSIS

admissibility of contention that final environmental assessment fails to adequately analyze cumulative impacts is decided; LBP-15-11, 81 NRC 401 (2015)

agency failed to take a hard look at cumulative impacts on cultural resources under NEPA even though the agency had satisfied its obligations under NHPA to consult with the tribe; LBP-15-16, 81 NRC 618 (2015)

when drafting an environmental impact statement, agency's scope of review must include analysis of any connected or cumulative actions to the central proposed action; LBP-15-16, 81 NRC 618 (2015)

CURRENT LICENSING BASIS

ability of a facility to shut down safely following a potential earthquake is a current operating issue, and is not unique to whether licenses should be renewed; LBP-15-6, 81 NRC 314 (2015)

allegations of noncompliance with already-issued, existing, and open Commission orders are part of the CLB and therefore cannot be challenged in a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

applicant has the burden of providing reasonable assurance that the CLB will be maintained throughout the renewal period; LBP-15-5, 81 NRC 249 (2015)

Commission distinguishes between aging management issues, reviewed at the time of license renewal, and operational issues, reviewed at all times as part of the CLB; LBP-15-5, 81 NRC 249 (2015)

concerns with the current design and operation of a nuclear power plant are more properly addressed through a petition for enforcement action; LBP-15-13, 81 NRC 456 (2015)

except for the detrimental effects of aging on the functionality of certain plant systems, structures, and components in the period of extended operation, the regulatory process is adequate to ensure that the licensing bases of all currently operating plants provide and maintain an acceptable level of safety; LBP-15-6, 81 NRC 314 (2015)

NRC's ongoing regulatory process ensures that the CLB of an operating plant remains acceptably safe; LBP-15-5, 81 NRC 249 (2015)

this term of art is comprehended as the various NRC requirements applicable to a specific plant that are in effect at the time of a license renewal application; LBP-15-20, 81 NRC 829 (2015)

DEADLINES

board is directed to rule within 140 days of the date of the referral on whether the hearing request should be granted; CLI-15-14, 81 NRC 729 (2015)

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contention filing deadlines support the Commission's interest in promoting efficient adjudication;

LBP-15-11, 81 NRC 401 (2015)

determination as to whether requests or petitions are filed in a timely manner shall be subject to a reasonableness standard and are not subject to the 30-day deadline applicable to motions by existing parties to add or amend contentions; LBP-15-6, 81 NRC 314 (2015)

each licensee shall complete implementation of the ERDS by February 13, 1993, or before initial escalation to full power, whichever comes later; LBP-15-4, 81 NRC 156 (2015)

environmental contentions are expected in response to applicant's or NRC Staff's environmental reviews, and contentions regarding their adequacy cannot be expected to be proffered at an earlier stage of the proceeding before the documents are available; LBP-15-11, 81 NRC 401 (2015)

in proceedings for which a Federal Register notice of agency action is published, a hearing request must be filed not later than the time specified in the notice or if no notice is specified, 60 days from the date of publication of the notice; CLI-15-5, 81 NRC 329 (2015)

in proceedings for which a notice of agency action is not published, a hearing request must be filed not later than the latest of 60 days after publication of notice on the NRC Web site or 60 days after the requestor receives actual notice of a pending application but not more than 60 days after agency action on the application; CLI-15-5, 81 NRC 329 (2015)

intervenor is not allowed to postpone filing a contention challenging environmental or safety information or analysis until Staff issues some document that collects, summarizes, and places into context the facts supporting that contention; LBP-15-11, 81 NRC 401 (2015)

intervention petition must be filed within the time specified in any notice of proposed action; LBP-15-13, 81 NRC 456 (2015)

new or amended contention is considered timely if it is filed within 60 days of the date when the material information first became available to the moving party through service, publication, or any other means; LBP-15-1, 81 NRC 15 (2015)

notification of renewal of source materials license triggers the 5-day filing deadline to apply for a stay of the license; LBP-15-2, 81 NRC 48 (2015)

timeliness of an initial hearing petition in different situations is defined as being filed between 20 and 60 days after certain specified events; LBP-15-11, 81 NRC 401 (2015)

when a contention is considered to be timely filed is not specified in 10 C.F.R. 2.309(c)(1)(iii); LBP-15-15, 81 NRC 598 (2015)

when a filing deadline is approaching, notwithstanding that an attorney is engaged in good-faith settlement discussions, prudence should compel the attorney to take all actions that are necessary to ensure the deadline will be met in the event that settlement discussions are unsuccessful; LBP-15-4, 81 NRC 156 (2015)

DECISION ON THE MERITS

in assessing whether applicant/licensee adequately carries out a licensing directive, boards are to assume that NRC Staff will be fair and judge the matter of applicant/licensee's compliance on the merits; LBP-15-3, 81 NRC 65 (2015)

merits questions cannot be resolved at the contention admission stage; LBP-15-20, 81 NRC 829 (2015)

NRC Staff guidance is entitled to special weight in a decision on the merits; LBP-15-20, 81 NRC 829 (2015)

requiring petitioners to proffer conclusive support for the effect of their proposed contention would improperly require boards to adjudicate the merits of contentions before admitting them; LBP-15-20, 81 NRC 829 (2015)

DECISIONS

board's ultimate NEPA judgments are made on the basis of the entire adjudicatory record in addition to NRC Staff's final supplemental environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

See also Initial Decisions; Licensing Board Decisions; Partial Initial Decisions; Record of Decision

DECOMMISSIONING

NRC expressly altered the policy and application of 10 C.F.R. 50.59 as it related to decommissioning activities, permitting licensee to dismantle major structural components without prior NRC approval of a final decommissioning plan; CLI-15-14, 81 NRC 729 (2015)

nuclear power facility arguably exists until final decommissioning, which may take up to 60 years, or longer if approved by the Commission; LBP-15-4, 81 NRC 156 (2015)

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regulatory history, like 10 C.F.R. Part 50, App. E, § VI itself, is focused entirely on implementation and maintenance of the ERDS operations with not one word about decommissioning the system; LBP-15-4, 81 NRC 156 (2015)

DECOMMISSIONING COSTS

decommissioning funding requirements encompass costs of low-level waste burial; CLI-15-8, 81 NRC 500 (2015)

DECOMMISSIONING FUNDING

financial assurance for decommissioning may be based on the prepayment method; CLI-15-8, 81 NRC 500 (2015)

formulas, based on reactor type and power level, are provided in 10 C.F.R. 50.75(c) for determining minimum dollar amounts required to demonstrate reasonable assurance of decommissioning funding; CLI-15-8, 81 NRC 500 (2015)

license transfer applicant must show reasonable assurance of sufficient funds to decommission the facility; CLI-15-8, 81 NRC 500 (2015)

DECOMMISSIONING FUNDING PLANS

financial surety arrangements must be established by each mill operator before the commencement of operations to ensure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas; LBP-15-15, 81 NRC 598 (2015)

DECOMMISSIONING PLANS

admissibility of contention that applicant submit a decommissioning plan and updated financial plans related to decommissioning is decided; LBP-15-15, 81 NRC 598 (2015)

licensees must submit for NRC approval their plans to manage spent fuel after the permanent cessation of reactor operation; CLI-15-4, 81 NRC 221 (2015)

DECONTAMINATION

parties are directed to provide further briefing on questions relating to severe accident decontamination time values and costs used in the SAMA analysis; CLI-15-2, 81 NRC 213 (2015)

DEFICIENCIES

deficiency in a final environmental impact statement is not automatic ground for reversal of an order granting a permit although the issue has been opened for full consideration in an agency hearing; CLI-15-6, 81 NRC 340 (2015)

DEFINITIONS

Administrative Procedure Act broadly defines “rule” to include nearly every statement an agency may make; LBP-15-15, 81 NRC 598 (2015)

“baseline” data describe results of applicant’s preoperational or baseline groundwater quality sampling program providing data on project-wide groundwater conditions; LBP-15-16, 81 NRC 618 (2015)

“byproduct material” is categorized as tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-15-11, 81 NRC 401 (2015); LBP-15-16, 81 NRC 618 (2015)

“Category IA” material means any strategic special nuclear material directly usable in the manufacture of a nuclear explosive device; CLI-15-9, 81 NRC 512 (2015)

“Category IB” material refers to all strategic special nuclear material other than Category IA material; CLI-15-9, 81 NRC 512 (2015)

“construction” does not include site exploration, including preconstruction monitoring to establish background information related to the environmental impacts of construction or operation, or the protection of environmental values; LBP-15-3, 81 NRC 65 (2015)

contentions of omission and contentions of inadequacy are defined; LBP-15-5, 81 NRC 249 (2015)

“controlled access area” is any temporarily or permanently established area that is clearly demarcated, access to which is controlled, and which affords isolation of the material or persons within it; CLI-15-9, 81 NRC 512 (2015)

“cumulative impacts” result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions; LBP-15-16, 81 NRC 618 (2015)

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- “current licensing basis” is a term of art comprehending the various NRC requirements applicable to a specific plant that are in effect at the time of a license renewal application; LBP-15-20, 81 NRC 829 (2015)
- “environmental document” includes environmental assessment, environmental impact statement, finding of no significant impact, and notice of intent; LBP-15-16, 81 NRC 618 (2015)
- for a potential injury to be irreparable, it must be shown to be imminent, certain, and great; LBP-15-2, 81 NRC 48 (2015)
- “formula kilogram” means strategic special nuclear material in any combination in a quantity of 1000 grams computed by the formula, $\text{grams} = (\text{grams contained U-235}) + 2.5 (\text{grams U-233} + \text{grams plutonium})$; CLI-15-9, 81 NRC 512 (2015)
- “good cause” in 10 C.F.R. 2.307 does not share the same definition that is used for good cause in section 2.309(c); LBP-15-1, 81 NRC 15 (2015)
- “informal” consultation is an optional process that includes all discussions, correspondence, etc., between the U.S. Fish and Wildlife Service and the federal agency designed to assist the federal agency in determining whether formal consultation or a conference is required with the Service under section 402.13; LBP-15-11, 81 NRC 401 (2015)
- “material access area” is any location that contains special nuclear material, within a vault or a building, the roof, walls, and floor of which constitute a physical barrier; CLI-15-9, 81 NRC 512 (2015)
- neither “baseline” nor “background” is explicitly defined in 10 C.F.R. Part 40, Appendix A; LBP-15-16, 81 NRC 618 (2015)
- nuclear power facility has shut down permanently within the meaning of 10 C.F.R. Part 50, Appendix E, § VI.2 when it has permanently ceased reactor operations, and permanently removed fuel from the reactor vessel, as those terms are defined in 10 C.F.R. 50.2; LBP-15-4, 81 NRC 156 (2015)
- “owned, controlled or dominated” refers to relationships in which the will of one party is subjugated to the will of another; CLI-15-7, 81 NRC 481 (2015)
- “permanent cessation of operations” for a nuclear power reactor facility is defined as a certification by a licensee to NRC that it has permanently ceased or will permanently cease reactor operations; LBP-15-4, 81 NRC 156 (2015)
- “permanent fuel removal” from a nuclear power reactor facility is defined as a certification by licensee to NRC that it has permanently removed all fuel assemblies from the reactor vessel; LBP-15-4, 81 NRC 156 (2015)
- “power of detection” means the probability that the critical value of a statistical test will be exceeded when there is an actual loss of a specific quantity of strategic special nuclear material; CLI-15-9, 81 NRC 512 (2015)
- “primary groundwater restoration” is to return the constituent to background levels; LBP-15-3, 81 NRC 65 (2015)
- “quality assurance” comprises all planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service; DD-15-2, 81 NRC 205 (2015)
- safety significance of a structure, system, or component is defined in terms of its safety-related functions, and within the scope of license renewal are included those SSCs whose failure could prevent satisfactory accomplishment of the safety-related function; CLI-15-6, 81 NRC 340 (2015)
- “secondary groundwater restoration” is restoration of constituent levels to the drinking water limits enumerated in Appendix A, Table 5C; LBP-15-3, 81 NRC 65 (2015)
- “source material” is defined as uranium being extracted through the ISL process; LBP-15-16, 81 NRC 618 (2015)
- special nuclear material “item” is any discrete quantity or container of special nuclear material or source material, not undergoing processing, having a unique identity and also having an assigned element and isotope quantity; CLI-15-9, 81 NRC 512 (2015)
- “strategic special nuclear material” means uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium; CLI-15-9, 81 NRC 512 (2015)
- “synergistic” refers to the joint action of different parts or sites which, acting together, enhance the effects of one or more individual sites; LBP-15-5, 81 NRC 249 (2015)

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“tamper-safing” refers to use of devices on containers or vaults in a manner and at a time that ensures a clear indication of any violation of the integrity of previously made measurements of special nuclear material within the container or vault; CLI-15-9, 81 NRC 512 (2015)

“unit process” means an identifiable segment or segments of processing activities for which the amounts of input and output strategic special nuclear material are based on measurements; CLI-15-9, 81 NRC 512 (2015)

“vault” is a windowless enclosure with walls, floor, roof and door(s) designed and constructed to delay penetration from forced entry; CLI-15-9, 81 NRC 512 (2015)

DELAY

admissibility of contention that final environmental assessment failed to conduct the required hard look at impacts of the proposed mine associated with restoration standards and schedules, including delays, resulting from the proposed rules, and failure to describe such impacts in the final EA is decided; LBP-15-15, 81 NRC 598 (2015)

DENIAL OF LICENSE

NRC Staff is instructed to promptly issue its approval or denial of an application consistent with its findings, despite the pendency of a hearing; LBP-15-16, 81 NRC 618 (2015)

DEPARTMENT OF ENERGY

responsibility for constructing and operating a waste repository was assigned to the Department of Energy, not NRC; CLI-15-4, 81 NRC 221 (2015)

DESIGN

spent fuel storage systems must be designed to ensure adequate safety under normal and postulated accident conditions; CLI-15-4, 81 NRC 221 (2015)

See also Containment Design

DESIGN BASIS

admissibility of contention that a license amendment will be required for licensee to update and maintain accurate design basis documents is decided; CLI-15-5, 81 NRC 329 (2015)

existing containment vent systems at BWRs with Mark I containments provide a capability to vent the containment under design-basis conditions; DD-15-1, 81 NRC 193 (2015)

DESIGN CERTIFICATION

applicants referencing a certified design must provide sufficient information for NRC Staff to determine whether the site’s characteristics fall within the design’s parameters; CLI-15-13, 81 NRC 555 (2015)
under its certified design, the Economic Simplified Boiling Water Reactor could maintain circulation long enough to permit safe shutdown of the reactor even if it were to lose offsite power and all of its backup generators failed to operate; LBP-15-5, 81 NRC 249 (2015)

DIESEL GENERATORS

under its certified design, the Economic Simplified Boiling Water Reactor could maintain circulation long enough to permit safe shutdown of the reactor even if it were to lose offsite power and all of its backup generators failed to operate; LBP-15-5, 81 NRC 249 (2015)

DISCLOSURE

lead agency must make available to the public the results of relevant monitoring of mitigation measures; LBP-15-16, 81 NRC 618 (2015)

DOCUMENTARY MATERIAL

“environmental document” includes environmental assessment, environmental impact statement, finding of no significant impact, and notice of intent; LBP-15-16, 81 NRC 618 (2015)

DOCUMENTATION

admissibility of contention that a license amendment will be required for licensee to update and maintain accurate design basis documents is decided; CLI-15-5, 81 NRC 329 (2015)

ruling that supplements the record should state clearly what evidence the board found credible, whether the evidence supports or alters NRC Staff’s conclusions in the environmental impact statement, and what the impact of the proposed action for the specific issue is expected to be; CLI-15-6, 81 NRC 340 (2015)

DRAFT ENVIRONMENTAL IMPACT STATEMENT

additional content is required in a final environmental impact statement compared to a draft EIS; LBP-15-3, 81 NRC 65 (2015)

SUBJECT INDEX

agencies shall prepare supplements to either draft or final EISs if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; LBP-15-13, 81 NRC 456 (2015)

although a draft supplemental environmental impact statement may rely in part on applicant's environmental report, NRC Staff must independently evaluate and be responsible for the reliability of all information used in the DSEIS; LBP-15-3, 81 NRC 65 (2015)

although NRC has issued a generic environmental impact statement for in situ uranium recovery facilities that assesses potential ISR facility construction/operation/decommissioning impacts, for the initial licensing of each individual ISR facility, NRC Staff will first prepare a draft supplemental EIS; LBP-15-3, 81 NRC 65 (2015)

analysis for all draft and final EISs, by virtue of section 51.90, will, to the fullest extent practicable, quantify the various factors considered; LBP-15-3, 81 NRC 65 (2015)

as long as the DEIS takes a hard look at the environmental impacts from licensing a plant, nothing in NEPA requires NRC Staff's analysis to preclude any particular environmental impact; LBP-15-19, 81 NRC 815 (2015)

contention claiming that NRC Staff's consultation was inadequate does not ripen until issuance of NRC Staff's draft environmental impact statement; LBP-15-5, 81 NRC 249 (2015)

contention that DEIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that they will change the plume dynamics of the industrial wastewater facility/cooling canal contaminant plume is inadmissible; LBP-15-19, 81 NRC 815 (2015)

contention that DEIS must identify the percentage of radial collector well water drawn from underneath the industrial wastewater facility is inadmissible; LBP-15-19, 81 NRC 815 (2015)

in consultation with identified parties, agency must develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effects of the undertaking on historic properties and describe them in the environmental assessment or draft environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

intervenor fail to specify what other alternatives to the license renewal application should be discussed in the draft supplemental environmental impact statement, much less show that any proposed alternative would satisfy the purpose of applicant's proposed action; LBP-15-1, 81 NRC 15 (2015)

it is not clear NRC Staff relied upon the generic environmental impact statement when preparing the draft supplemental environmental impact statement because it was not incorporated by reference or mentioned in any other manner; LBP-15-11, 81 NRC 401 (2015)

legal requirements applicable to a draft EIS, as specified in sections 51.70(b) and 51.71, are imposed on a final EIS; LBP-15-3, 81 NRC 65 (2015)

migration tenet applies when information in the draft environmental impact statement is sufficiently similar to information in applicant's environmental report, and allows previously admitted contentions challenging the environmental report to apply to relevant portions of the DSEIS; LBP-15-16, 81 NRC 618 (2015)

relative to an individual ISR facility, when NRC Staff formulates its draft and final supplemental environmental impact statement conclusions regarding the environmental impacts of a proposed action or alternative actions, it uses as guidance a standard scheme to categorize or quantify the impacts; LBP-15-3, 81 NRC 65 (2015)

DRY CASK STORAGE

structural integrity of GE Mark I boiling water reactor spent fuel pools and spent fuel management in dry storage casks are discussed; DD-15-1, 81 NRC 193 (2015)

suspension request that would have halted final licensing decisions pending action on a petition for rulemaking regarding NRC Staff's review of the potential expedited transfer of spent fuel from pools to dry casks was denied; CLI-15-13, 81 NRC 555 (2015)

EARLY SITE PERMITS

if applicant did not pursue an early site permit, all relevant site characteristics, including site geology, hydrology, seismology, and man-made hazards, as well as potential environmental impacts of the project, were studied as part of NRC Staff's combined license review and are within the scope of the Commission decision; CLI-15-13, 81 NRC 555 (2015)

in determining whether a license amendment, construction permit, or early site permit will be issued to applicant, the Commission is guided by the considerations that govern issuance of initial licenses,

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construction permits, or early site permits to the extent applicable and appropriate; LBP-15-20, 81 NRC 829 (2015)

EARTHQUAKE ZONES

request that NRC order the immediate shutdown of all nuclear power reactors that are known to be located on or near an earthquake fault line is denied; DD-15-6, 81 NRC 884 (2015)

EARTHQUAKES

ability of a facility to shut down safely following a potential earthquake is a current operating issue, and is not unique to whether licenses should be renewed; LBP-15-6, 81 NRC 314 (2015)

admissibility of contention that environmental assessment failed to analyze impacts on the project from earthquakes, especially concerning secondary porosity and adequate confinement is decided; LBP-15-11, 81 NRC 401 (2015)

contention that operating license should not be renewed unless and until applicant establishes that the plant can withstand and be safely shut down following an earthquake is not within the scope of a license renewal proceeding; LBP-15-6, 81 NRC 314 (2015)

See also Seismic Analysis; Seismic Design

ECONOMIC EFFECTS

petitioner's failure to address applicant's supplemental economic analyses, demonstrate specific knowledge of the analysis, and not indicate, even broadly that the SAMA economic cost-benefit conclusions are not sufficiently conservative renders a contention inadmissible; LBP-15-5, 81 NRC 249 (2015)

ECONOMIC ISSUES

generalized economic cost arguments, unsupported by asserted facts or expert opinion, are insufficient to show a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 15 (2015)

ECONOMIC SIMPLIFIED BOILING WATER REACTOR

under its certified design, the ESBWR could maintain circulation long enough to permit safe shutdown of the reactor even if it were to lose offsite power and all of its backup generators failed to operate; LBP-15-5, 81 NRC 249 (2015)

EFFECTIVENESS

NRC regulations appropriately require a hearing before the proposed license amendment becomes effective whenever the amendment creates the possibility of a new or different kind of accident; LBP-15-20, 81 NRC 829 (2015)

See also Immediate Effectiveness; Stay of Effectiveness

ELECTRICAL EQUIPMENT

inspection to determine effects of wet or underwater conditions on underground safety-related electrical cables is discussed; DD-15-1, 81 NRC 193 (2015)

transformer is an active component because it undergoes a change in properties when it performs its intended function; CLI-15-6, 81 NRC 340 (2015)

ELECTRONIC FILING

Commission exercises its discretion to consider briefs that were not filed via the agency's E-Filing system; LBP-15-4, 81 NRC 156 (2015)

failure to comply with NRC's e-filing requirements without good cause or without obtaining an exemption from the requirements under 10 C.F.R. 2.302(g) can result in rejection of a pleading; LBP-15-4, 81 NRC 156 (2015)

good cause doesn't exist where petitioner's late-filed contention is due to careless inadvertence and not, as petitioner claimed, attributable to technical difficulties with the E-Filing system; LBP-15-4, 81 NRC 156 (2015)

State intervenor provided good cause for its late E-filing submission because the State submitted its petition to NRC by e-mail before the deadline lapsed and the delay was purely a matter of obtaining digital credentials for the system, not an attempt to gain extra time to prepare a pleading or otherwise to flout NRC's procedural requirements; LBP-15-4, 81 NRC 156 (2015)

EMBRITTLEMENT

application to use alternate pressurized thermal shock rule must contain the projected embrittlement reference temperatures along various portions of the reactor pressure vessel, from the present to a future point, compared to the alternate screening criteria; LBP-15-17, 81 NRC 753 (2015)

application to use alternate pressurized thermal shock rule must contain an assessment of flaws in the reactor pressure vessel; LBP-15-17, 81 NRC 753 (2015)

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consistency check compares mean and slope of the embrittlement model curve against surveillance data and checks to confirm that outliers fall within acceptable residual values provided in the regulation; LBP-15-17, 81 NRC 753 (2015)

consistency check seeks to compare, for a specific material type, the model's projected embrittlement with the actual embrittlement values at the same fluence provided by material samples; LBP-15-17, 81 NRC 753 (2015)

differing amounts of copper, nickel, phosphorus, and manganese between material samples for the consistency check are accounted for; LBP-15-17, 81 NRC 753 (2015)

if fewer than three surveillance data points exist for a specific material, then the embrittlement model must be used without performing the consistency check; LBP-15-17, 81 NRC 753 (2015)

if the embrittlement model deviates from the physical samples over the limits specified in 10 C.F.R. 50.61a(f)(6)(vi), licensee must submit additional evaluations and seek approval for the deviations from the Director of the Office of Nuclear Reactor Regulation; LBP-15-17, 81 NRC 753 (2015)

if the reference values projected at specific areas of the reactor pressure vessel for the end of life of the plant surpass the current screening criteria, licensee must submit a safety analysis and obtain NRC approval to continue to operate; LBP-15-17, 81 NRC 753 (2015)

if three or more surveillance data points measured at three or more different neutron fluences exist for a specific material, licensee shall determine if the surveillance data show a significantly different trend than the embrittlement model predicts; LBP-15-17, 81 NRC 753 (2015)

in calculating embrittlement reference temperatures, licensee must calculate neutron flux through the reactor pressure vessel using a methodology that has been benchmarked to experimental measurements and with quantified uncertainties and possible biases; LBP-15-17, 81 NRC 753 (2015)

integrated surveillance program among similar reactors is allowed if the reactors have sufficiently similar design and operating features to permit accurate comparisons of the predicted amount of radiation damage; LBP-15-17, 81 NRC 753 (2015)

license amendments related to reactor pressure vessel embrittlement present an obvious potential for offsite public health and safety consequences; LBP-15-17, 81 NRC 753 (2015)

licensee must perform a consistency check of its embrittlement model against available surveillance data; LBP-15-17, 81 NRC 753 (2015)

licensees have some discretion in considering other plant-specific information that may be helpful in aligning their embrittlement models with the surveillance data; LBP-15-17, 81 NRC 753 (2015)

licensing actions that could increase reactor vessel embrittlement, such as license renewals, hold the potential for offsite consequences that are obvious; LBP-15-17, 81 NRC 753 (2015)

model projects the reference temperatures for various parts of the reactor pressure vessel at the end of life of the plant; LBP-15-17, 81 NRC 753 (2015)

neutron radiation embrittlement of reactor pressure vessel walls, decreasing their fracture toughness, is discussed; LBP-15-17, 81 NRC 753 (2015)

pressurized thermal shock rule and embrittlement screening program are discussed; LBP-15-17, 81 NRC (2015); LBP-15-17, 81 NRC 753 (2015)

probabilistic embrittlement model is used to predict future reference temperatures across the reactor pressure vessel, which is then verified by existing surveillance data in a process called the consistency check; LBP-15-17, 81 NRC 753 (2015)

purpose of the consistency check is to determine if the surveillance data show a significantly different trend than the embrittlement model predicts; LBP-15-17, 81 NRC 753 (2015)

surveillance data are continuously integrated into future embrittlement projections; LBP-15-17, 81 NRC 753 (2015)

surveillance data include any data that demonstrate embrittlement trends for the beltline materials; LBP-15-17, 81 NRC 753 (2015)

surveillance data need not be obtained from the same reactor pressure vessel that is the subject of the license amendment; LBP-15-17, 81 NRC 753 (2015)

EMERGENCIES

where NRC finds that an emergency situation exists, in that failure to act in a timely way would result in derating or shutdown of a nuclear power plant, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment; LBP-15-13, 81 NRC 456 (2015)

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EMERGENCY BACKUP POWER

NRC imposed requirements to provide makeup water independent of offsite power and the normal emergency alternating current power sources to maintain or restore spent fuel pool cooling capability in the event of an accident; DD-15-1, 81 NRC 193 (2015)

EMERGENCY CORE COOLING SYSTEM

in the event of a severe accident in an AP1000, squib valves, which are explosively activated, reduce pressure and inject water as needed into the reactor vessel; CLI-15-13, 81 NRC 555 (2015)

EMERGENCY EXERCISES

licensee must maintain an emergency plan, review it annually through an independent reviewer, and conduct periodic exercises to measure the plan's effectiveness; CLI-15-6, 81 NRC 340 (2015)
offsite emergency plans are reviewed biennially by NRC and the Federal Emergency Management Agency in a comprehensive emergency preparedness exercise; CLI-15-6, 81 NRC 340 (2015)

EMERGENCY OPERATING PROCEDURES

licensees must activate the ERDS as soon as possible but not later than 1 hour after declaring an Emergency Class of alert, site area emergency, or general emergency; LBP-15-4, 81 NRC 156 (2015)

EMERGENCY OPERATIONS FACILITY

ERDS is a direct electronic data link between licensees of operating reactors and the NRC Operations Center, and its objective is to allow NRC to monitor critical parameters during an emergency; LBP-15-4, 81 NRC 156 (2015)

EMERGENCY PLANNING

all Part 50 licensees must meet emergency planning requirements, regardless of whether the facility is operating or has been permanently shut down and defueled; LBP-15-18, 81 NRC 793 (2015)
challenges to emergency planning fall outside the scope of a license renewal proceeding; CLI-15-6, 81 NRC 340 (2015); LBP-15-5, 81 NRC 249 (2015)
proximity of the nuclear power plant site to the Canadian border is considered in the contexts of environmental and safety reviews; CLI-15-13, 81 NRC 555 (2015)

EMERGENCY PLANS

because current levels of emergency planning are required by regulation, licensee cannot make changes contemplated in its license amendment request without first receiving certain regulatory exemptions; LBP-15-18, 81 NRC 793 (2015)
before licensee may change its emergency plan to discontinue the ERDS link, it must perform and retain an analysis that concludes that the removal of ERDS is not a reduction in emergency plan effectiveness; LBP-15-4, 81 NRC 156 (2015)
concerns about a facility's emergency plans may be raised at any time pursuant to 10 C.F.R. 2.206; CLI-15-6, 81 NRC 340 (2015)
holder of a combined license for a newly built reactor may not load fuel or operate except as provided in accordance with Part 50, Appendix E; LBP-15-4, 81 NRC 156 (2015)
holder of a license under Part 50, or a combined license under Part 52, shall follow and maintain the effectiveness of an emergency plan that meets the requirements in Part 50, Appendix E; LBP-15-4, 81 NRC 156 (2015)
in any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on questions of adequacy and implementation ability of state and local emergency plans; LBP-15-4, 81 NRC 156 (2015)
lack of detail for emergency sheltering option is not significant because size of sheltering population is very small; LBP-15-18, 81 NRC 793 (2015)
licensee is forbidden to change its emergency plan unless it performs and retains an analysis that demonstrates the changes do not reduce the effectiveness of the plan as changed; LBP-15-4, 81 NRC 156 (2015)
licensee must comply with the requirements of 10 C.F.R. 50.54(q)(3) before it effects a change to its emergency plan to delete references to ERDS or its use during an emergency; LBP-15-4, 81 NRC 156 (2015)
licensee must maintain an emergency plan, review it annually through an independent reviewer, and conduct periodic exercises to measure the plan's effectiveness; CLI-15-6, 81 NRC 340 (2015)
offsite emergency plans are reviewed biennially by NRC and the Federal Emergency Management Agency in a comprehensive emergency preparedness exercise; CLI-15-6, 81 NRC 340 (2015)

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plans are approved by NRC and FEMA and are updated on an ongoing basis; CLI-15-6, 81 NRC 340 (2015)

EMERGENCY PREPAREDNESS

offsite emergency plans are reviewed biennially by NRC and the Federal Emergency Management Agency in a comprehensive emergency preparedness exercise; CLI-15-6, 81 NRC 340 (2015)

EMERGENCY RESPONSE

adequate provisions must exist for prompt communications among principal response organizations to emergency personnel and to the public; LBP-15-4, 81 NRC 156 (2015)

EMERGENCY RESPONSE DATA SYSTEM

all nuclear power facilities that are shut down permanently or indefinitely are exempted from participating in the ERDS program; LBP-15-4, 81 NRC 156 (2015)

all operational nuclear power plants except Big Rock Point must participate in the ERDS program by providing onsite hardware at each unit to interface with NRC receiving station; LBP-15-4, 81 NRC 156 (2015)

any alleged ambiguity in the exception provision of 10 C.F.R. Part 50, Appendix E, § VI is eliminated when the regulatory language is examined in light of the regulatory history and framework; LBP-15-4, 81 NRC 156 (2015)

any facility with an operating reactor unit is required to provide ERDS for that unit, regardless of the status of other reactors at the facility; LBP-15-4, 81 NRC 156 (2015)

before licensee may change its emergency plan to discontinue the ERDS link, it must perform and retain an analysis that concludes that the removal of ERDS is not a reduction in emergency plan effectiveness; LBP-15-4, 81 NRC 156 (2015)

each licensee shall complete implementation of the ERDS by February 13, 1993, or before initial escalation to full power, whichever comes later; LBP-15-4, 81 NRC 156 (2015)

ERDS is a direct electronic data link between licensees of operating reactors and the NRC Operations Center, and its objective is to allow NRC to monitor critical parameters during an emergency; LBP-15-4, 81 NRC 156 (2015)

exception in 10 C.F.R. 50.72 is most reasonably interpreted as exempting from the ERDS program all nuclear reactors that have permanently ceased operations and defueled, i.e., that are permanently shut down; LBP-15-4, 81 NRC 156 (2015)

if 10 C.F.R. Part 50, Appendix E, § VI were a one-time requirement that applied only to units existing in 1991, that would mean it was not intended to apply prospectively to newly built reactors; LBP-15-4, 81 NRC 156 (2015)

if licensee of a permanently shutdown reactor is never required to activate the ERDS link, it must be concluded that such a licensee is exempt from the ERDS program; LBP-15-4, 81 NRC 156 (2015)

licensee must activate the ERDS as soon as possible but not later than 1 hour after declaring an Emergency Class of alert, site area emergency, or general emergency; LBP-15-4, 81 NRC 156 (2015)

licensee must comply with the requirements of 10 C.F.R. 50.54(q)(3) before it effects a change to its emergency plan to delete references to ERDS or its use during an emergency; LBP-15-4, 81 NRC 156 (2015)

parameters from which ERDS transmits data points for boiling water reactors are identified in 10 C.F.R. Part 50, App. E, § VI.2(a)(ii); LBP-15-4, 81 NRC 156 (2015)

regulatory history, like 10 C.F.R. Part 50, App. E, § VI itself, is focused entirely on implementation and maintenance of the ERDS operations with not one word about decommissioning the system; LBP-15-4, 81 NRC 156 (2015)

scope of the ERDS exception is informed by the regulatory history, which states that ERDS is to be used by licensees of operating reactors; LBP-15-4, 81 NRC 156 (2015)

section 50.72(a)(4) describes implementation, maintenance, and activation of the ERDS system in the event of an emergency; LBP-15-4, 81 NRC 156 (2015)

section 50.72(a)(4) directing licensees to activate ERDS during exigent circumstances applies only to operating nuclear power reactors; LBP-15-4, 81 NRC 156 (2015)

to the extent a contention would require licensee to maintain the ERDS link or to create another ERDS-like system after its reactor is permanently shut down and defueled, it is an impermissible collateral attack on a regulation; LBP-15-4, 81 NRC 156 (2015)

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EMERGENCY RESPONSE PLANS

arrangements for requesting and effectively using assistance resources should be identified and supported by appropriate letters of agreement; LBP-15-18, 81 NRC 793 (2015)
radiological emergency response plan was developed by the State and approved by the Federal Emergency Management Agency to ensure that the State is prepared to handle the offsite effects of a radiological emergency; LBP-15-4, 81 NRC 156 (2015)

ENDANGERED SPECIES

admissibility of contention that environmental assessment failed to conduct the required hard look at impacts of the proposed mine and fails to consult with the U.S. Fish & Wildlife Service is decided; LBP-15-11, 81 NRC 401 (2015)
consultation with U.S. Fish & Wildlife Service is legally mandated for any agency action that may affect listed species or critical habitat; LBP-15-11, 81 NRC 401 (2015)
if an agency determines that a particular action will have no effect on an endangered or threatened species, the U.S. Fish & Wildlife Service consultation requirements are not triggered; LBP-15-11, 81 NRC 401 (2015)
“informal” consultation is an optional process that includes all discussions, correspondence, etc., between the U.S. Fish and Wildlife Service and the federal agency designed to assist the federal agency in determining whether formal consultation or a conference is required with the Service under section 402.13; LBP-15-11, 81 NRC 401 (2015)
when engaging in informal consultation, an agency must provide its determination as to whether the proposed action will affect threatened and endangered species to U.S. Fish & Wildlife Service and request FWS concurrence; LBP-15-11, 81 NRC 401 (2015)
whooping crane and black-footed ferret are listed as threatened or endangered under the Endangered Species Act; LBP-15-11, 81 NRC 401 (2015)

ENDANGERED SPECIES ACT

agency 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 destruction or adverse modification of critical habitat of such species; CLI-15-13, 81 NRC 555 (2015)
federal agency is required to consult if an action may affect listed species or designated critical habitat, even if the effects are expected to be beneficial; LBP-15-11, 81 NRC 401 (2015)
federal agency need not initiate formal consultation if, as a result of the preparation of a biological assessment under section 402.12 or as a result of informal consultation with the Service under section 402.13, the federal agency determines, with the written concurrence of the U.S. Fish and Wildlife Service Director, that the proposed action is not likely to adversely affect any listed species or critical habitat; LBP-15-11, 81 NRC 401 (2015)
only species listed as threatened or endangered under the Act are covered by the Act’s formal consultation requirements; LBP-15-11, 81 NRC 401 (2015)

ENERGY

See Department of Energy; Renewable Energy Sources; Wind Energy

ENERGY REORGANIZATION ACT

basis for NRC authority to regulate the use of special nuclear material in facilities like nuclear power reactors is established; CLI-15-4, 81 NRC 221 (2015)
if there were any doubt over the intent of Congress not to require a safety finding on spent fuel disposal, it was laid to rest by enactment of the ERA; CLI-15-4, 81 NRC 221 (2015)

ENFORCEMENT

compliance with orders issued as part of NRC’s ongoing oversight program are enforcement issues that are not within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)
monitoring and enforcement program must be adopted where applicable for any mitigation; LBP-15-16, 81 NRC 618 (2015)

See also Request for Action

ENFORCEMENT ACTIONS

assertion that the section 2.206 process does not provide a viable forum for relief is rejected; CLI-15-14, 81 NRC 729 (2015)

SUBJECT INDEX

Commission denies portions of a hearing request but refers petitioner's underlying concerns to the Executive Director for Operations for consideration as an enforcement action; CLI-15-14, 81 NRC 729 (2015)

if petitioner has a credible basis to question the adequacy of licensee's compliance with 10 C.F.R.

50.54(q)(3), it may petition for enforcement action; LBP-15-4, 81 NRC 156 (2015)

oversight activities at times involve enforcement actions, including orders and civil penalties, to which a hearing right or opportunity attaches; CLI-15-5, 81 NRC 329 (2015)

pending tax litigation would not have a significant implication for public health and safety and, to the extent the claim is viable, it would be better handled through a petition for enforcement action;

LBP-15-15, 81 NRC 598 (2015)

petitioners can raise compliance issues only under 10 C.F.R. 2.206, which would allow them to petition NRC to take an enforcement action; LBP-15-5, 81 NRC 249 (2015)

section 2.206 provides a process for stakeholders to advance concerns and obtain full or partial relief, or written reasons why the requested relief is not warranted; LBP-15-4, 81 NRC 156 (2015)

ENFORCEMENT POLICY

NRC's policy of imposing graduated civil penalties takes into account the gravity of the violation as the primary consideration and the ability to pay as a secondary consideration; DD-15-3, 81 NRC 713 (2015)

ENVIRONMENTAL ANALYSIS

agency conducting a NEPA analysis must examine both the probability of a given harm occurring and the consequences of that harm if it does occur; CLI-15-6, 81 NRC 340 (2015)

commencement of construction is prohibited prior to a NEPA determination; LBP-15-16, 81 NRC 618 (2015)

environmental impacts will be considered irrespective of whether a certification or license from the appropriate authority has been obtained; LBP-15-16, 81 NRC 618 (2015)

license transfer applications need not include an environmental analysis under NEPA; CLI-15-8, 81 NRC 500 (2015)

NEPA does not require NRC Staff to analyze every conceivable aspect of the proposed project; LBP-15-16, 81 NRC 618 (2015)

non-NEPA document, let alone one prepared and adopted by a state government, cannot satisfy a federal agency's obligations under NEPA; LBP-15-11, 81 NRC 401 (2015)

non-NRC permits are interdependent parts of applicant's proposed action and thus are connected actions; LBP-15-16, 81 NRC 618 (2015)

shared transmission corridor is an offsite transmission line excluded from environmental impact analysis; LBP-15-5, 81 NRC 249 (2015)

ENVIRONMENTAL ASSESSMENT

admissibility of contention that EA fails to adequately describe and analyze aquifer restoration goals in light of new standards for determining alternative control limits is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that EA fails to adequately describe and analyze impacts of maintaining post-operational wellfields as long-term hazardous waste facilities is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that EA fails to adequately describe and analyze proposed mitigation measures is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that EA fails to analyze impacts on the project from earthquakes, especially concerning secondary porosity and adequate confinement is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that EA fails to conduct the required hard look at impacts of the proposed mine and fails to consult with the U.S. Fish & Wildlife Service is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that EA fails to describe and analyze the environmental impacts of new porosity and permeability in the aquifer caused by mining activity is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that EA violates the National Environmental Policy Act in its failure to analyze groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 401 (2015)

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admissibility of contention that environmental documents and associated monitoring values and restoration goals rely on baseline data calculations that are inadequate and unacceptable is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental documents lack an adequate description of financial assurances for payment of the costs of restoration and long-term monitoring of up to 30 years is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that final EA fails to adequately analyze cumulative impacts is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that final EA fails to adequately evaluate adverse impacts on public health and safety is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that final EA fails to conduct the required hard look at impacts of the proposed mine associated with restoration standards and difficulty and cost in achieving them and the use of the alternative standards permitted under the proposed rules is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that final EA fails to satisfy NRC's requirement for an environmental impact statement when there are unresolved conflicts concerning reasonable alternatives is decided; LBP-15-15, 81 NRC 598 (2015)

agencies can, consistent with NEPA regulations, incorporate by reference analyses and information from existing documents into an EA or environmental impact statement, provided the material has been appropriately cited and described; LBP-15-11, 81 NRC 401 (2015)

allegations of inadequacies and omissions in NRC Staff's EA satisfy the requirement to provide a specific statement of the issue of law or fact to be raised; LBP-15-13, 81 NRC 456 (2015)

considering the reasonable alternatives analysis, it is only in the depth of the consideration and in the level of detail provided in the corresponding environmental documents that an EA and an environmental impact statement will differ; LBP-15-11, 81 NRC 401 (2015)

contention alleging that environmental assessment has not adequately addressed environmental impacts associated with saltwater intrusion arising from saline water migration from the plant into surrounding waters, and applicant's use of aquifer withdrawals to lower salinity and temperature is admissible; LBP-15-13, 81 NRC 456 (2015)

contention quotes text from a notice of proposed rulemaking, but it never ties the statements from the NOPR to any specific section of the EA, and thus fails to raise a genuine dispute with the EA; LBP-15-15, 81 NRC 598 (2015)

contention that EA fails to adequately describe air quality impacts is inadmissible as untimely; LBP-15-11, 81 NRC 401 (2015)

contention that final EA fails to adequately analyze all reasonable alternatives is inadmissible; LBP-15-11, 81 NRC 401 (2015)

contention that final EA fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 401 (2015)

contention that final EA fails to present relevant information in a clear and concise manner that is readily accessible to the public and other reviewers is inadmissible; LBP-15-11, 81 NRC 401 (2015)

deference can be given to a state permit's findings as to the acceptability of environmental impacts; LBP-15-11, 81 NRC 401 (2015)

EA and associated finding of no significant impact must contain sufficient discussion of environmental impacts and the reasons why the proposed action will not have a significant effect on the quality of the human environment; LBP-15-13, 81 NRC 456 (2015)

importing analysis from a previously completed EA while disregarding intervening events would render meaningless NEPA's requirement to supplement an environmental impact statement or EA; LBP-15-13, 81 NRC 456 (2015)

in consultation with identified parties, agency must develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effects of the undertaking on historic properties and describe them in the EA or draft environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

issuance of an EA is appropriate where NRC Staff determines that the proposed project will result in no significant impacts; LBP-15-11, 81 NRC 401 (2015)

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it is appropriate for NRC Staff to give substantial weight to state agency's decision that issuing the NPDES permit would be environmentally acceptable; LBP-15-11, 81 NRC 401 (2015)

it would be incongruous with NEPA's approach to environmental protection, and with NEPA's manifest concern with preventing uninformed action, for the blinders to adverse environmental effects, once unequivocally removed, to be restored prior to the completion of agency action simply because the relevant proposal has received initial approval; LBP-15-13, 81 NRC 456 (2015)

NEPA requires a hard look at the environmental effects of the planned action, not a circular restatement of NRC Staff's own conclusions; LBP-15-11, 81 NRC 401 (2015)

NRC Staff must describe the potential environmental impact of a proposed action and discuss any reasonable alternatives; LBP-15-11, 81 NRC 401 (2015)

petitioner's issue of NRC Staff's compliance with its NEPA obligation to undertake a full evaluation of the environmental impacts associated with a proposed federal action is within the scope of an operating license amendment proceeding and material to the findings NRC must make; LBP-15-13, 81 NRC 456 (2015)

question whether the environmental assessment is sufficient to satisfy NRC Staff's NEPA requirements must await consideration at a full evidentiary hearing; LBP-15-13, 81 NRC 456 (2015)

reliance on a state permit, let alone one prepared and adopted by a state government, cannot satisfy a federal agency's obligations under NEPA; LBP-15-11, 81 NRC 401 (2015)

standard for preparing a supplemental EA is the same as for preparing a supplemental environmental impact statement; LBP-15-13, 81 NRC 456 (2015)

ENVIRONMENTAL EFFECTS

adverse environmental effects that must be assessed under NEPA include aesthetic, historic, cultural, economic, social, or health effects; LBP-15-16, 81 NRC 618 (2015)

contention alleging a material deficiency must link the claimed deficiency to a public health and safety or an environmental impact; LBP-15-1, 81 NRC 15 (2015)

"cumulative impacts" result from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or nonfederal) or person undertakes such other actions; LBP-15-16, 81 NRC 618 (2015)

in its Waste Confidence Decision, NRC failed to consider environmental impacts of a repository never becoming available, its analysis of spent fuel pool leaks was not forward-looking, and it had not sufficiently considered the consequences of spent fuel pool fires; CLI-15-4, 81 NRC 221 (2015)

nothing in 10 C.F.R. Part 40, Appendix A, Criterion 5B precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in applicant's precicensing program were adequate to provide the necessary information to characterize properly the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 65 (2015)

programmatic agreement may be used to implement the NHPA § 106 process in situations where the effects to historic properties cannot be fully determined prior to the approval of an undertaking, such as where an applicant proposes a phased approach to developing its project; LBP-15-16, 81 NRC 618 (2015)

under NEPA, defining the scope of effects of a project requires engagement with governments of affected tribes through an early and open process aimed at identifying concerns, potential impacts, relevant effects of past actions, and possible alternative actions; LBP-15-16, 81 NRC 618 (2015)

ENVIRONMENTAL IMPACT STATEMENT

admissibility of contention that final environmental assessment fails to satisfy NRC's requirement for an EIS when there are unresolved conflicts concerning reasonable alternatives is decided; LBP-15-15, 81 NRC 598 (2015)

agencies are given broad discretion to keep their NEPA inquiries within appropriate and manageable boundaries; LBP-15-3, 81 NRC 65 (2015)

agencies can, consistent with NEPA regulations, incorporate by reference analyses and information from existing documents into an environmental assessment or environmental impact statement provided the material has been appropriately cited and described; LBP-15-11, 81 NRC 401 (2015)

agency preparing the NEPA document must explain the statutory or regulatory requirements it is relying on and its reasons for concluding that the application of those requirements will actually result in the mitigation and monitoring it assumes will occur; LBP-15-11, 81 NRC 401 (2015)

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alternative energy sources that will be dependent on future environmental safeguards and technological developments may be excluded from the NEPA alternatives discussion; LBP-15-3, 81 NRC 65 (2015)

alternatives discussion need not include every possible alternative, but rather every reasonable alternative; LBP-15-3, 81 NRC 65 (2015)

although license requirements and other environmental quality standards are to be considered in assessing environmental impacts, they do not negate NRC Staff's responsibility to consider all environmental effects; LBP-15-3, 81 NRC 65 (2015)

although NRC regulations do not require NRC Staff to analyze the environmental impacts of NRC licensing actions on the environment of foreign nations, Staff extended its outreach to international organizations to inform its analysis; CLI-15-13, 81 NRC 555 (2015)

appeal board's ruling that the EIS was deemed modified by the parties' stipulations at hearing did not violate the letter or spirit of NEPA; CLI-15-6, 81 NRC 340 (2015)

because NRC Staff relies heavily on applicant's environmental report in preparing the EIS, should the applicant become a proponent of a particular challenged position set forth in the EIS, the applicant, as such a proponent, also has the burden on that matter; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

board may construe an admitted contention contesting applicant's environmental report as a challenge to a subsequently issued draft or final EIS without the necessity for intervenors to file a new or amended contention; LBP-15-11, 81 NRC 401 (2015)

board may incorporate material from another agency's EIS, which was submitted in the hearing record, as part of the record of decision; CLI-15-6, 81 NRC 340 (2015)

boards do not sit to "flyspeak" environmental documents or to add details or nuances, but the environmental report or EIS must come to grips with all important considerations; LBP-15-5, 81 NRC 249 (2015)

compliance with the National Historic Preservation Act does not relieve a federal agency of the duty of complying with the EIS requirement to the fullest extent possible; LBP-15-16, 81 NRC 618 (2015)

connected actions are closely related and therefore should be discussed in the same EIS; LBP-15-16, 81 NRC 618 (2015)

consideration of alternatives under NEPA that are technologically unproven is unnecessary; LBP-15-3, 81 NRC 65 (2015)

considering the reasonable alternatives analysis, it is only in the depth of the consideration and in the level of detail provided in the corresponding environmental documents that an environmental assessment and an EIS will differ; LBP-15-11, 81 NRC 401 (2015)

contention that environmental review documents fail to identify source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene in groundwater is inadmissible as untimely; LBP-15-19, 81 NRC 815 (2015)

courts decide whether a mitigation plan was adequately or inadequately discussed, but the line between these two options is not well defined; LBP-15-16, 81 NRC 618 (2015)

"deemed incorporated" function of 10 C.F.R. 51.23(b) provides administrative efficiency by adding the environmental impacts of continued storage to site-specific EISs without additional work by the Staff; CLI-15-10, 81 NRC 535 (2015)

deficiency in a final EIS is not automatic ground for reversal of an order granting a permit although the issue has been opened for full consideration in an agency hearing; CLI-15-6, 81 NRC 340 (2015)

discussion of alternatives that present severe engineering requirements or are imprudent for reasons including their high cost, safety hazards, and operational difficulties is excluded under NEPA; LBP-15-3, 81 NRC 65 (2015)

EIS is required when the proposed project is a major federal action significantly affecting the quality of the human environment; LBP-15-15, 81 NRC 598 (2015)

EISs are not intended to be research documents; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

EISs may be deemed modified by the hearing record because hearing procedures allow for additional and more rigorous public scrutiny of the FSEIS than does the usual circulation for comment; CLI-15-6, 81 NRC 340 (2015)

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EISs must discuss any adverse environmental effects that cannot be avoided should the proposal be implemented and must provide a reasonably complete discussion of possible mitigation measures; LBP-15-11, 81 NRC 401 (2015)

environmental considerations that the environmental report must discuss are equivalent to, and in most instances verbatim restatements of, environmental considerations that NEPA requires the agency to describe in detail in the EIS; LBP-15-5, 81 NRC 249 (2015)

environmental documents must include a detailed statement by the responsible official on any adverse environmental effects that cannot be avoided should the proposal be implemented; LBP-15-16, 81 NRC 618 (2015)

environmental impacts of at-reactor and away-from-reactor storage of spent fuel are considered for 60 years after the end of a reactor's licensed life for operation, an additional 100 years of storage, and the indefinite storage of spent nuclear fuel and incorporated into site-specific EISs; CLI-15-10, 81 NRC 535 (2015)

environmental impacts of continued storage have been incorporated into the EISs at issue in the proceedings by operation of law; CLI-15-10, 81 NRC 535 (2015)

federal agencies must prepare a detailed EIS for proposed actions significantly affecting the quality of the human environment; LBP-15-16, 81 NRC 618 (2015)

hard look under NEPA is intended to foster both informed agency decisionmaking and informed public participation so as to ensure that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct; LBP-15-3, 81 NRC 65 (2015)

impact determinations in the continued storage generic EIS shall be deemed incorporated into the EISs associated with combined license or license renewal application; CLI-15-10, 81 NRC 535 (2015)

important qualitative considerations or factors that cannot be quantified in the EIS will be discussed in qualitative terms; LBP-15-3, 81 NRC 65 (2015)

in an NRC adjudicatory proceeding, even if a board finds an EIS prepared by NRC Staff inadequate in certain respects, the board's findings, as well as the adjudicatory record, become, in effect, part of the final EIS; LBP-15-16, 81 NRC 618 (2015)

merely listing possible mitigation options does not satisfy NEPA; LBP-15-16, 81 NRC 618 (2015)

NEPA does not call for certainty or precision, but an estimate of anticipated, not unduly speculative, impacts; LBP-15-16, 81 NRC 618 (2015)

NEPA does not demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act; LBP-15-16, 81 NRC 618 (2015)

NEPA does not mandate particular results, but simply prescribes the necessary process that agencies must follow in evaluating environmental impacts; LBP-15-19, 81 NRC 815 (2015)

NEPA does not require NRC Staff to examine every conceivable aspect of federally licensed projects in preparing its EIS; LBP-15-3, 81 NRC 65 (2015)

NEPA does not require the adoption of best practices, particularly in the face of a potentially significant resource commitment; LBP-15-3, 81 NRC 65 (2015)

NEPA requires federal agencies to take a hard look at the environmental impacts of a proposed action, as well as reasonable alternatives to that action; LBP-15-3, 81 NRC 65 (2015)

NEPA's "hard look" requirement is subject to a rule of reason in that consideration of environmental impacts need not address all theoretical possibilities, but rather only those that have some reasonable possibility of occurring; LBP-15-3, 81 NRC 65 (2015)

NRC must prepare an EIS that adequately evaluates the environmental impacts of relicensing, including impacts to tribal hunting and fishing rights and subsistence consumption; LBP-15-5, 81 NRC 249 (2015)

NRC Staff must describe the potential environmental impact of a proposed action and discuss any reasonable alternatives; LBP-15-11, 81 NRC 401 (2015)

NRC Staff must include in an EIS an analysis of significant problems and objections raised by any affected Indian tribes and other interested persons; LBP-15-16, 81 NRC 618 (2015)

NRC Staff must prepare an EIS in connection with a license to possess and use source and AEA § 11e(2) byproduct material for the purpose of in situ uranium recovery; LBP-15-3, 81 NRC 65 (2015)

principal goals of a final EIS are to force agencies to take a hard look at the environmental consequences of a proposed project and to permit the public a role in the agency's decisionmaking process; LBP-15-16, 81 NRC 618 (2015)

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reasonable alternatives under NEPA do not include alternatives that are impractical, that present unique problems, or that cause extraordinary costs; LBP-15-3, 81 NRC 65 (2015)

reasonably complete discussion of possible mitigation measures must be included in a NEPA document, to allow the agency and the public a chance to properly evaluate the severity of the adverse effects; LBP-15-16, 81 NRC 618 (2015)

section 51.102(c) replaced a previous version that expressly permitted licensing boards to modify the content of an EIS; CLI-15-6, 81 NRC 340 (2015)

statutory requirement to prepare an EIS ensures that decisionmakers will have available, and will carefully consider, detailed information concerning significant environmental impacts; CLI-15-10, 81 NRC 535 (2015)

statutory requirement to prepare an EIS guarantees that the relevant information will be made available to the larger audience, such as petitioners and state and local governments; CLI-15-10, 81 NRC 535 (2015)

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-15-3, 81 NRC 65 (2015)

though mitigation measures must be discussed in an EIS, NEPA does not guarantee that federally approved projects will have no adverse impacts; LBP-15-16, 81 NRC 618 (2015)

when adequacy of an EIS mitigation strategy is challenged, the determining issue is whether the agency took a sufficiently hard look at environmental consequences, and ensured that its decision was supported by a completely informed record; LBP-15-16, 81 NRC 618 (2015)

when drafting an EIS, agency's scope of review must include analysis of any connected or cumulative actions to the central proposed action; LBP-15-16, 81 NRC 618 (2015)

where the agency has found mitigation strategies necessary to alleviate a potential impact, the associated discussion should be reasonably complete to properly evaluate the severity of the adverse effects; LBP-15-11, 81 NRC 401 (2015)

with regard to reasonably foreseeable impacts, NEPA does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts; LBP-15-3, 81 NRC 65 (2015)

See also Draft Environmental Impact Statement; Final Environmental Impact Statement; Generic Environmental Impact Statement; Supplemental Environmental Impact Statement

ENVIRONMENTAL ISSUES

admitted contentions challenging applicant's environmental report may function as challenges to similar portions of NRC Staff's NEPA document; LBP-15-11, 81 NRC 401 (2015)

although environmental contentions are, in essence, challenges to NRC Staff's compliance with NEPA, those contentions must be raised, if possible, in response to applicant's environmental report; CLI-15-1, 81 NRC 1 (2015)

board's ultimate NEPA judgments are made on the basis of the entire adjudicatory record in addition to NRC Staff's final supplemental environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

Category 1 issues are not subject to challenge in a relicensing proceeding, absent a waiver under 10 C.F.R. 2.335, because they involve environmental effects that are essentially similar for all plants and need not be assessed repeatedly on a site-specific basis; LBP-15-5, 81 NRC 249 (2015)

contention of omission on a matter related to the National Environmental Policy Act must describe the information that should have been included in applicant's environmental report and provide the legal basis that requires the omitted information to be included; LBP-15-5, 81 NRC 249 (2015)

contentions arising under NEPA must be filed based on applicant's environmental report; LBP-15-19, 81 NRC 815 (2015)

environmental contentions are expected in response to applicant's or NRC Staff's environmental reviews, and contentions regarding their adequacy cannot be expected to be proffered at an earlier stage of the proceeding before the documents are available; LBP-15-11, 81 NRC 401 (2015)

environmental waste confidence contentions are dismissed; CLI-15-6, 81 NRC 340 (2015)

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, late-filing standards are no bar to the admission of properly supported contentions; LBP-15-11, 81 NRC 401 (2015)

issues that the Commission must consider in the mandatory portion of a combined license proceeding are outlined; CLI-15-13, 81 NRC 555 (2015)

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license renewal provisions cover environmental issues relating to onsite spent fuel storage generically, and all such issues, including accident risk, fall outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

NRC has not expressly adopted Council on Environmental Quality regulations, but they are entitled to considerable deference; LBP-15-3, 81 NRC 65 (2015)

NRC hearings on NEPA issues focus entirely on the adequacy of NRC Staff's work; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

NRC Staff's first attempt to analyze a NEPA issue gives rise to an intervenor's first opportunity to raise contentions on the adequacy of this assessment; LBP-15-11, 81 NRC 401 (2015)

NRC Staff's safety analysis and environmental analysis occur separately, and intervenors are expected to raise safety challenges in response to the safety reports and environmental challenges in response to the environmental statements; LBP-15-11, 81 NRC 401 (2015)

petitioner may file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement or environmental assessment that differ significantly from data or conclusions in applicant's documents; LBP-15-11, 81 NRC 401 (2015)

proposed transmission-line corridor is discussed; CLI-15-13, 81 NRC 555 (2015)

severe accident mitigation alternatives analysis is conducted pursuant to the National Environmental Policy Act, and thus is an environmental issue, not a safety issue; LBP-15-1, 81 NRC 15 (2015)

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 for hearing; LBP-15-5, 81 NRC 249 (2015)

when NEPA provisions are involved, the burden of proof shifts to NRC Staff; LBP-15-16, 81 NRC 618 (2015)

ENVIRONMENTAL JUSTICE

Exec. Order No. 12898 did not, in itself, create new substantive authority for federal agencies and thus NRC determined that it would endeavor to carry out the EJ principles as part of the agency's responsibilities under NEPA; CLI-15-6, 81 NRC 340 (2015)

impacts to subsistence consumption must be evaluated as part of the site-specific EJ analysis; LBP-15-5, 81 NRC 249 (2015)

license renewal review must consider EJ, which is a Category 2 issue; CLI-15-6, 81 NRC 340 (2015); LBP-15-5, 81 NRC 249 (2015)

NRC must prepare an environmental impact statement that adequately evaluates the environmental impacts of relicensing, including impacts to tribal hunting and fishing rights and subsistence consumption; LBP-15-5, 81 NRC 249 (2015)

NRC Staff examined special pathways of exposure that could lead to a higher level of radiation exposure in minority and low-income populations in the area, including subsistence consumption of fish, native vegetation, surface waters, sediments, and local produce; CLI-15-6, 81 NRC 340 (2015)

subsistence consumption is a subset of EJ; LBP-15-5, 81 NRC 249 (2015)

ENVIRONMENTAL PROTECTION AGENCY

agency is recognized as an expert in environmental protection, and its final policy determinations deserve consideration; LBP-15-15, 81 NRC 598 (2015)

radon emissions are regulated by EPA; LBP-15-16, 81 NRC 618 (2015)

ENVIRONMENTAL REPORT

admissibility of contention that ER lacks site-specific safety and environmental findings regarding storage and disposal of spent fuel is decided; LBP-15-5, 81 NRC 249 (2015)

although a draft supplemental environmental impact statement may rely in part on applicant's ER, NRC Staff must independently evaluate and be responsible for the reliability of all information used in the DSEIS; LBP-15-3, 81 NRC 65 (2015)

although environmental contentions are, in essence, challenges to NRC Staff's compliance with NEPA, those contentions must be raised, if possible, in response to applicant's ER; CLI-15-1, 81 NRC 1 (2015)

applicant for a license to possess and use source and AEA § 11e(2) byproduct material for the purpose of in situ uranium recovery must submit an ER with its application; LBP-15-3, 81 NRC 65 (2015)

applicant must analyze environmental impacts of a license renewal on matters identified as Category 2 issues in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 249 (2015)

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applicant must describe the proposed action, state its purposes, and describe the environment affected; LBP-15-3, 81 NRC 65 (2015)

applicant must discuss the five elements of 10 C.F.R. 51.45(b)(1)-(5); LBP-15-3, 81 NRC 65 (2015)

because NRC Staff relies heavily on the applicant's ER in preparing the environmental impact statement, should the applicant become a proponent of a particular challenged position set forth in the EIS, the applicant, as such a proponent, also has the burden on that matter; LBP-15-16, 81 NRC 618 (2015)

because NRC Staff relies heavily upon applicant's ER in preparing the environmental impact statement, should applicant become a proponent of a particular challenged position set forth in the EIS, applicant, as such a proponent, also has the burden on that matter; LBP-15-3, 81 NRC 65 (2015)

board may construe an admitted contention contesting applicant's ER as a challenge to a subsequently issued draft or final environmental impact statement without the necessity for intervenors to file a new or amended contention; LBP-15-11, 81 NRC 401 (2015)

boards do not sit to "flyspeck" environmental documents or to add details or nuances, but the ER or environmental impact statement must come to grips with all important considerations; LBP-15-5, 81 NRC 249 (2015)

Category 2 issues are reviewed on a site-specific basis because they have not been determined to be essentially similar for all plants; LBP-15-5, 81 NRC 249 (2015)

contention is within the scope of license renewal proceeding because NRC regulations require that the ER include a severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 249 (2015)

contention of omission on a matter related to the National Environmental Policy Act must describe the information that should have been included in applicant's ER and provide the legal basis that requires the omitted information to be included; LBP-15-5, 81 NRC 249 (2015)

contention that ER does not satisfy NEPA because it does not consider a range of mitigation measures to mitigate the risk of catastrophic fires in densely packed, closed-frame spent fuel storage pools is decided; LBP-15-5, 81 NRC 249 (2015)

contention that ER fails to accurately and thoroughly conduct severe accident mitigation alternatives analysis to design vulnerability of GE Mark I boiling water reactor pressure suppression containment system and environmental consequences of a to-be-anticipated severe accident post-Fukushima Daiichi fails to present a genuine material dispute; LBP-15-5, 81 NRC 249 (2015)

contention that ER is inadequate insofar as it does not consider the risk of spent fuel pool fires is inadmissible; LBP-15-5, 81 NRC 249 (2015)

contentions arising under NEPA must be filed based on applicant's ER; LBP-15-19, 81 NRC 815 (2015)

environmental considerations that the ER must discuss are equivalent to, and in most instances verbatim restatements of, environmental considerations that NEPA requires the agency to describe in detail in the environmental impact statement; LBP-15-5, 81 NRC 249 (2015)

ER for the license renewal stage need not contain environmental analysis of Category 1 issues identified in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 249 (2015)

ER must contain a consideration of alternatives for reducing adverse impacts for all Category 2 license renewal issues in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 249 (2015)

even if a contention provided information not discussed in the ER, it is still not admissible if it fails to provide a reasoned basis or explanation for why the ER is wrong; LBP-15-5, 81 NRC 249 (2015)

failure to provide a direct critique of the analysis in the ER discussing the potential for offshore power and interconnected wind farms is a failure to identify a genuine dispute with applicant; LBP-15-5, 81 NRC 249 (2015)

inadequacy in the severe accident mitigation alternatives analysis is material if license renewal applicant failed to consider complete information without justifying why particular information was omitted; LBP-15-5, 81 NRC 249 (2015)

license renewal applicant may adopt generic findings of the generic environmental impact statement, but must also include site-specific analyses of Category 2 issues; CLI-15-6, 81 NRC 340 (2015)

license renewal applicant must consider alternatives to mitigate severe accidents for all plants that have not considered such alternatives; LBP-15-5, 81 NRC 249 (2015)

migration tenet applies when information in the draft environmental impact statement is sufficiently similar to information in applicant's ER, and allows previously admitted contentions challenging the ER to apply to relevant portions of the DSEIS; LBP-15-16, 81 NRC 618 (2015)

SUBJECT INDEX

NRC Staff uses applicant's ER as a starting point for its own environmental review of a license renewal application, the results of which are published as a supplement to the generic environmental impact statement; CLI-15-6, 81 NRC 340 (2015)

once challenged, there is no presumption that an ER is correct or accurate, with applicant, as the proponent of the license, bearing the burden of proof; LBP-15-2, 81 NRC 48 (2015)

petitioners may raise contentions seeking correction of significant inaccuracies and omissions in the ER; LBP-15-5, 81 NRC 249 (2015)

severe accident mitigation alternatives analysis must be considered as part of the ER and, ultimately, as part of NRC Staff's supplemental environmental impact statement for a power reactor license renewal; LBP-15-5, 81 NRC 249 (2015)

severe accident mitigation alternatives review identifies and assesses possible changes, such as improvements in hardware, training, or procedures, that could cost-effectively mitigate the environmental impacts that would otherwise flow from a potential severe accident; LBP-15-5, 81 NRC 249 (2015)

to the extent there are important NEPA qualitative considerations or factors that cannot be quantified, these considerations or factors will be discussed in qualitative terms; LBP-15-5, 81 NRC 249 (2015)

ENVIRONMENTAL REVIEW

absent a rule waiver, NRC Staff is not expected to revisit the impact determinations made in the Continued Storage GEIS as part of its site-specific NEPA reviews; CLI-15-10, 81 NRC 535 (2015)

adequacy of NRC Staff's review of transmission-corridor impacts might be appropriate for the board's consideration sua sponte; CLI-15-1, 81 NRC 1 (2015)

agencies are given broad discretion to keep their NEPA inquiries within appropriate and manageable boundaries; LBP-15-3, 81 NRC 65 (2015)

agencies 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-15-13, 81 NRC 555 (2015)

agency conducting a NEPA review shall independently evaluate the information submitted and shall be responsible for its accuracy; LBP-15-11, 81 NRC 401 (2015)

agency failed to take a hard look at cumulative impacts on cultural resources under NEPA even though the agency had satisfied its obligations under NHPA to consult with the tribe; LBP-15-16, 81 NRC 618 (2015)

although an agency may coordinate and, where practicable, integrate its National Environmental Policy Act and National Historic Preservation Act review efforts, the two statutes impose separate and distinct obligations; LBP-15-16, 81 NRC 618 (2015)

because 10 C.F.R. 51.23(b) prescribes a specific procedure for incorporating the environmental impacts of continued storage into a site-specific analysis, this procedure, rather than a procedure set forth in the general provisions of Part 51, governs NRC environmental review; CLI-15-10, 81 NRC 535 (2015)

compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act is not a substitute for, and does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality; LBP-15-11, 81 NRC 401 (2015)

"environmental document" includes environmental assessment, environmental impact statement, finding of no significant impact, and notice of intent; LBP-15-16, 81 NRC 618 (2015)

federal agency must assess the effects of the undertaking on any eligible historic properties found; LBP-15-16, 81 NRC 618 (2015)

in uncontested hearings, it is NRC's duty to ensure, among other things, that it has adhered to its obligations under the National Environmental Policy Act; CLI-15-1, 81 NRC 1 (2015)

it is the duty of NRC Staff, not applicant, to consult with interested tribes concerning the proposed site in the context of a National Historic Preservation Act contention; LBP-15-5, 81 NRC 249 (2015)

NEPA encourages state participation when appropriate and authorized, but coordination between a federal agency and a state requires active involvement between the two in order for the federal agency to meet its independent review burden; LBP-15-11, 81 NRC 401 (2015)

NEPA hard look must emerge from an engagement in informed and reasoned decisionmaking, as the agency obtains opinions from its own experts and experts outside the agency and gives careful scientific scrutiny and responds to all legitimate concerns that are raised; LBP-15-16, 81 NRC 618 (2015)

SUBJECT INDEX

NEPA requires that agencies take a hard look at the environmental effects of actions even after a proposal has received initial approval; LBP-15-16, 81 NRC 618 (2015)

NEPA review in license renewal proceedings is not limited to aging management-related issues; LBP-15-5, 81 NRC 249 (2015)

NRC Staff examined special pathways of exposure that could lead to a higher level of radiation exposure in minority and low-income populations in the area, including subsistence consumption of fish, native vegetation, surface waters, sediments, and local produce; CLI-15-6, 81 NRC 340 (2015)

NRC Staff must assess the relationship between local short-term uses and long-term productivity of the environment, consider alternatives, and describe the unavoidable adverse environmental impacts and the irreversible and irretrievable commitments of resources associated with the proposed action; CLI-15-13, 81 NRC 555 (2015)

NRC Staff must have some discretion to draw the line and move forward with decisionmaking; LBP-15-16, 81 NRC 618 (2015)

NRC Staff must provide a reasonably thorough discussion of the significant aspects of the probable environmental consequences of a proposed action; LBP-15-16, 81 NRC 618 (2015)

NRC Staff must weigh unavoidable adverse environmental impacts and resource commitments (costs) against the project's benefits; CLI-15-13, 81 NRC 555 (2015)

NRC Staff uses applicant's ER as a starting point for its own environmental review of a license renewal application, the results of which are published as a supplement to the generic environmental impact statement; CLI-15-6, 81 NRC 340 (2015)

proximity of the nuclear power plant site to the Canadian border is considered in the contexts of environmental and safety reviews; CLI-15-13, 81 NRC 555 (2015)

the fact that a competent and responsible state authority has approved the environmental acceptability of a site or a project after extensive and thorough environmentally sensitive hearings is properly entitled to substantial weight in the conduct of NRC's own NEPA analysis; LBP-15-11, 81 NRC 401 (2015)

when drafting an environmental impact statement, agency's scope of review must include analysis of any connected or cumulative actions to the central proposed action; LBP-15-16, 81 NRC 618 (2015)

while reviewing any adverse effects, federal agencies must take a hard look at the environmental impacts of a proposed action; LBP-15-16, 81 NRC 618 (2015)

EQUIPMENT

protection of regulatory treatment of nonsafety systems equipment from external hazards at the site is discussed; CLI-15-13, 81 NRC 555 (2015)

ERROR

board did not err in factual finding that applicant was not under foreign ownership, control, or domination; CLI-15-7, 81 NRC 481 (2015)

board erred in allowing a collateral attack on the GEIS Category 1 finding associated with severe accident consequences; CLI-15-6, 81 NRC 340 (2015)

board erred in allowing collateral attacks on emergency plans; CLI-15-6, 81 NRC 340 (2015)

board erred in concluding that transformers are passive components under the license renewal rule; CLI-15-6, 81 NRC 340 (2015)

board erred in finding that NRC Staff analyzed the wrong variables in its environmental justice review; CLI-15-6, 81 NRC 340 (2015)

board improperly allowed petitioner to challenge the generic environmental impact statement's generic finding regarding severe accident consequences; CLI-15-6, 81 NRC 340 (2015)

Commission defers to board's factual findings unless they are clearly erroneous and generally steps in only to correct factual findings not even plausible in light of the record reviewed in its entirety, e.g., where it appears that the board has overlooked or misunderstood important evidence; CLI-15-6, 81 NRC 340 (2015)

licensing board failed to provide sufficient justification for rejecting a challenge to applicant's meteorological model where petitioners pointed to site-specific meteorological patterns to argue that the model and inputs were inaccurate and insufficiently conservative; LBP-15-20, 81 NRC 829 (2015)

to show clear error, petitioner must show that the board's determination is not even plausible in light of the record as a whole; CLI-15-7, 81 NRC 481 (2015); CLI-15-9, 81 NRC 512 (2015)

SUBJECT INDEX

EVACUATION TIME ESTIMATES

failure to offer factual support for the proposition that applicant's inputs for evacuation times are flawed or unreasonable or that its sensitivity analysis of these inputs was incorrect renders a contention inadmissible; LBP-15-5, 81 NRC 249 (2015)

EVIDENCE

absent documentary support, NRC has declined to assume that licensees will contravene its regulations; LBP-15-3, 81 NRC 65 (2015)

at the contention admission stage, petitioners need not marshal their evidence as though preparing for an evidentiary hearing; LBP-15-20, 81 NRC 829 (2015)

at the contention admission stage, the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion; LBP-15-1, 81 NRC 15 (2015)

board considered a letter written after the original petition was filed and submitted with petitioner's reply; LBP-15-5, 81 NRC 249 (2015)

board considered evidence submitted with petitioner's reply to which opposing parties didn't object; LBP-15-5, 81 NRC 249 (2015)

board has ample authority to ensure that evidence offered concerning microcracking is limited to that specific material issue and does not stray into issues outside the scope of the license amendment proceeding; LBP-15-20, 81 NRC 829 (2015)

contention admission stage is not the appropriate point at which to evaluate witness credibility or to weigh competing evidence, but an expert must provide a reasoned basis or explanation for opinions in support of a contention; LBP-15-17, 81 NRC 753 (2015)

factual support is not necessary at the contention filing stage to show that a genuine dispute exists and need not be in affidavit or formal evidentiary form or of the quality necessary to withstand a summary disposition motion; LBP-15-11, 81 NRC 401 (2015)

irreparable harm element of the test for issuance of injunctive relief was met where the tribe's evidence showed that a phase of the project would involve damage to at least one known site, and virtually ensure some loss or damage; LBP-15-2, 81 NRC 48 (2015)

mere presence of evidence supporting both sides does not call for Commission review where it appears that the board considered all the evidence and arguments before it; CLI-15-7, 81 NRC 481 (2015)

nonstatic nature of a website, in the absence of a stand-alone compact disc/digital video disc that would allow the board or parties to run a locked-down version of the website application, prevents consideration as evidence; LBP-15-3, 81 NRC 65 (2015)

requiring petitioners to proffer conclusive support for the effect of their proposed contention would improperly require boards to adjudicate the merits of contentions before admitting them; LBP-15-20, 81 NRC 829 (2015)

EVIDENCE, HEARSAY

in absence of objection, hearsay evidence is treated as being properly admitted and may be given such probative effect and value to which it is entitled; LBP-15-20, 81 NRC 829 (2015)

EVIDENTIARY HEARINGS

boards have considerable discretion in their evidentiary rulings; CLI-15-6, 81 NRC 340 (2015)

fact-finding administrative body, such as a licensing board, with authority to develop an evidentiary record, is distinguished from reviewing adjudicatory and judicial bodies, generally with a more limited record-creating authority; LBP-15-3, 81 NRC 65 (2015)

issued licenses can be revoked, conditioned, modified, or affirmed based on the evidence reviewed at the evidentiary hearing; LBP-15-16, 81 NRC 618 (2015)

question whether the environmental assessment is sufficient to satisfy NRC Staff's NEPA requirements must await consideration at a full evidentiary hearing; LBP-15-13, 81 NRC 456 (2015)

EXCEPTIONS

exception in 10 C.F.R. 50.72 is most reasonably interpreted as exempting from the ERDS program all nuclear reactors that have permanently ceased operations and defueled, i.e., that are permanently shut down; LBP-15-4, 81 NRC 156 (2015)

scope of the ERDS exception is informed by the regulatory history, which states that ERDS is to be used by licensees of operating reactors; LBP-15-4, 81 NRC 156 (2015)

SUBJECT INDEX

EXECUTIVE ORDER 12898

order did not, in itself, create new substantive authority for federal agencies and thus NRC determined that it would endeavor to carry out the environmental justice principles as part of the agency's responsibilities under NEPA; CLI-15-6, 81 NRC 340 (2015)

EXEMPTIONS

any alleged ambiguity in the exception provision of 10 C.F.R. Part 50, Appendix E, § VI is eliminated when the regulatory language is examined in light of the regulatory history and framework; LBP-15-4, 81 NRC 156 (2015)

because current levels of emergency planning are required by regulation, licensee cannot make changes contemplated in its license amendment request without first receiving certain regulatory exemptions; LBP-15-18, 81 NRC 793 (2015)

Congress intentionally limited the opportunity for a hearing to certain designated agency actions which do not include exemptions; LBP-15-18, 81 NRC 793 (2015)

exemption from the surveillance program is allowed if a reactor's lifetime irradiation levels are below a certain threshold; LBP-15-17, 81 NRC 753 (2015)

exemptions ordinarily do not trigger hearing rights when an already-licensed facility is asking for relief from performing a duty imposed by NRC regulations; LBP-15-18, 81 NRC 793 (2015)

failure to comply with NRC's e-filing requirements without good cause or without obtaining an exemption from the requirements under 10 C.F.R. 2.302(g) can result in rejection of a pleading; LBP-15-4, 81 NRC 156 (2015)

hearing on exemption-related matters is necessary insofar as resolution of the exemption request directly affects the licensability of a proposed fuel storage site and the exemption raises material questions directly connected to an agency licensing action; LBP-15-18, 81 NRC 793 (2015)

in exempting an aquifer from MCLs, EPA has to find that the aquifer cannot and will not serve as a source of drinking water because it is mineral producing and can be demonstrated to contain minerals that, considering their quantity and location, are expected to be commercially producible; LBP-15-3, 81 NRC 65 (2015)

when licensee requests an exemption in a related license amendment application, hearing rights on the amendment application are considered to encompass the exemption request as well; LBP-15-18, 81 NRC 793 (2015)

EXIGENT CIRCUMSTANCES

determination seems compelled by the fact that violation of the technical specifications limit for the plant, whatever the cause of the temperature increase, requires a dual-unit shutdown; LBP-15-13, 81 NRC 456 (2015)

NRC Staff may determine that exigent circumstances exist such that there is insufficient time for a full 30-day public comment period on a license amendment request; LBP-15-13, 81 NRC 456 (2015)

EXTENSION OF TIME

if intervenor cannot meet the requirements for filing a contention under the new section 2.309(c)(1), he or she can still take advantage of an extension request if unanticipated events, such as a weather event or unexpected health issues, prevented the participant from filing for a reasonable period of time after the deadline; LBP-15-1, 81 NRC 15 (2015)

FAIRNESS

each side must be heard; LBP-15-5, 81 NRC 249 (2015)

in assessing whether applicant/licensee adequately carries out a licensing directive, boards are to assume that NRC Staff will be fair and judge the matter of applicant/licensee's compliance on the merits; LBP-15-3, 81 NRC 65 (2015)

petitioners would have no opportunity to be heard regarding a sua sponte objection by the board because they would only learn of it when they received the board's ruling and thus would be deprived of the opportunity to file the response expressly provided in procedural rules; LBP-15-5, 81 NRC 249 (2015)

FAULTS

request that NRC order immediate shutdown of all nuclear power reactors that are known to be located on or near an earthquake fault line is denied; DD-15-6, 81 NRC 884 (2015)

SUBJECT INDEX

FEDERAL EMERGENCY MANAGEMENT AGENCY

in any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on questions of adequacy and implementation ability of state and local emergency plans; LBP-15-4, 81 NRC 156 (2015)

radiological emergency response plan was developed by the State and approved by the Federal Emergency Management Agency to ensure that the State is prepared to handle the offsite effects of a radiological emergency; LBP-15-4, 81 NRC 156 (2015)

FEDERAL REGISTER

publication in the Federal Register is legally sufficient notice to all affected people; LBP-15-5, 81 NRC 249 (2015)

FEDERAL RULES OF EVIDENCE

federal rules are not directly applicable to NRC proceedings, but NRC adjudicatory boards often look to those rules for guidance; LBP-15-20, 81 NRC 829 (2015)

objection not timely made is considered to be waived; LBP-15-20, 81 NRC 829 (2015)

FEDERAL WATER POLLUTION CONTROL ACT

compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act is not a substitute for, and does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality; LBP-15-11, 81 NRC 401 (2015)

FILINGS

amicus curiae filings are allowed at the Commission's discretion or sua sponte; CLI-15-4, 81 NRC 221 (2015)

contention filing deadlines support the Commission's interest in promoting efficient adjudication; LBP-15-11, 81 NRC 401 (2015)

when a filing deadline is approaching, notwithstanding that an attorney is engaged in good-faith settlement discussions, prudence should compel the attorney to take all actions that are necessary to ensure the deadline will be met in the event that settlement discussions are unsuccessful; LBP-15-4, 81 NRC 156 (2015)

See also Electronic Filing; Pleadings

FILTERS

petitioners question applicant's failure to consider the qualitative benefits of installing engineered filters; LBP-15-5, 81 NRC 249 (2015)

FINAL ENVIRONMENTAL IMPACT STATEMENT

additional content is required in a FEIS compared to a draft EIS; LBP-15-3, 81 NRC 65 (2015)

agencies shall prepare supplements to either draft or final EISs if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; LBP-15-13, 81 NRC 456 (2015)

analysis for all draft and final EISs, by virtue of section 51.90, will, to the fullest extent practicable, quantify the various factors considered; LBP-15-3, 81 NRC 65 (2015)

board's findings and the adjudicatory record are, in effect, part of the final supplemental environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

board's ultimate NEPA judgments can be made on the basis of the entire adjudicatory record in addition to NRC Staff's FEIS; LBP-15-3, 81 NRC 65 (2015)

bounding analysis provided in the final supplemental environmental impact statement, as supplemented in the record, provides sufficient information about a reasonable range of hazardous constituent concentration values associated with potential post-operational alternate concentration limits so as to provide an appropriate NEPA assessment of the environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits; LBP-15-3, 81 NRC 65 (2015)

contention alleging that final supplemental environmental impact statement fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater samples were collected in a scientifically defensible manner is decided; LBP-15-16, 81 NRC 618 (2015)

contention that final supplemental environmental impact statement fails to analyze environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits is decided; LBP-15-3, 81 NRC 65 (2015)

SUBJECT INDEX

contention that final supplemental environmental impact statement fails to comply with NRC regulations and NEPA because it lacks an adequate description of the present baseline (i.e., original or pre-mining) groundwater quality and fails to demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies is decided; LBP-15-3, 81 NRC 65 (2015)

decision of the board or Commission becomes the record of decision, which may also incorporate the final supplemental environmental impact statement; CLI-15-6, 81 NRC 340 (2015)

distribution requirements for an FEIS (and a supplement thereto) are imposed by 10 C.F.R. 51.93; LBP-15-3, 81 NRC 65 (2015)

even if contentions are based on NRC Staff's FSEIS, intervenor still bears the responsibility of demonstrating that a new contention merits admission and meets all six admission requirements; LBP-15-16, 81 NRC 618 (2015)

FEIS or supplement thereto must be considered in the agency's decisionmaking; LBP-15-3, 81 NRC 65 (2015)

FEIS as amplified by both board and Commission decisions, provides adequate consideration of environmental impacts of near-surface waste disposal; CLI-15-6, 81 NRC 340 (2015)

FEISs must be supplemented to provide complete, accurate, and up-to-date sources of information for members of the public and state and local governments; CLI-15-10, 81 NRC 535 (2015)

FSEIS is a snapshot in time of expected environmental consequences; CLI-15-6, 81 NRC 340 (2015)

FSEIS must include an analysis of cultural impacts; LBP-15-16, 81 NRC 618 (2015)

hearing on environmental issues must await issuance of FEIS; LBP-15-3, 81 NRC 65 (2015)

intervenors fail to establish the validity of their various challenges to the adequacy of the final supplemental environmental impact statement description of the baseline water quality at the in situ recovery site; LBP-15-3, 81 NRC 65 (2015)

legal requirements applicable to a draft EIS, as specified in sections 51.70(b) and 51.71, are imposed on a final EIS; LBP-15-3, 81 NRC 65 (2015)

NRC Staff must include in the FSEIS an analysis of significant problems and objections raised by any affected Indian tribes and other interested persons; LBP-15-16, 81 NRC 618 (2015)

purpose of the final supplemental environmental impact statement is to inform the decisionmaking agency and the public of a broad range of environmental impacts that will result, with a fair degree of likelihood, from a proposed project, rather than to speculate about worst-case scenarios and how to prevent them; CLI-15-6, 81 NRC 340 (2015)

supplemental environmental impact statement is supplemented by the board's decision as well as by the hearing record; CLI-15-6, 81 NRC 340 (2015)

when considering continued storage in licensing reviews with previously completed final environmental impact statements, NRC Staff is expected to use a consistent and transparent process to ensure that all stakeholders are aware of how the environmental impacts of continued storage are considered in each licensing action affected by this regulation; CLI-15-10, 81 NRC 535 (2015)

where environmental impacts are practically quantifiable, NRC has a duty to discuss them in those terms in the final supplemental environmental impact statement; LBP-15-3, 81 NRC 65 (2015)

FINAL SAFETY ANALYSIS REPORT

contention that FSAR is deficient because it does not include information provided in applicant's seismic evaluation process report is rejected; LBP-15-14, 81 NRC 591 (2015)

report must take into account any pertinent information developed since the submittal of the preliminary SAR; LBP-15-14, 81 NRC 591 (2015)

FINALITY

agency action is final at the consummation of the agency's decisionmaking process, and when rights or obligations have been determined; LBP-15-2, 81 NRC 48 (2015)

given the need for finality in adjudications, reopening the record is an extraordinary action imposing a deliberately heavy burden on intervenor; LBP-15-14, 81 NRC 591 (2015)

licensing board's ruling resolving the last pending contention is equivalent to a final decision under 10 C.F.R. 2.341, and a licensing board's jurisdiction ends after it has rendered a final decision; LBP-15-9, 81 NRC 396 (2015)

FINANCIAL ASSURANCE

admissibility of contention that applicant submit a decommissioning plan and related updated financial plans is decided; LBP-15-15, 81 NRC 598 (2015)

SUBJECT INDEX

admissibility of contention that environmental documents lack an adequate description of financial assurances sufficient to pay the costs of restoration and long-term monitoring of up to 30 years is decided; LBP-15-15, 81 NRC 598 (2015)

applicant must submit information that demonstrates that it possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operating costs for the period of the license; CLI-15-8, 81 NRC 500 (2015)

decommissioning funding requirements encompass costs of low-level waste burial; CLI-15-8, 81 NRC 500 (2015)

license transfer applicant must show reasonable assurance of sufficient funds to decommission the facility; CLI-15-8, 81 NRC 500 (2015)

license transfer applicant must submit estimates for total annual operating costs for each of the first 5 years of facility operation; CLI-15-8, 81 NRC 500 (2015)

FINANCIAL ASSURANCE PLAN

financial surety arrangements must be established by each mill operator before the commencement of operations to ensure that sufficient funds will be available to carry out decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas; LBP-15-15, 81 NRC 598 (2015)

FINDING OF NO SIGNIFICANT IMPACT

environmental assessment, and associated FONSI, must contain sufficient discussion of environmental impacts and the reasons why the proposed action will not have a significant effect on the quality of the human environment; LBP-15-13, 81 NRC 456 (2015)

if an agency determines that a particular action will have no effect on an endangered or threatened species, the U.S. Fish & Wildlife Service consultation requirements are not triggered; LBP-15-11, 81 NRC 401 (2015)

issuance of an environmental assessment is appropriate where NRC Staff determines that the proposed project will result in no significant impacts; LBP-15-11, 81 NRC 401 (2015)

FINDINGS OF FACT

board did not err in factual finding that applicant was not under foreign ownership, control, or domination; CLI-15-7, 81 NRC 481 (2015)

Commission defers to board's factual findings unless they are clearly erroneous and generally steps in only to correct factual findings not even plausible in light of the record reviewed in its entirety; CLI-15-6, 81 NRC 340 (2015); CLI-15-9, 81 NRC 512 (2015)

fact-finding administrative body, such as a licensing board, with authority to develop an evidentiary record, is distinguished from reviewing adjudicatory and judicial bodies, generally with a more limited record-creating authority; LBP-15-3, 81 NRC 65 (2015)

licensing boards are the appropriate finders of fact in most circumstances, and referral of a matter for a fact-specific dispute occurs in the ordinary course of business; CLI-15-14, 81 NRC 729 (2015)

FIRES

contention that environmental report does not satisfy NEPA because it does not consider a range of measures to mitigate the risk of catastrophic fires in densely packed, closed-frame spent fuel storage pools is decided; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report is inadequate insofar as it does not consider the risk of spent fuel pool fires is inadmissible; LBP-15-5, 81 NRC 249 (2015)

in its Waste Confidence Decision, NRC failed to consider environmental impacts of a repository never becoming available, its analysis of spent fuel pool leaks was not forward-looking, and it had not sufficiently considered the consequences of spent fuel pool fires; CLI-15-4, 81 NRC 221 (2015)

FISH AND WILDLIFE SERVICE

admissibility of contention that environmental assessment failed to conduct the required hard look at impacts of the proposed mine and fails to consult with the FWS is decided; LBP-15-11, 81 NRC 401 (2015)

concurrence by FWS discharges NRC's consultation responsibilities; LBP-15-11, 81 NRC 401 (2015)

consultation with FWS is legally mandated for any agency action that may affect listed species or critical habitat; LBP-15-11, 81 NRC 401 (2015)

federal agency is required to consult if an action may affect listed species or designated critical habitat, even if the effects are expected to be beneficial; LBP-15-11, 81 NRC 401 (2015)

SUBJECT INDEX

federal agency need not initiate formal consultation if, as a result of the preparation of a biological assessment under section 402.12 or as a result of informal consultation with the Service under section 402.13, the federal agency determines, with the written concurrence of the FWS Director, that the proposed action is not likely to adversely affect any listed species or critical habitat; LBP-15-11, 81 NRC 401 (2015)

if an agency determines that a particular action will have no effect on an endangered or threatened species, the FWS consultation requirements are not triggered; LBP-15-11, 81 NRC 401 (2015)

“informal” consultation is an optional process that includes all discussions, correspondence, etc., between FWS and the federal agency designed to assist the federal agency in determining whether formal consultation or a conference is required with the Service under section 402.13; LBP-15-11, 81 NRC 401 (2015)

only species listed as threatened or endangered under the Endangered Species Act are covered by the act’s formal consultation requirements; LBP-15-11, 81 NRC 401 (2015)

when engaging in informal consultation, an agency must provide its determination as to whether the proposed action will affect threatened and endangered species to FWS and request FWS concurrence; LBP-15-11, 81 NRC 401 (2015)

FLOOD PROTECTION

admissibility of contention that licensee is undertaking modifications for protection against severe flooding in the event of upstream dam failures that will require a license amendment is decided; CLI-15-5, 81 NRC 329 (2015)

NRC addressed concerns about flooding at GE Mark I and II boiling water reactors through a request for information; DD-15-1, 81 NRC 193 (2015)

NRC Staff may impose additional requirements to protect against a reevaluated flood hazard; DD-15-5, 81 NRC 877 (2015)

petitioner’s request that the NRC take escalated enforcement action against licensee concerning flooding protection is being addressed by the NRC’s request for information; DD-15-5, 81 NRC 877 (2015)

request for enforcement action based on support beam deficiencies, flood protection inadequacy, flood risks from upstream dams, and primary reactor containment electrical penetration seals containing Teflon is denied because petitioner’s requests have been addressed through other actions; DD-15-4, 81 NRC 869 (2015)

FLOODS

flood hazard reevaluations being performed pursuant to a request for information are beyond the current design/licensing basis of operating plants; DD-15-4, 81 NRC 869 (2015)

FOREIGN OWNERSHIP

board did not err in factual finding that applicant was not under foreign ownership, control, or domination; CLI-15-7, 81 NRC 481 (2015)

foreign ownership, control, or domination analysis should be given an orientation toward safeguarding the national defense and security; CLI-15-7, 81 NRC 481 (2015)

in determining foreign ownership issues, boards may consider aspects of control that do not affect nuclear safety or security; CLI-15-7, 81 NRC 481 (2015)

NRC is prohibited from issuing a utilization or production facility license to any alien or any corporation or other entity if NRC knows or has reason to believe it is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; CLI-15-7, 81 NRC 481 (2015)

“owned, controlled or dominated” refers to relationships in which the will of one party is subjugated to the will of another; CLI-15-7, 81 NRC 481 (2015)

where the record did not show any means for foreign minority owner of applicant to control applicant’s decisions, or any attempts by the foreign owner to do so, the board could permissibly conclude that the foreign minority owner did not “control” the applicant; CLI-15-7, 81 NRC 481 (2015)

whether a foreign entity has the ability to restrict or inhibit compliance with security or other regulations of the Commission is of greatest significance to a foreign ownership, control, or domination review; CLI-15-7, 81 NRC 481 (2015)

FRACTURE TOUGHNESS

applicant requests an operating license amendment to implement alternate fracture toughness requirements for protection against pressurized thermal shock events; LBP-15-17, 81 NRC 753 (2015)

SUBJECT INDEX

ASTM Standard E 185 anticipates that during the course of a nuclear power plant's life the surveillance capsule withdrawal schedule may need to be revised and allows and provides for such changes; LBP-15-20, 81 NRC 829 (2015)

if part of a reactor pressure vessel is expected to fall below the 50 ft-lb standard, licensee must demonstrate that lower values of Charpy upper-shelf energy will provide margins of safety against fracture equivalent to those required by the ASME Boiler and Pressure Vessel Code; LBP-15-20, 81 NRC 829 (2015)

licensees have the option of demonstrating that values of Charpy upper-shelf energy below 50 ft-lb will provide margins of safety against fracture equivalent to those required by Appendix G of Section XI of the ASME BPV Code; LBP-15-20, 81 NRC 829 (2015)

licensees must attach a particular number of surveillance capsules to specified areas within the reactor vessel, typically near the inside vessel wall at the beltline; LBP-15-20, 81 NRC 829 (2015)

long-term exposure to neutron radiation and elevated temperatures in a reactor vessel decrease the vessel materials' fracture toughness, or resistance to fracture; LBP-15-20, 81 NRC 829 (2015)

materials in a reactor vessel must maintain a minimum level of 50 ft-lb of Charpy upper-shelf energy, which is a measurement of the amount of energy the material can absorb at high temperatures before it fractures and fails; LBP-15-20, 81 NRC 829 (2015)

minimum frequency with which surveillance capsules must be tested is set by ASTM Standard E 185 (1982 version), which is incorporated into Appendix H; LBP-15-20, 81 NRC 829 (2015)

neutron radiation embrittlement of reactor pressure vessel walls, decreasing their fracture toughness, is discussed; LBP-15-17, 81 NRC 753 (2015)

petitioners are not barred from contending that additional testing is necessary to show margins of safety equivalent to those of the ASME BPV Code, Section XI, Appendix G because the petitioners allege noncompliance with 10 C.F.R. Part 50, Appendix G and not Appendix H; LBP-15-20, 81 NRC 829 (2015)

physical specimens must come from near the inside vessel wall in the beltline region so that the specimen irradiation history duplicates the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface; LBP-15-17, 81 NRC 753 (2015)

plant-specific surveillance data must be integrated into the transition fracture toughness reference temperature estimate; LBP-15-17, 81 NRC 753 (2015)

results from plant-specific surveillance program must be integrated into the fracture toughness estimate if the plant-specific surveillance data have been deemed credible; LBP-15-17, 81 NRC 753 (2015)

FUEL LOADING

holder of a combined license for a newly built reactor may not load fuel or operate except as provided in accordance with Part 50, Appendix E; LBP-15-4, 81 NRC 156 (2015)

FUEL REMOVAL

"permanent fuel removal" from a nuclear power reactor facility is defined as a certification by licensee to NRC that it has permanently removed all fuel assemblies from the reactor vessel; LBP-15-4, 81 NRC 156 (2015)

FUKUSHIMA ACCIDENT

as part of the NRC post-Fukushima lessons-learned activities, NRC is requiring all licensees to reevaluate seismic hazards at their sites, and to this end, issued a request for information; DD-15-1, 81 NRC 193 (2015)

current regulatory approach and the resultant plant capabilities provide confidence to conclude that a sequence of events similar to the Fukushima accident is unlikely to occur in the U.S.; DD-15-6, 81 NRC 884 (2015); DD-15-6, 81 NRC 884 (2015)

NRC Staff review of combined license application relative to regulatory actions that the NRC has taken in response to lessons learned from the accident is discussed; CLI-15-13, 81 NRC 555 (2015)

petitioners asserted that NRC actions following the events of September 11, 2001, and the accident at Fukushima Dai-ichi were insufficient to satisfy NRC's general obligation under the Atomic Energy Act to protect public health and safety; CLI-15-4, 81 NRC 221 (2015)

post-Fukushima spent fuel pool concerns are being addressed through rulemaking on mitigation of beyond-design-basis events; DD-15-1, 81 NRC 193 (2015)

request for suspension of proceedings and other relief after the Fukushima Dai-ichi accident was denied; CLI-15-13, 81 NRC 555 (2015)

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request that NRC order the immediate suspension of the operating licenses of all General Electric boiling-water reactors that use the Mark I primary containment system, citing the Fukushima Dai-ichi accident in Japan as its basis, is resolved; DD-15-1, 81 NRC 193 (2015)

GENERAL LICENSES

all Part 50 and Part 52 reactor licensees may be granted a general license to store spent fuel in an independent spent fuel storage installation; CLI-15-4, 81 NRC 221 (2015)

GENERATORS

See Diesel Generators

GENERIC ENVIRONMENTAL IMPACT STATEMENT

absent a rule waiver, NRC Staff is not expected to revisit the impact determinations made in the Continued Storage GEIS as part of its site-specific NEPA reviews; CLI-15-10, 81 NRC 535 (2015)
although NRC has issued a GEIS for in situ uranium recovery facilities that assesses potential ISR facility construction/operation/decommissioning impacts, for the initial licensing of each individual ISR facility, NRC Staff will first prepare a draft supplemental environmental impact statement; LBP-15-3, 81 NRC 65 (2015)

assumptions used in the analysis of impacts of continued storage of spent fuel are sufficiently conservative to bound the impacts such that variances that may occur between sites are unlikely to result in environmental impact determinations greater than those presented in the continued storage GEIS; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

board improperly allowed petitioner to challenge the GEIS's generic finding regarding severe accident consequences; CLI-15-6, 81 NRC 340 (2015)

Commission adopted a GEIS to identify and analyze the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-12, 81 NRC 452 (2015)

Commission directed licensing boards to reject pending waste confidence contentions after adopting a GEIS to identify and analyze environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-5, 81 NRC 249 (2015)

contention that supplementation of the environmental impact statement is necessary to allow members of the public to lodge placeholder contentions challenging Commission reliance, in individual licensing proceedings, on the Continued Storage GEIS and Rule is inadmissible; CLI-15-10, 81 NRC 535 (2015)

Continued Storage Rule and supporting GEIS to assess the environmental impacts of spent fuel storage after the end of a reactor's license term were approved; CLI-15-10, 81 NRC 535 (2015)

GEIS findings with respect to severe accident consequences are not subject to challenge in individual license renewal proceedings; CLI-15-6, 81 NRC 340 (2015)

GEIS for in-situ leach uranium milling facilities addresses, among other topics, matters specified in section 51.45; LBP-15-3, 81 NRC 65 (2015)

GEIS for ISL mining is subject to an appropriate challenge in an adjudicatory proceeding; LBP-15-11, 81 NRC 401 (2015)

generic analyses of the environmental impacts of continued storage and disposal in the context of NRC reactor licensing proceedings are acceptable; CLI-15-4, 81 NRC 221 (2015)

generic environmental analysis is incorporated into NRC regulations, and thus Category 1 generic findings may not be challenged in individual licensing proceedings unless accompanied by a petition for rule waiver; CLI-15-6, 81 NRC 340 (2015)

impact determinations in the Continued Storage GEIS shall be deemed incorporated into the environmental impact statements associated with combined license and license renewal applications; CLI-15-10, 81 NRC 535 (2015)

impacts of continued storage will not vary significantly across sites and can be analyzed generically; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

it is not clear NRC Staff relied upon the GEIS when preparing the draft supplemental environmental impact statement because it was not incorporated by reference or mentioned in any other manner; LBP-15-11, 81 NRC 401 (2015)

license renewal applicant's environmental report may adopt the findings of the GEIS, but must also include site-specific analyses of Category 2 issues; CLI-15-6, 81 NRC 340 (2015)

license renewal provisions cover environmental issues relating to onsite spent fuel storage generically, and all such issues, including accident risk, fall outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

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NRC adopted a GEIS identifying and analyzing environmental impacts of continued storage of spent nuclear fuel and associated revisions to the Temporary Storage Rule in 10 C.F.R. 51.23; LBP-15-1, 81 NRC 15 (2015); LBP-15-5, 81 NRC 249 (2015)

NRC need not incorporate a GEIS by reference where the Commission has already taken public comment and performed a comprehensive analysis of the environmental consequences of continued spent fuel storage; CLI-15-10, 81 NRC 535 (2015)

NRC Staff uses applicant's environmental report as a starting point for its own environmental review of a license renewal application, the results of which are published as a supplement to the GEIS; CLI-15-6, 81 NRC 340 (2015)

spent fuel pool GEIS is not limited to discussing only normal operations, but also discusses potential accidents and other nonroutine events, and thus need not be included in the severe accident mitigation alternatives analysis for license renewal; LBP-15-5, 81 NRC 249 (2015)

GENERIC ISSUES

Commission approval of a rule waiver could allow a contention on a Category 1 issue to proceed where special circumstances exist; CLI-15-6, 81 NRC 340 (2015)

generic determinations are appropriately excluded from litigation in individual proceedings; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

licensing proceedings are not the appropriate venue for generic rulemaking issues; CLI-15-9, 81 NRC 512 (2015)

NRC's use of rulemaking to address generic issues has been approved by the Supreme Court; CLI-15-6, 81 NRC 340 (2015)

pointing to alleged new and significant information is not enough to allow boards to adjudicate an issue resolved generically by regulation; LBP-15-5, 81 NRC 249 (2015)

where special circumstances make a generic rule inapplicable to a particular proceeding, participant may petition for a rule waiver or exception; CLI-15-6, 81 NRC 340 (2015)

GENERIC SAFETY ISSUES

Continued Storage Rule makes generic safety findings concerning feasibility and capacity of spent fuel disposal; LBP-15-9, 81 NRC 396 (2015)

GOVERNMENT PARTIES

Commission grants standing to a governmental body within close proximity of a proposed nuclear reactor under the proximity presumption, effectively dispensing with the need to make an affirmative showing of injury, causation, and redressability; LBP-15-19, 81 NRC 815 (2015)

GROUNDWATER

admissibility of contention that environmental assessment fails to adequately describe and analyze aquifer restoration goals in light of new standards for determining alternative control limits is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental assessment fails to analyze impacts on the project from earthquakes, especially concerning secondary porosity and adequate confinement is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that NRC Staff must conduct a new baseline groundwater characterization study of the license renewal area rather than relying on the baseline study conducted during the original license application is decided; LBP-15-11, 81 NRC 401 (2015)

"baseline" data describe results of applicant's preoperational or baseline groundwater quality sampling program providing data on project-wide groundwater conditions; LBP-15-16, 81 NRC 618 (2015)

Commission-approved background cannot be established until after an ISR license has been issued; LBP-15-3, 81 NRC 65 (2015)

contention that environmental assessment violates the National Environmental Policy Act in its failure to analyze groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 401 (2015)

contention that final supplemental environmental impact statement fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater samples were collected in a scientifically defensible manner is decided; LBP-15-16, 81 NRC 618 (2015)

EPA drinking water maximum contaminant levels continue to be an accepted groundwater restoration standard; LBP-15-3, 81 NRC 65 (2015)

in situ recovery license applicant is barred from installing a complete wellfield and associated monitor well networks until after a license is issued; LBP-15-3, 81 NRC 65 (2015)

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intervenor fail to establish the validity of their various challenges to the adequacy of the final supplemental environmental impact statement description of the baseline water quality at the ISR site; LBP-15-3, 81 NRC 65 (2015)

prelicensing monitoring program to characterize site groundwater constituents need not be coextensive with the Criterion 7A preoperational monitoring, license condition-based program intended to provide the information needed for setting Criterion 5B groundwater protection standards and UCLs; LBP-15-16, 81 NRC 618 (2015)

“primary groundwater restoration” is to return the constituent to background levels; LBP-15-3, 81 NRC 65 (2015)

restoration to an alternate concentration limit is permitted only when restoration to a primary or the secondary Table 5C standard is not practically achievable; LBP-15-3, 81 NRC 65 (2015)

“secondary groundwater restoration” is restoration of constituent levels to the drinking water limits enumerated in Appendix A, Table 5C; LBP-15-3, 81 NRC 65 (2015)

waiting until after licensing, although before mining operations begin, to definitively establish the groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology, given the sequential development of in situ leach wellfields; LBP-15-16, 81 NRC 618 (2015)

GROUNDWATER CONTAMINATION

activities associated with, and the data coming from, prelicensing groundwater monitoring activities are associated with compliance with the dictates of 10 C.F.R. Part 40, Appendix A, Criterion 7; LBP-15-3, 81 NRC 65 (2015)

although the Part 40, Appendix A criteria were developed for conventional uranium milling facilities, they have since been applied in limited fashion to ISR facilities; LBP-15-3, 81 NRC 65 (2015)

applicant for a uranium ISR license is required to provide data from a groundwater monitoring program that are sufficient to establish a prelicensing site characterization baseline for assessing the potential effects of facility operations on local groundwater quality; LBP-15-3, 81 NRC 65 (2015)

applicant’s monitoring program for establishing existing site characterization baseline values for certain site groundwater constituents prior to issuance of a source materials license for ISR facility construction and operation need not, to comply with NEPA and NRC’s Part 51 implementing regulations, be conducted so as to also provide background information needed to set Appendix A, Criterion 5B groundwater protection standards; LBP-15-3, 81 NRC 65 (2015)

background water quality data are used to establish existing hazardous constituent concentrations in an aquifer, which can then be used to set post-operational concentration limits; LBP-15-16, 81 NRC 618 (2015)

bounding analysis provided in the final supplemental environmental impact statement, as supplemented in the record, provides sufficient information about a reasonable range of hazardous constituent concentration values associated with potential post-operational alternate concentration limits so as to provide an appropriate NEPA assessment of the environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits; LBP-15-3, 81 NRC 65 (2015)

contention that environmental assessment has not adequately addressed environmental impacts associated with saltwater intrusion arising from saline water migration from the plant into surrounding waters, and applicant’s use of aquifer withdrawals to lower salinity and temperature is admissible; LBP-15-13, 81 NRC 456 (2015)

contention that environmental review documents fail to identify source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene in groundwater is inadmissible as untimely; LBP-15-19, 81 NRC 815 (2015)

contention that final supplemental environmental impact statement fails to analyze environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits is decided; LBP-15-3, 81 NRC 65 (2015)

contention that final supplemental environmental impact statement fails to comply with NRC regulations and NEPA because it lacks an adequate description of the present baseline (i.e., original or pre-mining) groundwater quality and fails to demonstrate that groundwater samples were collected in a scientifically defensible manner is decided; LBP-15-3, 81 NRC 65 (2015)

determination of background groundwater quality to include sampling of wells that are hydraulically upgradient of the waste management area is not required if non-upgradient well sampling will provide

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an indication of background groundwater quality that is representative, or more representative, than that provided by upgradient wells; LBP-15-3, 81 NRC 65 (2015)

in exempting an aquifer from MCLs, EPA has to find that the aquifer cannot and will not serve as a source of drinking water because it is mineral producing and can be demonstrated to contain minerals that, considering their quantity and location, are expected to be commercially producible; LBP-15-3, 81 NRC 65 (2015)

licensee shall establish a detection monitoring program needed for NRC to set the site-specific groundwater protection standards, and the monitoring program must be in place when specified by NRC in license conditions; LBP-15-3, 81 NRC 65 (2015)

nineteen factors must be considered in making the “present and potential hazard” finding requisite to Commission approval of an alternate concentration limit; LBP-15-3, 81 NRC 65 (2015)

no in situ recovery facility has ever requested that all OZ aquifer groundwater hazardous constituents be restored to CAB concentrations or Criterion 5B(5)(b) MCLs, as those are currently defined; LBP-15-3, 81 NRC 65 (2015)

nothing in 10 C.F.R. Part 40, Appendix A, Criterion 5B precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in applicant’s precertification program were adequate to provide the necessary information to characterize properly the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 65 (2015)

nothing in the definition of “construction” in 10 C.F.R. 40.4 precludes the installation of wells or the use of monitoring protocols as needed to provide those background data; LBP-15-3, 81 NRC 65 (2015)

NRC regulations explicitly allow the use of alternate concentration limits for hazardous constituents; LBP-15-11, 81 NRC 401 (2015)

post-licensing, preoperational activities conducted to comply with Part 40, Appendix A, Criterion 7 are associated with compliance with the dictates of 10 C.F.R. Part 40, Appendix A, Criteria 5B and 7A; LBP-15-3, 81 NRC 65 (2015)

proper sampling plan for establishing baseline values is described; LBP-15-3, 81 NRC 65 (2015)

requirements for groundwater restoration standards for ISR mining operations are set forth in 10 C.F.R. Part 40, Appendix A, Criterion 5B(5); LBP-15-3, 81 NRC 65 (2015)

results of review by NRC Staff and Indian tribe of applicant’s newly disclosed well log data did not paint a seriously different picture of the environmental landscape; LBP-15-16, 81 NRC 618 (2015)

site-specific data to confirm proper baseline quality values, and confirm whether existing rock units provide adequate confinement cannot be collected until an in situ leach well field has been installed; LBP-15-3, 81 NRC 65 (2015)

subset of the production and injection wells to be drilled within the boundaries of the ISR wellfield is to be used to sample groundwater from the aquifer prior to the commencement of operations to establish hazardous constituent Commission-approved background concentrations; LBP-15-3, 81 NRC 65 (2015)

to have an alternate concentration limit approved, licensee must demonstrate that the hazardous constituent value is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the ACL is not exceeded; LBP-15-3, 81 NRC 65 (2015)

waiting until after licensing (although before mining operations begin) to establish definitively the groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology, given the sequential development of in situ leach well fields; LBP-15-3, 81 NRC 65 (2015)

water samples taken from one well located hydrologically upgradient are part of the groundwater sampling protocol; LBP-15-3, 81 NRC 65 (2015)

HAZARDOUS MATERIALS

contention that environmental review documents fail to identify source data of the chemical concentrations for ethylbenzene, heptachlor, tetrachloroethylene, and toluene in groundwater is inadmissible as untimely; LBP-15-19, 81 NRC 815 (2015)

NRC regulations explicitly allow the use of alternate concentration limits for hazardous constituents; LBP-15-11, 81 NRC 401 (2015)

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HAZARDOUS WASTE

admissibility of contention that environmental assessment fails to adequately describe and analyze the impacts of maintaining post-operational wellfields as long-term hazardous waste facilities is decided; LBP-15-15, 81 NRC 598 (2015)

HEALTH AND SAFETY

admissibility of contention that final environmental assessment fails to adequately evaluate adverse impacts on public health and safety is decided; LBP-15-15, 81 NRC 598 (2015)

as a matter of policy, applicant's decision to improve an existing program to promote health and safety or to boost public support and confidence ought not ordinarily be viewed as conferring petitioners with an automatic opportunity to advance a new contention; LBP-15-1, 81 NRC 15 (2015)

because the shield building functions as a radiation and biological shield, failure or collapse of the shield building due to cracking propagation could lead to health and safety impacts and thus petitioner's contention concerns a subject matter that could impact the grant or denial of a pending license application; LBP-15-1, 81 NRC 15 (2015)

contention alleging a material deficiency must link the claimed deficiency to a public health and safety or an environmental impact; LBP-15-1, 81 NRC 15 (2015)

license transfer proceedings do not encompass a full-scale health-and-safety review of a plant; CLI-15-8, 81 NRC 500 (2015)

material condition of a plant's reactor vessel obviously bears on the health and safety of members of the public who reside in the plant's vicinity; LBP-15-20, 81 NRC 829 (2015)

NRC can issue nuclear power reactor licenses to applicants only upon a finding that utilization of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public; CLI-15-4, 81 NRC 221 (2015)

petitioners asserted that NRC actions following the events of September 11, 2001, and the accident at Fukushima Dai-ichi were insufficient to satisfy NRC's general obligation under the Atomic Energy Act to protect public health and safety; CLI-15-4, 81 NRC 221 (2015)

prior to license issuance NRC must find reasonable assurance that activities authorized by the amendment can be conducted without endangering the health and safety of the public, and in compliance with Commission regulations; LBP-15-20, 81 NRC 829 (2015)

HEALTH EFFECTS

to challenge a Category I issue such as public health, petitioner must request a waiver and show that unique circumstances warrant a site-specific determination; LBP-15-5, 81 NRC 249 (2015)

HEARING REQUESTS

Commission denies portions of a hearing request but refers petitioner's underlying concerns to the Executive Director for Operations for consideration as an enforcement action; CLI-15-14, 81 NRC 729 (2015)

in proceedings for which a Federal Register notice of agency action is published, a hearing request must be filed not later than the time specified in the notice or if no notice is specified, 60 days from the date of publication of the notice; CLI-15-5, 81 NRC 329 (2015)

in proceedings for which a notice of agency action is not published, a hearing request must be filed not later than the latest of 60 days after publication of notice on the NRC Web site or 60 days after the requestor receives actual notice of a pending application but not more than 60 days after agency action on the application; CLI-15-5, 81 NRC 329 (2015)

HEARING RIGHTS

agency actions not formally labeled as license amendments nevertheless can constitute de facto license amendments and accordingly trigger hearing rights for the public under Atomic Energy Act § 189a; CLI-15-5, 81 NRC 329 (2015); CLI-15-14, 81 NRC 729 (2015)

agency approval or authorization is a necessary component of Commission action that affords a hearing opportunity under AEA § 189a, but not all agency approvals granted to licensees constitute de facto licensee amendments; CLI-15-14, 81 NRC 729 (2015)

Commission refers a limited portion of the hearing request to the licensing board to determine whether petitioner has identified an NRC activity that requires an opportunity to request an adjudicatory hearing; CLI-15-14, 81 NRC 729 (2015)

Congress intentionally limited the opportunity for a hearing to certain designated agency actions which do not include exemptions; LBP-15-18, 81 NRC 793 (2015)

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direction is given on what licensee actions do and do not constitute a de facto license amendment triggering hearing rights; CLI-15-14, 81 NRC 729 (2015)

exemptions ordinarily do not trigger hearing rights when an already-licensed facility is asking for relief from performing a duty imposed by NRC regulations; LBP-15-18, 81 NRC 793 (2015)

hearing on exemption-related matters is necessary insofar as resolution of the exemption request directly affects the licensability of a proposed fuel storage site and the exemption raises material questions directly connected to an agency licensing action; LBP-15-18, 81 NRC 793 (2015)

hearing rights are provided in licensing actions concerning the granting of any license upon the request of any person whose interest may be affected by the proceeding; LBP-15-16, 81 NRC 618 (2015)

licensing actions that alter the terms of a license or otherwise authorize additional operating activities trigger hearing rights for the public under section 189a of the Atomic Energy Act; CLI-15-5, 81 NRC 329 (2015)

NRC approvals of plant restart and lifting suspensions did not trigger AEA §189a hearing rights; CLI-15-14, 81 NRC 729 (2015)

NRC must afford interested persons an opportunity for a hearing on the granting, suspending, revoking, or amending of any license; CLI-15-5, 81 NRC 329 (2015); LBP-15-17, 81 NRC 753 (2015); LBP-15-18, 81 NRC 793 (2015)

NRC Staff inspections and confirmatory action letters are oversight activities normally conducted to ensure that licensees comply with existing NRC requirements and license conditions and therefore do not typically trigger the opportunity for a hearing under the AEA; CLI-15-5, 81 NRC 329 (2015)

opportunity for a hearing must be provided for an amendment to an operating license, combined license, or manufacturing license; LBP-15-17, 81 NRC 753 (2015)

oversight activities at times involve enforcement actions, including orders and civil penalties, to which a hearing right or opportunity attaches; CLI-15-5, 81 NRC 329 (2015)

petitioner must address its hearing request to a matter that triggers a hearing opportunity; CLI-15-5, 81 NRC 329 (2015)

scope of the referral is limited to whether NRC granted licensee greater authority than that provided by its existing licenses or otherwise altered the terms of its existing licenses, thereby entitling petitioner to an opportunity to request a hearing; CLI-15-14, 81 NRC 729 (2015)

when licensee requests an exemption in a related license amendment application, hearing rights on the amendment application are considered to encompass the exemption request as well; LBP-15-18, 81 NRC 793 (2015)

HEAT SINK

plants must employ an ultimate heat sink to transfer heat from structures, systems, and components that are important to safety; LBP-15-13, 81 NRC 456 (2015)

HIGH-LEVEL WASTE REPOSITORY

Congress expressly recognized and impliedly approved NRC's regulatory scheme and practice under which the safety of interim storage of high-level wastes at commercial nuclear power reactor sites has been determined separately from the safety of government-owned permanent storage facilities that have not yet been established; CLI-15-4, 81 NRC 221 (2015)

in its Waste Confidence Decision, NRC failed to consider environmental impacts of a repository never becoming available, its analysis of spent fuel pool leaks was not forward-looking, and it had not sufficiently considered the consequences of spent fuel pool fires; CLI-15-4, 81 NRC 221 (2015)

responsibility for constructing and operating a waste repository was assigned to the Department of Energy, not NRC; CLI-15-4, 81 NRC 221 (2015)

HISTORIC SITES

agencies must take a hard look at preserving important historic and cultural aspects of our national heritage; LBP-15-16, 81 NRC 618 (2015)

Class III archeological survey involves a professionally conducted, pedestrian survey of an entire target area to identify properties that may be eligible for inclusion on the National Register of Historic Places; LBP-15-16, 81 NRC 618 (2015)

demolition of a historic unit to build a new unit will result in a finding of adverse effect under applicable criteria in 36 C.F.R. 800.5; CLI-15-13, 81 NRC 555 (2015)

federal agency must assess the effects of the undertaking on any eligible historic properties found; LBP-15-16, 81 NRC 618 (2015)

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federal agency must confer with a State Historic Preservation Officer and seek the approval of the ACHP; LBP-15-16, 81 NRC 618 (2015)

federal agency must determine whether identified properties are eligible for listing on the National Register based on the criteria in 36 C.F.R. 60.4; LBP-15-16, 81 NRC 618 (2015)

federal agency must make a reasonable and good-faith effort to identify historic properties; LBP-15-16, 81 NRC 618 (2015)

in consultation with identified parties, agency must develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effects of the undertaking on historic properties and describe them in the environmental assessment or draft environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

materials license application must provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that cultural and historic resources are identified and protected; LBP-15-16, 81 NRC 618 (2015)

HYDRODYNAMICS

contention that draft EIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that they will change the plume dynamics of the industrial wastewater facility/cooling canal contaminant plume is inadmissible; LBP-15-19, 81 NRC 815 (2015)

HYDROGEOLOGY

admissibility of contention that environmental assessment failed to analyze impacts on the project from earthquakes, especially concerning secondary porosity and adequate confinement is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that environmental assessment fails to describe and analyze the environmental impacts of new porosity and permeability in the aquifer caused by mining activity is decided; LBP-15-15, 81 NRC 598 (2015)

site-specific data to confirm proper baseline quality values, and confirm whether existing rock units provide adequate confinement, cannot be collected until an in situ leach wellfield has been installed; LBP-15-3, 81 NRC 65 (2015)

IMMEDIATE EFFECTIVENESS

license amendment will be effective on issuance, even if adverse public comments have been received and even if an interested person meeting the provisions for intervention has filed a request for a hearing; LBP-15-17, 81 NRC 753 (2015)

NRC Staff may determine that exigent circumstances exist such that there is insufficient time for a full 30-day public comment period on a license amendment request; LBP-15-13, 81 NRC 456 (2015)

when an adjudicatory proceeding has been initiated with respect to a license amendment issued with a no significant hazards determination, once the presiding officer's initial decision becomes effective, the appropriate official shall take action with respect to that amendment in accordance with the initial decision; LBP-15-13, 81 NRC 456 (2015)

IN SITU LEACH MINING

admissibility of contention that environmental assessment fails to adequately describe and analyze impacts of maintaining post-operational wellfields as long-term hazardous waste facilities is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental assessment fails to adequately describe and analyze proposed mitigation measures is decided; LBP-15-11, 81 NRC 401 (2015)

admissibility of contention that environmental assessment fails to conduct the required hard look at impacts of the proposed mine and fails to consult with the U.S. Fish & Wildlife Service is decided; LBP-15-11, 81 NRC 401 (2015)

although 10 C.F.R. Part 40 applies to ISL mining, some of the specific requirements in Part 40, such as many of those found in Appendix A, address hazards posed only by conventional uranium milling operations, and do not carry over to ISL mining; LBP-15-16, 81 NRC 618 (2015)

although NRC has issued a generic environmental impact statement for in situ uranium recovery facilities that assesses potential ISR facility construction/operation/decommissioning impacts, for the initial licensing of each individual ISR facility, NRC Staff will first prepare a draft supplemental environmental impact statement; LBP-15-3, 81 NRC 65 (2015)

although the Part 40, Appendix A criteria were developed for conventional uranium milling facilities, they have since been applied in limited fashion to ISR facilities; LBP-15-3, 81 NRC 65 (2015)

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applicant for a license to possess and use source and AEA §11e(2) byproduct material for the purpose of in situ uranium recovery must submit an environmental report with its application; LBP-15-3, 81 NRC 65 (2015)

applicant for a uranium ISR license is required to provide data from a groundwater monitoring program that are sufficient to establish a precensuring site characterization baseline for assessing the potential effects of facility operations on local groundwater quality; LBP-15-3, 81 NRC 65 (2015)

applicant's monitoring program for establishing existing site characterization baseline values for certain site groundwater constituents prior to issuance of a source materials license for ISR facility construction and operation need not, to comply with NEPA and NRC's Part 51 implementing regulations, be conducted so as to also provide background information needed to set Appendix A, Criterion 5B groundwater protection standards; LBP-15-3, 81 NRC 65 (2015)

"construction" does not include site exploration, including preconstruction monitoring to establish background information related to the environmental impacts of construction or operation, or the protection of environmental values; LBP-15-3, 81 NRC 65 (2015)

contention that environmental assessment fails to adequately describe air quality impacts is inadmissible as untimely; LBP-15-11, 81 NRC 401 (2015)

contention that environmental assessment violates the National Environmental Policy Act in its failure to analyze groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 401 (2015)

contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 401 (2015)

contention that FSEIS fails to analyze environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits is decided; LBP-15-3, 81 NRC 65 (2015)

environmental impact statement must discuss any adverse environmental effects that cannot be avoided should the proposal be implemented and must provide a reasonably complete discussion of possible mitigation measures; LBP-15-11, 81 NRC 401 (2015)

generic environmental impact statement for in-situ leach mining is subject to an appropriate challenge in an adjudicatory proceeding; LBP-15-11, 81 NRC 401 (2015)

generic environmental impact statement for in-situ leach uranium milling facilities addresses, among other topics, matters specified in section 51.45; LBP-15-3, 81 NRC 65 (2015)

in situ recovery license applicant is barred from installing a complete wellfield and associated monitor well networks until after a license is issued; LBP-15-3, 81 NRC 65 (2015)

intervenor fail to establish the validity of their various challenges to the adequacy of the FSEIS description of the baseline water quality at the ISR site; LBP-15-3, 81 NRC 65 (2015)

licensee shall establish a detection monitoring program needed for NRC to set the site-specific groundwater protection standards, and the monitoring program must be in place when specified by NRC in license conditions; LBP-15-3, 81 NRC 65 (2015)

no in situ recovery facility has ever requested that all OZ aquifer groundwater hazardous constituents be restored to CAB concentrations or Criterion 5B(5)(b) MCLs, as those are currently defined; LBP-15-3, 81 NRC 65 (2015)

nothing in 10 C.F.R. Part 40, Appendix A, Criterion 5B precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in applicant's precensuring program were adequate to provide the necessary information to characterize properly the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 65 (2015)

NRC regulations explicitly allow the use of alternate concentration limits for hazardous constituents; LBP-15-11, 81 NRC 401 (2015)

NRC Staff must prepare an environmental impact statement in connection with a license to possess and use source and AEA §11e(2) byproduct material for the purpose of in situ uranium recovery; LBP-15-3, 81 NRC 65 (2015)

relative to an individual ISR facility, when NRC Staff formulates its draft and final supplemental environmental impact statement conclusions regarding the environmental impacts of a proposed action or alternative actions, it uses as guidance a standard scheme to categorize or quantify the impacts; LBP-15-3, 81 NRC 65 (2015)

requirements for groundwater restoration standards for ISR mining operations are set forth in 10 C.F.R. Part 40, Appendix A, Criterion 5B(5); LBP-15-3, 81 NRC 65 (2015)

SUBJECT INDEX

site-specific data to confirm proper baseline quality values, and confirm whether existing rock units provide adequate confinement cannot be collected until an in situ leach well field has been installed; LBP-15-3, 81 NRC 65 (2015)

“source material” is defined as uranium being extracted through the ISL process; LBP-15-16, 81 NRC 618 (2015)

subset of the production and injection wells to be drilled within the boundaries of the ISR wellfield is to be used to sample groundwater from the aquifer prior to the commencement of operations to establish hazardous constituent Commission-approved background concentrations; LBP-15-3, 81 NRC 65 (2015)

waiting until after licensing (although before mining operations begin) to establish definitively the groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology, given the sequential development of in situ leach well fields; LBP-15-3, 81 NRC 65 (2015)

INCORPORATION BY REFERENCE

agencies can, consistent with NEPA regulations, incorporate by reference analyses and information from existing documents into an environmental assessment or environmental impact statement provided the material has been appropriately cited and described; LBP-15-11, 81 NRC 401 (2015)

Commission discourages incorporating pleadings or arguments by reference; LBP-15-5, 81 NRC 249 (2015)

“deemed incorporated” function of 10 C.F.R. 51.23(b) provides administrative efficiency by adding the environmental impacts of continued storage to site-specific environmental impact statements without additional work by the Staff; CLI-15-10, 81 NRC 535 (2015)

impact determinations in the continued storage generic environmental impact statement shall be deemed incorporated into the environmental impact statements associated with combined license and license renewal applications; CLI-15-10, 81 NRC 535 (2015)

it is not clear that NRC Staff relied upon the generic environmental impact statement when preparing the draft supplemental environmental impact statement because it was not incorporated by reference or mentioned in any other manner; LBP-15-11, 81 NRC 401 (2015)

latest edition and addenda of the ASME Boiler and Pressure Vessel Code has been incorporated by reference in 10 C.F.R. 50.55a(b)(2); LBP-15-20, 81 NRC 829 (2015)

NRC need not undertake incorporation by reference of a generic environmental impact statement where the Commission has already taken public comment and performed a comprehensive analysis of the environmental consequences of continued spent fuel storage; CLI-15-10, 81 NRC 535 (2015)

NRC Staff is incorporating the 2012 edition of the ASME code by reference into 10 C.F.R. 50.55a; CLI-15-13, 81 NRC 555 (2015)

wholesale incorporation by reference does not serve the purposes of a pleading; LBP-15-5, 81 NRC 249 (2015)

INDEPENDENT SPENT FUEL STORAGE INSTALLATION

general license may be granted to all Part 50 and Part 52 reactor licensees to store spent fuel in an ISFSI; CLI-15-4, 81 NRC 221 (2015)

stringent safety requirements apply to construction and operation of reactor spent fuel pools and ISFSIs; CLI-15-4, 81 NRC 221 (2015)

INITIAL DECISIONS

when an adjudicatory proceeding has been initiated with respect to a license amendment issued with a no significant hazards determination, once the presiding officer’s initial decision becomes effective, the appropriate official shall take action with respect to that amendment in accordance with the initial decision; LBP-15-13, 81 NRC 456 (2015)

INJUNCTIVE RELIEF

irreparable harm element of the test for issuance of injunctive relief was met where the tribe’s evidence showed that a phase of the project would involve damage to at least one known site, and virtually ensure some loss or damage; LBP-15-2, 81 NRC 48 (2015)

movant must show that the harm is certain and great and of such imminence that there is a clear and present need for equitable relief; LBP-15-2, 81 NRC 48 (2015)

SUBJECT INDEX

preliminary injunction halting a solar energy project was granted based on a tribal claim that the project would not avoid most of the 459 cultural sites identified, and that the NEPA and NHPA process had been insufficient; LBP-15-2, 81 NRC 48 (2015)

See also Stay

INJURY IN FACT

party seeking a stay must specifically and reasonably demonstrate an injury, not merely allege generalized harm; LBP-15-2, 81 NRC 48 (2015)

See also Irreparable Injury

INSPECTION

although intervenors disagree with applicant's opportunistic inspection strategy for managing rebar corrosion, they merely assert, and do not plausibly explain, how applicant's approach will lead to a material safety impact; LBP-15-1, 81 NRC 15 (2015)

inservice testing and inspection program for squib valves in combined license applications is discussed; CLI-15-13, 81 NRC 555 (2015)

inspection to determine effects of wet or underwater conditions on underground safety-related electrical cables is discussed; DD-15-1, 81 NRC 193 (2015)

intervenor must do more than point to issues with the shield building, but must also indicate what is wrong with applicant's response and its amended inspection program and why intervenor believes the particular inspection program makes the license renewal application unacceptable; LBP-15-1, 81 NRC 15 (2015)

NRC Staff inspections and confirmatory action letters are oversight activities normally conducted to ensure that licensees comply with existing NRC requirements and license conditions and therefore do not typically trigger the opportunity for a hearing under the AEA; CLI-15-5, 81 NRC 329 (2015)

request for an Office of the Inspector General inspection on why different NRC regions have different analysis criteria for similar primary coolant pump events was forwarded on to the OIG; DD-15-3, 81 NRC 713 (2015)

INSTRUMENTATION

request for additional instrumentation for all Mark I spent fuel storage pools has been addressed through an order modifying licenses with regard to reliable spent fuel pool instrumentation; DD-15-1, 81 NRC 193 (2015)

INTEGRATED PLANT ASSESSMENT

contention that does not actually challenge any specific part of the integrated plant assessment or time-limited aging analyses fails to demonstrate the existence of a genuine dispute with applicant; LBP-15-6, 81 NRC 314 (2015)

license renewal applicant must demonstrate that effects of aging for each structure and component will be managed so that the intended functions will be maintained consistent with the current licensing basis for the period of extended operation; CLI-15-6, 81 NRC 340 (2015)

license renewal applicant must perform an integrated plant assessment to identify structures and components that are subject to aging management review; CLI-15-6, 81 NRC 340 (2015)

INTERESTED GOVERNMENTAL ENTITY

governmental entity is permitted to participate in the proceeding as an interested local governmental body and will thus have the opportunity to support intervenors' already-admitted contention; LBP-15-19, 81 NRC 815 (2015)

litigation opportunities available to an entity participating as a local governmental body pursuant to 10 C.F.R. 2.315(c) are discussed; LBP-15-19, 81 NRC 815 (2015)

representative of a governmental entity that wishes to participate as a nonparty in the proceeding must identify those contentions on which it will participate in advance of any hearing held; LBP-15-11, 81 NRC 401 (2015)

INTERPRETATION

intervenors' allegations are viewed in a light favorable to intervenors; LBP-15-11, 81 NRC 401 (2015)

principle of *expressio unis est exclusio alterius* is discussed; LBP-15-11, 81 NRC 401 (2015)

See also Construction of Meaning; Regulations, Interpretation; Statutory Construction

INTERVENORS

petitioners are obliged to present factual allegations and/or expert opinion necessary to support its contention; LBP-15-1, 81 NRC 15 (2015)

SUBJECT INDEX

petitioners have the burden of going forward, which requires them to provide factual allegations or expert testimony to show a potential deficiency in applicant's aging management plan; LBP-15-5, 81 NRC 249 (2015)

INTERVENTION

admissible contention is required for grant of a hearing request; LBP-15-17, 81 NRC 753 (2015)

Commission denies a request for a hearing and to intervene in this license transfer proceeding; CLI-15-8, 81 NRC 500 (2015)

contention admissibility criteria are strict by design but should not be turned into a fortress to deny intervention; LBP-15-20, 81 NRC 829 (2015)

hearing is granted where petitioner has proffered at least one admissible contention and established standing; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015)

intervention petitioner must not only establish standing, but must also proffer at least one admissible contention that meets the requirements of 10 C.F.R. 2.309(f); LBP-15-17, 81 NRC 753 (2015)

licensing boards must consider the nature of petitioner's right under the AEA or the National Environmental Policy Act to be made a party to the proceeding, nature and extent of petitioner's property, financial, or other interest in the proceeding, and possible effect of any decision or order that may be issued in the proceeding on petitioner's interest; LBP-15-17, 81 NRC 753 (2015)

participation in a licensing proceeding requires a demonstration of standing; LBP-15-17, 81 NRC 753 (2015)

petitioners must articulate at the outset the specific issues they wish to litigate as a prerequisite to gaining formal admission as parties; CLI-15-9, 81 NRC 512 (2015)

See also Standing to Intervene

INTERVENTION, DISCRETIONARY

intervention as a matter of discretion is permitted only where at least one petitioner has established standing and at least one admissible contention has been admitted, and petitioner is required to address six factors in its initial petition; CLI-15-14, 81 NRC 729 (2015)

INTERVENTION PETITIONERS

petitioner has the right to file a reply; LBP-15-13, 81 NRC 456 (2015)

right to reply is intended to provide an opportunity to legitimately amplify arguments made in the intervention petition in response to applicant and NRC Staff answers; LBP-15-13, 81 NRC 456 (2015)

INTERVENTION PETITIONS

arguments not raised before the board or not clearly articulated in the petition for review are deemed waived; LBP-15-5, 81 NRC 249 (2015)

Commission denies hearing request, but refers the matters raised to the Executive Director of Operations for consideration as a request for enforcement action; CLI-15-5, 81 NRC 329 (2015)

hearing request is granted where petitioners have submitted a timely petition, established representational standing, and proffered an admissible contention; LBP-15-20, 81 NRC 829 (2015)

intervention petition must be filed within the time specified in any notice of proposed action; LBP-15-13, 81 NRC 456 (2015)

issues raised in an intervention petition or answer are within the appropriate scope of a reply brief; LBP-15-5, 81 NRC 249 (2015)

license amendment will be effective on issuance, even if adverse public comments have been received and even if an interested person meeting the provisions for intervention has filed a request for a hearing; LBP-15-17, 81 NRC 753 (2015)

name, address, and phone number of the requestor or petitioner must be provided; LBP-15-20, 81 NRC 829 (2015)

petitioner must satisfy the six pleading requirements of 10 C.F.R. 2.309(f)(1); LBP-15-13, 81 NRC 456 (2015)

petitioner must set forth with particularity the contentions it seeks to have litigated in a hearing; CLI-15-8, 81 NRC 500 (2015)

petitioner must state the nature of petitioner's statutory right to be made a party to the proceeding, nature and extent of petitioner's property, financial, or other interest in the proceeding, and possible effect of any decision or order that may be issued on petitioner's interest; LBP-15-13, 81 NRC 456 (2015); LBP-15-19, 81 NRC 815 (2015)

SUBJECT INDEX

petitions must be timely, demonstrate standing, and proffer at least one admissible contention; CLI-15-5, 81 NRC 329 (2015); LBP-15-6, 81 NRC 314 (2015)

pleadings submitted by pro se petitioners are afforded greater leniency than petitions drafted with the assistance of counsel; LBP-15-5, 81 NRC 249 (2015)

timeliness of an initial hearing petition in different situations is defined as being filed between 20 and 60 days after certain specified events; LBP-15-11, 81 NRC 401 (2015)

INTERVENTION PETITIONS, LATE-FILED

determination as to whether requests or petitions are filed in a timely manner shall be subject to a reasonableness standard and are not subject to the 30-day deadline applicable to motions by existing parties to add or amend contentions; LBP-15-6, 81 NRC 314 (2015)

lack of prejudice, standing alone, does not excuse an untimely filing, but it is a factor the Commission has considered in determining whether good cause exists; LBP-15-4, 81 NRC 156 (2015)

persons not currently parties may file timely petitions to intervene provided that they satisfy the good-cause criteria; LBP-15-6, 81 NRC 314 (2015)

State intervenor provided good cause for its late E-filing submission because the State submitted its petition to NRC by e-mail before the deadline lapsed and the delay was purely a matter of obtaining digital credentials for the system, not an attempt to gain extra time to prepare a pleading or otherwise to flout NRC's procedural requirements; LBP-15-4, 81 NRC 156 (2015)

INTERVENTION RULINGS

board examines the information, facts, and expert opinions provided by petitioners to confirm that they do indeed provide adequate support for the contention; LBP-15-20, 81 NRC 829 (2015)

board is obliged to independently assess petitioners' standing, even if it is unchallenged; LBP-15-5, 81 NRC 249 (2015); LBP-15-17, 81 NRC 753 (2015)

Commission affirmed the board's standing ruling, but declined to accept review of challenges to the board's admission of two contentions because petitioner had failed to perfect its appeal by challenging the validity of the board's admissibility rulings regarding other contentions; LBP-15-3, 81 NRC 65 (2015)

limited interlocutory appeal right attaches only when the board has fully ruled on the initial intervention petition, i.e., when it has admitted or rejected all proposed contentions; LBP-15-1, 81 NRC 15 (2015)

proximity-based standing based on frequent contacts is a determination to be made by a licensing board after weighing all the information provided; LBP-15-17, 81 NRC 753 (2015)

IRREPARABLE INJURY

even if a party moving for a stay fails to show irreparable injury, a board may still grant a stay if movant has made an overwhelming showing or a demonstration of virtual certainty that it will prevail on the merits; LBP-15-2, 81 NRC 48 (2015)

for a potential injury to be irreparable, it must be shown to be imminent, certain, and great; LBP-15-2, 81 NRC 48 (2015)

harming Native American artifacts would constitute an irreparable injury because artifacts are, by their nature, unique, and their historical and cultural significance make them difficult to value monetarily; LBP-15-2, 81 NRC 48 (2015)

injury that has never been the focus of a lawsuit cannot constitute irreparable harm; LBP-15-2, 81 NRC 48 (2015)

irreparable injury is the most important of the factors for grant or denial of a stay; LBP-15-2, 81 NRC 48 (2015)

test for issuance of injunctive relief was met where the tribe's evidence showed that a phase of the project would involve damage to at least one known site, and virtually ensure some loss or damage; LBP-15-2, 81 NRC 48 (2015)

to qualify as an irreparable injury, the potential harm cited by stay movant first must be related to the underlying claim that is the focus of the adjudication; LBP-15-2, 81 NRC 48 (2015)

upon a strong showing of irreparable injury, stay movant need not always establish a high probability of success on the merits; LBP-15-2, 81 NRC 48 (2015)

See also Injury in Fact

JURISDICTION

radon emissions are regulated by EPA; LBP-15-16, 81 NRC 618 (2015)

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LABOR ISSUES

licensee is obliged to give local union notice and an opportunity to bargain over the effects of its decision to implement changes in the terms and conditions of the employees' employment regarding behavioral observations of security concerns; CLI-15-16, 81 NRC 810 (2015)

LEAKAGE

in its Waste Confidence Decision, NRC failed to consider environmental impacts of a repository never becoming available, its analysis of spent fuel pool leaks was not forward-looking, and it had not sufficiently considered the consequences of spent fuel pool fires; CLI-15-4, 81 NRC 221 (2015)
intervenor's reliance on long-available documents regarding leakages and notices of violation made a contention untimely as filed; LBP-15-11, 81 NRC 401 (2015)
request for immediate action on leakage from the safety injection refueling water tank did not meet the criteria for review; DD-15-3, 81 NRC 713 (2015)

LEGAL AUTHORITIES

grant of discretionary review must show that a board's ruling was a departure from, or contrary to, established law; CLI-15-7, 81 NRC 481 (2015)
petition for review must raise a substantial question with respect to whether a necessary legal conclusion is without governing precedent or is contrary to established law; CLI-15-7, 81 NRC 481 (2015)
specific regulations control over general regulations; CLI-15-10, 81 NRC 535 (2015)

LICENSE AMENDMENTS

agency actions not formally labeled as license amendments nevertheless can constitute de facto license amendments and accordingly trigger hearing rights for the public under section 189a of the AEA; CLI-15-14, 81 NRC 729 (2015)
agency approval or authorization is a necessary component of Commission action that affords a hearing opportunity under AEA § 189a, but not all agency approvals granted to licensees constitute de facto licensee amendments; CLI-15-14, 81 NRC 729 (2015)
considerations that NRC should review for grant of a license amendment are defined in 10 C.F.R. 50.40; LBP-15-17, 81 NRC 753 (2015)
direction is given on what licensee actions do and do not constitute a de facto license amendment triggering hearing rights; CLI-15-14, 81 NRC 729 (2015)
if a license were amended, the public's only means to participate in future schedule changes would be through a request for action under 10 C.F.R. 2.206; LBP-15-17, 81 NRC 753 (2015)
in determining whether a license or permit amendment will be issued to applicant, the Commission is to be guided by the considerations that govern issuance of initial licenses, construction permits, or early site permits to the extent applicable and appropriate; LBP-15-17, 81 NRC 753 (2015)
licensee action without NRC approval of an increase in authority or alteration of the terms of the license does not constitute a de facto amendment; CLI-15-14, 81 NRC 729 (2015)
licensee cannot amend the terms of its license unilaterally; CLI-15-14, 81 NRC 729 (2015)
petitioners' premise that a series of NRC Staff communications relating to plant oversight should be considered as an element of a single, overarching de facto license amendment was rejected; CLI-15-14, 81 NRC 729 (2015)
whenever licensee desires to amend the license, application for an amendment must be filed with the Commission; CLI-15-14, 81 NRC 729 (2015)

LICENSE APPLICATIONS

See Combined License Application; Contested License Applications; License Renewal Applications; Materials License Applications; Operating License Applications; Uncontested License Applications

LICENSE CONDITIONS

although the Commission found NRC Staff's review of combined license applications rigorous, it imposed a condition requiring implementation of a squib-valve surveillance program prior to fuel load; CLI-15-13, 81 NRC 555 (2015)
boards cannot assume that applicants will not comply with its regulatory responsibilities, including its license conditions; LBP-15-3, 81 NRC 65 (2015)
Commission may incorporate in any license at the time of issuance, or thereafter, by appropriate rule, regulation, or order, such additional requirements and conditions with respect to licensee's receipt, possession, use, and transfer of source or byproduct material as it deems appropriate or necessary in order to protect health or to minimize danger of life or property; LBP-15-16, 81 NRC 618 (2015)

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if a board determines after full adjudication that the license amendment should not have been granted, it may be revoked or conditioned; LBP-15-16, 81 NRC 618 (2015)

in granting a proposed license, board may condition it upon some precautionary measures required at the chosen site; LBP-15-16, 81 NRC 618 (2015)

in NEPA context, path that licensee and NRC Staff must follow relative to a license condition is sufficiently clear that continuing to hold the hearing open while it is completed would be an unnecessary extension of the adjudicatory process; LBP-15-3, 81 NRC 65 (2015)

in setting license conditions, NRC Staff may assume that a licensee will comply with all requirements imposed by the license; LBP-15-16, 81 NRC 618 (2015)

issued licenses can be revoked, conditioned, modified, or affirmed based on the evidence reviewed at the evidentiary hearing; LBP-15-16, 81 NRC 618 (2015)

licensee shall establish a detection monitoring program needed for NRC to set the site-specific groundwater protection standards, and the monitoring program must be in place when specified by NRC in license conditions; LBP-15-3, 81 NRC 65 (2015)

NRC Staff may impose additional requirements to protect against a reevaluated flood hazard; DD-15-5, 81 NRC 877 (2015)

request under 10 C.F.R. 50.54(f) is to enable the Commission to determine whether or not the license should be modified, suspended, or revoked; CLI-15-14, 81 NRC 729 (2015)

LICENSE EXPIRATION

existing license will not be deemed to have expired until the license renewal application has been finally determined; CLI-15-6, 81 NRC 340 (2015)

when licensee has made timely and sufficient application for a renewal, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency; LBP-15-2, 81 NRC 48 (2015; LBP-15-11, 81 NRC 401 (2015)

LICENSE RENEWAL

See Operating License Renewal

LICENSE RENEWAL APPLICATIONS

contention fails because it contests NRC Staff's safety review rather than the license renewal application; LBP-15-15, 81 NRC 598 (2015)

NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 48 (2015)

timing of license issuance is informed by instruction for NRC Staff to promptly issue its approval or denial of the application consistent with its findings, and despite the pendency of a hearing; LBP-15-2, 81 NRC 48 (2015)

when licensee has made timely and sufficient application for a license renewal, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency; LBP-15-2, 81 NRC 48 (2015; LBP-15-11, 81 NRC 401 (2015)

LICENSE TRANSFER APPLICATIONS

applicant must show reasonable assurance of sufficient funds to decommission the facility; CLI-15-8, 81 NRC 500 (2015)

applicant must submit estimates for total annual operating costs for each of the first 5 years of facility operation; CLI-15-8, 81 NRC 500 (2015)

environmental analysis under NEPA need not be included; CLI-15-8, 81 NRC 500 (2015)

formulas, based on reactor type and power level, are provided in 10 C.F.R. 50.75(c) for determining minimum dollar amounts required to demonstrate reasonable assurance of decommissioning funding; CLI-15-8, 81 NRC 500 (2015)

issuance of a request for additional information does not alone establish deficiencies in an application or that NRC Staff will go on to find any of applicant's clarifications, justifications, or other responses to be unsatisfactory; CLI-15-8, 81 NRC 500 (2015)

NEPA and 10 C.F.R. Part 52 requirements do not apply in the license transfer context; CLI-15-8, 81 NRC 500 (2015)

subject areas that license transfer applications must address are outlined in 10 C.F.R. 50.80(b)(1)(i), (2); CLI-15-8, 81 NRC 500 (2015)

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LICENSE TRANSFER PROCEEDINGS

Commission denies a request for a hearing and to intervene in a license transfer proceeding; CLI-15-8, 81 NRC 500 (2015)

full-scale health-and-safety reviews of a plant are not required; CLI-15-8, 81 NRC 500 (2015)
provisions of 10 C.F.R. Part 2, Subpart M, together with the generally applicable intervention provisions in 10 C.F.R. Part 2, Subpart C, govern adjudicatory proceedings on license transfer applications; CLI-15-8, 81 NRC 500 (2015)

LICENSE TRANSFERS

written consent from NRC is required for all direct or indirect license transfers; CLI-15-8, 81 NRC 500 (2015)

LICENSEE CHARACTER

Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses or NRC regulations; LBP-15-4, 81 NRC 156 (2015)

See also Management Character and Competence

LICENSEE EMPLOYEES

licensee is obliged to give local union notice and an opportunity to bargain over the effects of its decision to implement changes in the terms and conditions of the employees' employment regarding behavioral observations of security concerns; CLI-15-16, 81 NRC 810 (2015)

LICENSEES

responsibility for constructing and operating a waste repository was assigned to the Department of Energy, not NRC; CLI-15-4, 81 NRC 221 (2015)

LICENSES

licensing board takes official notice of NRC-issued licenses; LBP-15-3, 81 NRC 65 (2015)

LICENSING BOARD DECISIONS

board is directed to rule within 140 days of the date of the referral on whether the hearing request should be granted; CLI-15-14, 81 NRC 729 (2015)

Commission affords substantial deference to licensing boards' contention admission decisions; CLI-15-6, 81 NRC 340 (2015); CLI-15-9, 81 NRC 512 (2015)

Commission will not overturn a board's factual findings unless they are not even plausible in light of the record viewed in its entirety; CLI-15-9, 81 NRC 512 (2015)

decision of the board or Commission becomes the record of decision, which may also incorporate the final supplemental environmental impact statement; CLI-15-6, 81 NRC 340 (2015)

final environmental impact statement or supplement thereto must be considered in the agency's decisionmaking; LBP-15-3, 81 NRC 65 (2015)

final supplemental environmental impact statement is supplemented by the board's decision as well as by the hearing record; CLI-15-6, 81 NRC 340 (2015)

ruling that supplements the record should state clearly what evidence the board found credible, whether the evidence supports or alters NRC Staff's conclusions in the environmental impact statement, and what the impact of the proposed action for the specific issue is expected to be; CLI-15-6, 81 NRC 340 (2015)

LICENSING BOARDS, AUTHORITY

although boards are accorded considerable discretion to manage proceedings before them, they need not exercise it; LBP-15-15, 81 NRC 598 (2015)

although boards do not decide the merits or resolve conflicting evidence at the contention admission stage, materials cited as the basis for a contention are subject to scrutiny by the board to determine whether they actually support the facts alleged; LBP-15-20, 81 NRC 829 (2015)

board admitted a contention without deciding if it was a contention of omission or a contention of inadequacy; LBP-15-5, 81 NRC 249 (2015)

board considered a letter written after the original petition was filed and submitted with petitioner's reply; LBP-15-5, 81 NRC 249 (2015)

board considered evidence submitted with petitioner's reply to which opposing parties didn't object; LBP-15-5, 81 NRC 249 (2015)

board has discretion to consider an untimely motion to reopen if the motion presents an exceptionally grave issue; LBP-15-14, 81 NRC 591 (2015)

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board may appropriately view a petitioner's support for its contention in a light that is favorable to petitioner, but cannot do so by ignoring the requirements set forth in current 10 C.F.R. 2.309(f)(1); LBP-15-5, 81 NRC 249 (2015); LBP-15-20, 81 NRC 829 (2015)

boards are given broad discretion in the conduct of NRC adjudicatory proceedings, and the Commission generally defers to board case-management decisions; LBP-15-15, 81 NRC 598 (2015)

boards cannot prohibit what regulations allow except under specific conditions; LBP-15-17, 81 NRC 753 (2015)

boards do not sit to "flyspeck" environmental documents or to add details or nuances, but the environmental report or environmental impact statement must come to grips with all important considerations; LBP-15-5, 81 NRC 249 (2015)

boards have considerable discretion in their evidentiary rulings; CLI-15-6, 81 NRC 340 (2015)

boards have the authority to reformulate contentions to consolidate issues for a more efficient proceeding; LBP-15-17, 81 NRC 753 (2015)

boards have the power to take necessary and appropriate actions consistent with the Atomic Energy Act to conduct a fair hearing; LBP-15-15, 81 NRC 598 (2015)

boards may examine both the statements in the document that support petitioner's assertions and those that do not; LBP-15-20, 81 NRC 829 (2015)

boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015)

boards must request Commission approval to undertake sua sponte review; CLI-15-1, 81 NRC 1 (2015)

fact-finding administrative body, such as a licensing board, with authority to develop an evidentiary record, is distinguished from reviewing adjudicatory and judicial bodies, generally with a more limited record-creating authority; LBP-15-3, 81 NRC 65 (2015)

in granting a proposed license, board may condition it upon some precautionary measures required at the chosen site; LBP-15-16, 81 NRC 618 (2015)

it is for the Commission, not licensing boards, to revise its ruling; LBP-15-18, 81 NRC 793 (2015)

licensing boards are the appropriate finders of fact in most circumstances, and referral of a matter for a fact-specific dispute occurs in the ordinary course of business; CLI-15-14, 81 NRC 729 (2015)

licensing boards can refer potentially significant safety issues that cannot be addressed through the adjudicatory process to NRC Staff for review; LBP-15-1, 81 NRC 15 (2015)

licensing boards cannot superintend the conduct of NRC Staff's technical reviews; LBP-15-2, 81 NRC 48 (2015)

licensing 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-15-1, 81 NRC 15 (2015)

NRC Rules of Practice provide the board with substantial authority to regulate hearing procedures; LBP-15-15, 81 NRC 598 (2015)

to eliminate the inadmissible issue of tribal notification and to clarify the scope of the subsistence consumption issue, board narrows and reformulates a contention; LBP-15-5, 81 NRC 249 (2015)

when 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-15-1, 81 NRC 15 (2015)

when the Commission has determined that compliance with a regulation is sufficient to provide for reasonable assurance of public health and safety, a licensing board cannot impose requirements that exceed those in the regulation; LBP-15-20, 81 NRC 829 (2015)

where no Staff guidance was available for the particular type of facility undergoing license review, the board reasonably selected a standard for a facility most like the facility under review; CLI-15-6, 81 NRC 340 (2015)

where NRC guidance document is not directly applicable to the issue at hand, the presiding officer is afforded greater leeway in its application; CLI-15-6, 81 NRC 340 (2015)

with Commission's express approval, a licensing board may make findings on a serious safety, environmental, or common defense and security matter not put into controversy by the parties; CLI-15-1, 81 NRC 1 (2015)

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LICENSING BOARDS, JURISDICTION

board's jurisdiction terminates when there are no longer any contested matters pending before it; CLI-15-13, 81 NRC 555 (2015); LBP-15-12, 81 NRC 452 (2015)

licensing board lacks authority to hold a hearing on the adequacy of a different agency's regulations; LBP-15-5, 81 NRC 249 (2015)

licensing board's ruling resolving the last pending contention is equivalent to a final decision under 10 C.F.R. 2.341, and a licensing board's jurisdiction ends after it has rendered a final decision; LBP-15-9, 81 NRC 396 (2015)

NRC's transfer of regulatory authority to the State of New Jersey is now final and the licensing board no longer has the jurisdiction it had retained over the proceeding, and the board terminates the proceeding; LBP-15-10, 81 NRC 399 (2015)

LIMITED WORK AUTHORIZATION

transmission lines are expressly excluded from the delineated construction activities that would require NRC approval before being undertaken; CLI-15-1, 81 NRC 1 (2015)

See also Preconstruction Activities

MAINTENANCE

monitoring a component's performance or condition is required by the maintenance rule; CLI-15-6, 81 NRC 340 (2015)

power reactor licensees are required to monitor the performance or condition of systems, structures, and components against licensee-established goals in a manner sufficient to provide reasonable assurance that these SSCs are capable of fulfilling their intended functions; CLI-15-6, 81 NRC 340 (2015)

MAINTENANCE PROGRAMS

all structures and components that are important to safety must be maintained to manage the effects of aging, but most systems, structures, and components are adequately maintained under existing programs as required by the Maintenance Rule; CLI-15-6, 81 NRC 340 (2015)

any member of the public may seek enforcement action associated with matters affecting plant operation, including the vitality of component maintenance programs; CLI-15-6, 81 NRC 340 (2015)

relay switches and snubbers do not rely on time-limited assumptions based on the plant's operating term, but rather are subject to ongoing maintenance programs; LBP-15-6, 81 NRC 314 (2015)

MANAGEMENT CHARACTER AND COMPETENCE

claims of past and current mismanagement are outside the scope of the license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

proximity presumption was applied in a license amendment proceeding where management's lack of the required character and competence was alleged; LBP-15-17, 81 NRC 753 (2015)

See also Licensee Character

MANDATORY HEARINGS

Commission does not review combined license application de novo, but rather considers the sufficiency of NRC Staff's review of the application; CLI-15-13, 81 NRC 555 (2015)

environmental issues that the Commission must consider in the mandatory portion of a combined license proceeding are outlined; CLI-15-13, 81 NRC 555 (2015)

hearing must be held on each application to construct a nuclear power plant, regardless of whether an interested member of the public requests a hearing on the application; CLI-15-13, 81 NRC 555 (2015)

NRC regulations appropriately require a hearing before the proposed license amendment becomes effective whenever the amendment creates the possibility of a new or different kind of accident; LBP-15-20, 81 NRC 829 (2015)

safety issues that the Commission must consider in the mandatory portion of a combined license proceeding are outlined; CLI-15-13, 81 NRC 555 (2015)

MATERIAL CONTROL AND ACCOUNTING

accuracy is an integral component of the portion of the regulatory requirement that addresses item presence verification; CLI-15-9, 81 NRC 512 (2015)

any statistical sampling plan for verifying the presence and integrity of strategic special nuclear material items must have at least 99 percent power of detecting item losses that total 5 formula kg or more, plantwide, within 30 calendar days for Category IA items and 60 calendar days for Category IB items contained in a vault or in a permanently controlled access area isolated from the rest of the material access area; CLI-15-9, 81 NRC 512 (2015)

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applicant for a license to possess and use strategic special nuclear material must establish, implement, and maintain a Commission-approved MC&A system that will address the loss or theft of such material; CLI-15-9, 81 NRC 512 (2015)

contention that applicant's revised MC&A plan is deficient because its item monitoring program does not have the capability to verify, on a statistical sampling basis, the presence and integrity of strategic special nuclear material losses within the time frames specified by the regulation is inadmissible; CLI-15-9, 81 NRC 512 (2015)

contention that applicant's revised MC&A plan is inadequate to satisfy the alarm resolution requirements is inadmissible; CLI-15-9, 81 NRC 512 (2015)

contention that applicant's revised MC&A plan fails to show how confirmation and verification of theft of plutonium will be carried out in the specified timelines is inadmissible; CLI-15-9, 81 NRC 512 (2015)

"formula kilogram" means strategic special nuclear material in any combination in a quantity of 1000 grams computed by the formula, $\text{grams} = (\text{grams contained U-235}) + 2.5 (\text{grams U-233} + \text{grams plutonium})$; CLI-15-9, 81 NRC 512 (2015)

licensee must be able to rapidly assess the validity of alleged thefts; CLI-15-9, 81 NRC 512 (2015)

licensee must show with reasonable assurance that its proposed methodology for MC&A will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public; CLI-15-9, 81 NRC 512 (2015)

licensees must verify on a statistical sampling basis, the presence and integrity of strategic special nuclear material items; CLI-15-9, 81 NRC 512 (2015)

meaning of "verify" in the context of item presence verification is discussed; CLI-15-9, 81 NRC 512 (2015)

"strategic special nuclear material" means uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium; CLI-15-9, 81 NRC 512 (2015)

"tamper-safing" refers to use of devices on containers or vaults in a manner and at a time that ensures a clear indication of any violation of the integrity of previously made measurements of special nuclear material within the container or vault; CLI-15-9, 81 NRC 512 (2015)

"unit process" means an identifiable segment or segments of processing activities for which the amounts of input and output strategic special nuclear material are based on measurements; CLI-15-9, 81 NRC 512 (2015)

MATERIAL INFORMATION

licensee or applicant must inform the NRC of information that applicant or licensee has identified as having a significant implication for public health and safety or common defense and security; LBP-15-15, 81 NRC 598 (2015)

MATERIALITY

contention must explain what specific deficiencies exist and why they materially impact the license renewal application or environmental impact statement; LBP-15-1, 81 NRC 15 (2015)

if a contention makes a prima facie allegation that the application omits information required by law, it necessarily presents a genuine dispute with applicant on a material issue and raises an issue plainly material to an essential finding of regulatory compliance needed for license issuance; LBP-15-5, 81 NRC 249 (2015)

in explaining why there is a genuine material dispute, contention must give the board a reason to believe that the alleged deficiency will lead to a material safety or environmental outcome, based on factual or expert support; LBP-15-1, 81 NRC 15 (2015)

inadequacy in the severe accident mitigation alternatives analysis is material if license renewal applicant failed to consider complete information without justifying why particular information was omitted; LBP-15-5, 81 NRC 249 (2015)

issue of alleged failure to consult with a tribe is material and within the scope of materials license proceeding; LBP-15-16, 81 NRC 618 (2015)

issue raised must fall within the scope of the proceeding and be material to the findings that the NRC must make; CLI-15-8, 81 NRC 500 (2015)

new contention is inadmissible because it relies on information that is not materially different from information previously available and already in the record; LBP-15-16, 81 NRC 618 (2015)

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petitioner must demonstrate that a contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-15-19, 81 NRC 815 (2015); LBP-15-20, 81 NRC 829 (2015)
petitioner must show why the alleged error or omission is of possible significance to the result of the proceeding; LBP-15-20, 81 NRC 829 (2015)
subject matter of contentions must impact the grant or denial of a pending license application; LBP-15-20, 81 NRC 829 (2015)

MATERIALS LICENSE AMENDMENT PROCEEDINGS

contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 401 (2015)
generic environmental impact statement for ISL mining is subject to an appropriate challenge in an adjudicatory proceeding; LBP-15-11, 81 NRC 401 (2015)

MATERIALS LICENSE APPLICATIONS

applicant for a license to possess and use source and AEA § 11e(2) byproduct material for the purpose of in situ uranium recovery must submit an environmental report with its application; LBP-15-3, 81 NRC 65 (2015)
applicant must provide analyses that are adequate, accurate, and complete in all material respects to demonstrate that cultural and historic resources are identified and protected; LBP-15-16, 81 NRC 618 (2015)
environmental reports must contain a description of the proposed action, a statement of its purposes, and a description of the environment affected; LBP-15-3, 81 NRC 65 (2015)
environmental reports must discuss the five elements of 10 C.F.R. 51.45(b)(1)-(5); LBP-15-3, 81 NRC 65 (2015)
timing of source materials license renewal application enables licensee to operate under NRC's timely renewal provision until the agency renews the license; LBP-15-2, 81 NRC 48 (2015)

MATERIALS LICENSE PROCEEDINGS

issue of alleged failure to consult with a tribe is material and within the scope of materials license proceeding; LBP-15-16, 81 NRC 618 (2015)

MATERIALS LICENSE RENEWAL

admissibility of contention that applicant submit a decommissioning plan and updated financial plans related to decommissioning is decided; LBP-15-15, 81 NRC 598 (2015)
admissibility of contention that environmental documents lack an adequate description of financial assurances sufficient to pay the costs of restoration and long-term monitoring of up to 30 years is decided; LBP-15-15, 81 NRC 598 (2015)
admissibility of contention that final environmental assessment fails to satisfy NRC's requirement for an environmental impact statement when there are unresolved conflicts concerning reasonable alternatives is decided; LBP-15-15, 81 NRC 598 (2015)
admissibility of contention that NRC Staff must conduct a new baseline groundwater characterization study of the license renewal area rather than relying on the baseline study conducted during the original license application is decided; LBP-15-11, 81 NRC 401 (2015)
notification of renewal of source materials license triggers the 5-day filing deadline to apply for a stay of the license; LBP-15-2, 81 NRC 48 (2015)
NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 48 (2015)
stay of an NRC license is an extraordinary remedy, and a rare occurrence in NRC practice; LBP-15-2, 81 NRC 48 (2015)
timing of license issuance is informed by instruction for NRC Staff to promptly issue its approval or denial of the application consistent with its findings, and despite the pendency of a hearing; LBP-15-2, 81 NRC 48 (2015)
timing of source materials license renewal application enables licensee to operate under NRC's timely renewal provision until the agency renews the license; LBP-15-2, 81 NRC 48 (2015)
when licensee has made timely and sufficient application for a renewal, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency; LBP-15-2, 81 NRC 48 (2015); LBP-15-11, 81 NRC 401 (2015)

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MATERIALS LICENSES

See Byproduct Materials Licenses; Source Materials Licenses

MAXIMUM CONTAMINANT LEVELS

EPA drinking water MCLs continue to be an accepted groundwater restoration standard; LBP-15-3, 81 NRC 65 (2015)

in exempting an aquifer from MCLs, EPA has to find that the aquifer cannot and will not serve as a source of drinking water because it is mineral producing and can be demonstrated to contain minerals that, considering their quantity and location, are expected to be commercially producible; LBP-15-3, 81 NRC 65 (2015)

no in situ recovery facility has ever requested that all OZ aquifer groundwater hazardous constituents be restored to CAB concentrations or Criterion 5B(5)(b) MCLs, as those are currently defined; LBP-15-3, 81 NRC 65 (2015)

MIGRATION TENET

board may construe an admitted contention contesting applicant's environmental report as a challenge to a subsequently issued draft or final environmental impact statement without the necessity for intervenors to file a new or amended contention; LBP-15-11, 81 NRC 401 (2015)

migration of a contention is appropriate only where the environmental analysis or discussion at issue is essentially in pari materia with applicant's analysis or discussion that is the focus of the contention; LBP-15-11, 81 NRC 401 (2015)

when information in the draft environmental impact statement is sufficiently similar to information in applicant's environmental report, previously admitted contentions challenging the environmental report apply to relevant portions of the DSEIS; LBP-15-16, 81 NRC 618 (2015)

MITIGATION PLANS

admissibility of contention that environmental assessment fails to adequately describe or analyze proposed mitigation measures is decided; LBP-15-11, 81 NRC 401 (2015)

agency preparing the NEPA document must explain the statutory or regulatory requirements it is relying on and its reasons for concluding that the application of those requirements will actually result in the mitigation and monitoring it assumes will occur; LBP-15-11, 81 NRC 401 (2015)

agency's record of decision must include a concise discussion of mitigation measures; LBP-15-16, 81 NRC 618 (2015)

alternate pressurized thermal shock rule specifies mitigation processes for licensees if they project they will exceed (or they do exceed) the rules' screening criteria; LBP-15-17, 81 NRC 753 (2015)

courts decide whether a mitigation plan was adequately or inadequately discussed, but the line between these two options is not well defined; LBP-15-16, 81 NRC 618 (2015)

environmental impact statement must discuss any adverse environmental effects that cannot be avoided should the proposal be implemented and must provide a reasonably complete discussion of possible mitigation measures; LBP-15-11, 81 NRC 401 (2015)

in consultation with identified parties, agency must develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effects of the undertaking on historic properties and describe them in the environmental assessment or draft environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

lead agency must make available to the public the results of relevant monitoring of mitigation measures; LBP-15-16, 81 NRC 618 (2015)

licensees must develop strategies to mitigate a simultaneous loss of all a.c. power and loss of normal access to the ultimate heat sink; DD-15-5, 81 NRC 877 (2015)

merely listing possible mitigation options does not satisfy NEPA; LBP-15-16, 81 NRC 618 (2015)

monitoring and enforcement program must be adopted where applicable for any mitigation; LBP-15-16, 81 NRC 618 (2015)

NEPA does not demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act; LBP-15-16, 81 NRC 618 (2015)

NRC issued an order on station blackout mitigation strategies requiring strategies to protect against, among many other hazards, postulated seismic events; DD-15-1, 81 NRC 193 (2015)

reasonably complete discussion of possible mitigation measures must be included in a NEPA document, to allow the agency and the public a chance to properly evaluate the severity of the adverse effects; LBP-15-16, 81 NRC 618 (2015)

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though mitigation measures must be discussed in an environmental impact statement, NEPA does not guarantee that federally approved projects will have no adverse impacts; LBP-15-16, 81 NRC 618 (2015)

when the adequacy of an EIS mitigation strategy is challenged, the determining issue is whether the agency took a sufficiently hard look at environmental consequences, and ensured that its decision was supported by a completely informed record; LBP-15-16, 81 NRC 618 (2015)

where the agency has found mitigation strategies necessary to alleviate a potential impact, the associated discussion should be reasonably complete to properly evaluate the severity of the adverse effects; LBP-15-11, 81 NRC 401 (2015)

MODELS/MODELING

agency's failure to adequately validate a quantitative model on which it relies may lead the reviewing court to conclude that the agency's decision is arbitrary, capricious, or contrary to law; LBP-15-20, 81 NRC 829 (2015)

MODIFICATION ORDER

request for additional instrumentation for all Mark I spent fuel storage pools has been addressed through an order modifying licenses with regard to reliable spent fuel pool instrumentation; DD-15-1, 81 NRC 193 (2015)

MONITORING

activities associated with, and the data coming from, preclicensing groundwater monitoring activities are associated with compliance with the dictates of 10 C.F.R. Part 40, Appendix A, Criterion 7; LBP-15-3, 81 NRC 65 (2015)

agencies may provide for monitoring to ensure that their decisions are carried out and should do so in important cases; LBP-15-16, 81 NRC 618 (2015)

although the Part 40, Appendix A criteria were developed for conventional uranium milling facilities, they have since been applied in limited fashion to ISR facilities; LBP-15-3, 81 NRC 65 (2015)

applicant for a uranium ISR license is required to provide data from a groundwater monitoring program that are sufficient to establish a preclicensing site characterization baseline for assessing the potential effects of facility operations on local groundwater quality; LBP-15-3, 81 NRC 65 (2015)

applicant must establish a preoperational monitoring program that must be conducted to provide complete baseline data on a milling site and its environs; LBP-15-16, 81 NRC 618 (2015)

applicant's monitoring program for establishing existing site characterization baseline values for certain site groundwater constituents prior to issuance of a source materials license for ISR facility construction and operation need not, to comply with NEPA and NRC's Part 51 implementing regulations, be conducted so as to also provide background information needed to set Appendix A, Criterion 5B groundwater protection standards; LBP-15-3, 81 NRC 65 (2015)

contention that final supplemental environmental impact statement fails to comply with NRC regulations and NEPA because it lacks an adequate description of the present baseline (i.e., original or pre-mining) groundwater quality and fails to demonstrate that groundwater samples were collected in a scientifically defensible manner, using proper sampling methodologies is decided; LBP-15-3, 81 NRC 65 (2015)

determination of background groundwater quality to include sampling of wells that are hydraulically upgradient of the waste management area is not required if non-upgradient well sampling will provide an indication of background groundwater quality that is representative, or more representative, than that provided by upgradient wells; LBP-15-3, 81 NRC 65 (2015)

ERDS is a direct electronic data link between licensees of operating reactors and the NRC Operations Center, and its objective is to allow NRC to monitor critical parameters during an emergency; LBP-15-4, 81 NRC 156 (2015)

if, as intervenors allege, applicant's enhanced monitoring program is inadequate, then applicant's unenhanced monitoring program embodied in its license renewal application was *a fortiori* inadequate, and intervenors had a regulatory obligation to challenge it in their original petition to intervene; LBP-15-1, 81 NRC 15 (2015)

in situ recovery license applicant is barred from installing a complete wellfield and associated monitor well networks until after a license is issued; LBP-15-3, 81 NRC 65 (2015)

licensee shall establish a detection monitoring program needed for NRC to set the site-specific groundwater protection standards, and the monitoring program must be in place when specified by NRC in license conditions; LBP-15-3, 81 NRC 65 (2015)

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licensees must monitor structures, systems, and components in a manner sufficient to provide reasonable assurance that the SSCs are capable of supporting their intended function; DD-15-3, 81 NRC 713 (2015)

monitoring and enforcement program must be adopted where applicable for any mitigation; LBP-15-16, 81 NRC 618 (2015)

nothing in 10 C.F.R. Part 40, Appendix A, Criterion 5B precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in applicant's precertification program were adequate to provide the necessary information to characterize properly the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 65 (2015)

nothing in the definition of "construction" in 10 C.F.R. 40.4 precludes the installation of wells or the use of monitoring protocols as needed to provide those background data; LBP-15-3, 81 NRC 65 (2015)

post-certification, preoperational activities conducted to comply with Part 40, Appendix A, Criterion 7 are associated with compliance with the dictates of 10 C.F.R. Part 40, Appendix A, Criteria 5B and 7A; LBP-15-3, 81 NRC 65 (2015)

precertification monitoring program to characterize site groundwater constituents need not be coextensive with the Criterion 7A preoperational monitoring, license condition-based program intended to provide the information needed for setting Criterion 5B groundwater protection standards and UCLs; LBP-15-16, 81 NRC 618 (2015)

subset of the production and injection wells to be drilled within the boundaries of the ISR wellfield is to be used to sample groundwater from the aquifer prior to the commencement of operations to establish hazardous constituent Commission-approved background concentrations; LBP-15-3, 81 NRC 65 (2015)

surveillance program to monitor pressurized water reactor pressure vessel is described; LBP-15-17, 81 NRC 753 (2015)

waiting until after licensing, but before mining operations begin, to definitively establish groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology, given the sequential development of in situ leach well fields; LBP-15-3, 81 NRC 65 (2015)

water samples taken from one well located hydrologically upgradient are part of the groundwater sampling protocol; LBP-15-3, 81 NRC 65 (2015)

MOOTNESS

if applicant cures the omission cited in a contention, the contention will become moot unless revised by intervenors; LBP-15-5, 81 NRC 249 (2015)

MOTIONS

when a party requests action from the presiding officer in an NRC adjudicatory proceeding, the request must come in the form of a motion; CLI-15-13, 81 NRC 555 (2015)

MOTIONS TO REOPEN

affidavits accompanying motions 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; LBP-15-14, 81 NRC 591 (2015)

board has discretion to consider an untimely motion to reopen if the motion presents an exceptionally grave issue; LBP-15-14, 81 NRC 591 (2015)

contention that final safety analysis report is deficient because it does not include information provided in applicant's seismic evaluation process report is rejected; LBP-15-14, 81 NRC 591 (2015)

evidence contained in affidavits accompanying motions to reopen must meet admissibility standards; LBP-15-14, 81 NRC 591 (2015)

motion that relates to a contention not previously in controversy must satisfy the section 2.309(c) requirements for new or amended contentions filed after the original hearing petition deadline; LBP-15-14, 81 NRC 591 (2015)

motions must be accompanied by affidavits that set forth the factual and/or technical bases for movant's claim; LBP-15-14, 81 NRC 591 (2015)

motions must be timely, 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; LBP-15-14, 81 NRC 591 (2015)

placeholder contentions that challenge the 2014 Continued Storage Rule and associated Generic Environmental Impact Statement for Continued Storage are inadmissible; CLI-15-15, 81 NRC 803 (2015)

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NATIONAL ENVIRONMENTAL POLICY ACT

actual range of alternatives must be considered so that agencies are precluded from defining the objectives of their actions in terms so unreasonably narrow that they can be accomplished by only applicant's proposed project; LBP-15-15, 81 NRC 598 (2015)

adverse environmental effects that must be assessed under NEPA include aesthetic, historic, cultural, economic, social, or health effects; LBP-15-16, 81 NRC 618 (2015)

agencies are given broad discretion to keep their NEPA inquiries within appropriate and manageable boundaries; LBP-15-3, 81 NRC 65 (2015)

agencies must take a hard look at preserving important historic and cultural aspects of our national heritage; LBP-15-16, 81 NRC 618 (2015)

agency is required to consider all reasonable alternatives under the National Environmental Policy Act; LBP-15-15, 81 NRC 598 (2015)

alternative energy sources that will be dependent on future environmental safeguards and technological developments may be excluded from the NEPA alternatives discussion; LBP-15-3, 81 NRC 65 (2015)

alternatives discussion need not include every possible alternative, but rather every reasonable alternative; LBP-15-3, 81 NRC 65 (2015)

although an agency may coordinate and, where practicable, integrate its National Environmental Policy Act and National Historic Preservation Act review efforts, the two statutes impose separate and distinct obligations; LBP-15-16, 81 NRC 618 (2015)

appeal board's ruling that the environmental impact statement was deemed modified by the parties' stipulations at hearing did not violate the letter or spirit of NEPA; CLI-15-6, 81 NRC 340 (2015)

board's ultimate NEPA judgments can be made on the basis of the entire adjudicatory record in addition to NRC Staff's final environmental impact statement; LBP-15-3, 81 NRC 65 (2015)

burden of NEPA compliance lies with NRC Staff; LBP-15-2, 81 NRC 48 (2015); LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

consideration of alternatives under NEPA that are technologically unproven is unnecessary; LBP-15-3, 81 NRC 65 (2015)

contention of omission on a matter related to NEPA must describe the information that should have been included in applicant's environmental report and provide the legal basis that requires the omitted information to be included; LBP-15-5, 81 NRC 249 (2015)

contention that environmental assessment violates NEPA in its failure to analyze groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 401 (2015)

Continued Storage Rule and supporting generic environmental impact statement to assess the environmental impacts of spent fuel storage after the end of a reactor's license term were approved; CLI-15-10, 81 NRC 535 (2015)

court may not substitute its own judgment for that of an agency, and agencies are not constrained by NEPA to select only the most environmentally benign option; LBP-15-16, 81 NRC 618 (2015)

defining the scope of effects of a project requires engagement with governments of affected tribes through an early and open process aimed at identifying concerns, potential impacts, relevant effects of past actions, and possible alternative actions; LBP-15-16, 81 NRC 618 (2015)

discussion of alternatives that present severe engineering requirements or are imprudent for reasons including their high cost, safety hazards, and operational difficulties is excluded under NEPA; LBP-15-3, 81 NRC 65 (2015)

environmental considerations that the environmental report must discuss are equivalent to, and in most instances verbatim restatements of, environmental considerations that NEPA requires the agency to describe in detail in the environmental impact statement; LBP-15-5, 81 NRC 249 (2015)

Exec. Order No. 12898 did not, in itself, create new substantive authority for federal agencies and thus NRC determined that it would endeavor to carry out the environmental justice principles as part of the agency's responsibilities under NEPA; CLI-15-6, 81 NRC 340 (2015)

federal agencies are required to take a hard look at the environmental impacts of a proposed action, as well as reasonable alternatives to that action; LBP-15-3, 81 NRC 65 (2015)

federal agencies must prepare a detailed environmental impact statement for proposed actions significantly affecting the quality of the human environment; LBP-15-16, 81 NRC 618 (2015)

hard look at the environmental effects of the planned action, not a circular restatement of NRC Staff's own conclusions, is required; LBP-15-11, 81 NRC 401 (2015)

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hard look is subject to a rule of reason, and consideration of environmental impacts need not address all theoretical possibilities, but only those that have some reasonable possibility of occurring; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

hard look must emerge from an engagement in informed and reasoned decisionmaking, as the agency obtains opinions from its own experts and experts outside the agency and gives careful scientific scrutiny and responds to all legitimate concerns that are raised; LBP-15-16, 81 NRC 618 (2015)

hard look under NEPA is intended to foster both informed agency decisionmaking and informed public participation so as to ensure that the agency does not act upon incomplete information, only to regret its decision after it is too late to correct; LBP-15-3, 81 NRC 65 (2015)

importing analysis from a previously completed environmental assessment while disregarding intervening events would render meaningless NEPA's requirement to supplement an environmental impact statement or environmental assessment; LBP-15-13, 81 NRC 456 (2015)

in NEPA context, path that licensee and NRC Staff must follow relative to a license condition is sufficiently clear that continuing to hold the hearing open while it is completed would be an unnecessary extension of the adjudicatory process; LBP-15-3, 81 NRC 65 (2015)

in uncontested hearings, it is NRC's duty to ensure, among other things, that it has adhered to its obligations under NEPA; CLI-15-1, 81 NRC 1 (2015)

intervenors litigated whether the performance-based licensing complies with the Atomic Energy Act and NEPA, and whether undue discretion was accorded to licensee; LBP-15-16, 81 NRC 618 (2015)

it is NRC Staff, not petitioners, that has the burden of complying with NEPA; LBP-15-5, 81 NRC 249 (2015)

it would be incongruous with NEPA's approach to environmental protection, and with the Act's manifest concern with preventing uninformed action, for the blinders to adverse environmental effects, once unequivocally removed, to be restored prior to the completion of agency action simply because the relevant proposal has received initial approval; LBP-15-13, 81 NRC 456 (2015)

license transfer applications need not include an environmental analysis under NEPA; CLI-15-8, 81 NRC 500 (2015)

mandate to federal agencies is to consider a broad range of environmental effects that are reasonably likely to ensue as a result of a major federal action; CLI-15-6, 81 NRC 340 (2015)

neither certainty nor precision is called for, but rather an estimate of anticipated, not unduly speculative, impacts; LBP-15-16, 81 NRC 618 (2015)

NEPA does not demand the presence of a fully developed plan that will mitigate environmental harm before an agency can act; LBP-15-16, 81 NRC 618 (2015)

NEPA does not mandate particular results, but simply prescribes the necessary process that agencies must follow in evaluating environmental impacts; LBP-15-19, 81 NRC 815 (2015)

NEPA does not require adoption of best practices, particularly in the face of a potentially significant resource commitment; LBP-15-3, 81 NRC 65 (2015)

NEPA does not require NRC Staff to analyze every conceivable aspect of the proposed project; LBP-15-16, 81 NRC 618 (2015)

NEPA requires a reasonably complete discussion of possible mitigation measures; LBP-15-11, 81 NRC 401 (2015)

NEPA requires acknowledgment of tribal hunting and fishing rights, as well as an analysis of how the project will affect those rights; LBP-15-5, 81 NRC 249 (2015)

NEPA review in license renewal proceedings is not limited to aging management-related issues; LBP-15-5, 81 NRC 249 (2015)

non-NEPA document, let alone one prepared and adopted by a state government, cannot satisfy a federal agency's obligations under NEPA; LBP-15-11, 81 NRC 401 (2015)

NRC hearings on NEPA issues focus entirely on the adequacy of NRC Staff's work; LBP-15-16, 81 NRC 618 (2015)

NRC must make a diligent effort to involve the public in implementation of NEPA procedures; LBP-15-16, 81 NRC 618 (2015)

NRC Staff is not required to examine very conceivable aspect of federally licensed projects in preparing its environmental impact statement; LBP-15-3, 81 NRC 65 (2015)

NRC Staff must assess the relationship between local short-term uses and long-term productivity of the environment, consider alternatives, and describe the unavoidable adverse environmental impacts and the

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irreversible and irretrievable commitments of resources associated with the proposed action; CLI-15-13, 81 NRC 555 (2015)

NRC's AEA safety review under Part 54 does not compromise or limit NEPA; LBP-15-5, 81 NRC 249 (2015)

preliminary injunction halting a solar energy project was granted based on a tribal claim that the project would not avoid most of the 459 cultural sites identified, and that the NEPA and NHPA process had been insufficient; LBP-15-2, 81 NRC 48 (2015)

reasonable alternatives under NEPA do not include alternatives that are impractical, that present unique problems, or that cause extraordinary costs; LBP-15-3, 81 NRC 65 (2015)

reliance on a state permit, let alone one prepared and adopted by a state government, cannot satisfy a federal agency's obligations under NEPA; LBP-15-11, 81 NRC 401 (2015)

severe accident mitigation alternatives analysis is conducted pursuant to NEPA, and thus is an environmental issue, not a safety issue; LBP-15-1, 81 NRC 15 (2015)

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-15-3, 81 NRC 65 (2015)

though mitigation measures must be discussed in an environmental impact statement, NEPA does not guarantee that federally approved projects will have no adverse impacts; LBP-15-16, 81 NRC 618 (2015)

to the extent there are important NEPA qualitative considerations or factors that cannot be quantified, these considerations or factors will be discussed in qualitative terms; LBP-15-5, 81 NRC 249 (2015)

when NEPA contentions are involved, the burden of proof shifts to NRC Staff; LBP-15-16, 81 NRC 618 (2015)

with regard to reasonably foreseeable impacts, NEPA does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts; LBP-15-3, 81 NRC 65 (2015)

NATIONAL HISTORIC PRESERVATION ACT

although an agency may coordinate and, where practicable, integrate its National Environmental Policy Act and NHPA review efforts, the two statutes impose separate and distinct obligations; LBP-15-16, 81 NRC 618 (2015)

Commission approved NRC Staff completion of some NHPA documents after the environmental impact statement process was complete, but before the license was issued; LBP-15-16, 81 NRC 618 (2015)

compliance with NHPA does not relieve a federal agency of the duty of complying with the environmental impact statement requirement to the fullest extent possible; LBP-15-16, 81 NRC 618 (2015)

demolition of a historic unit to build a new unit will result in a finding of adverse effect under applicable criteria in 36 C.F.R. 800.5; CLI-15-13, 81 NRC 555 (2015)

federal agency must assess the effects of the undertaking on any eligible historic properties found; LBP-15-16, 81 NRC 618 (2015)

federal agency must confer with a State Historic Preservation Officer and seek the approval of the ACHP; LBP-15-16, 81 NRC 618 (2015)

federal agency must determine whether identified properties are eligible for listing on the National Register based on the criteria in 36 C.F.R. 60.4; LBP-15-16, 81 NRC 618 (2015)

in consultation with identified parties, agency must develop alternatives and proposed measures that might avoid, minimize, or mitigate any adverse effects of the undertaking on historic properties and describe them in the environmental assessment or draft environmental impact statement; LBP-15-16, 81 NRC 618 (2015)

it is the duty of NRC Staff, not applicant, to consult with interested tribes concerning the proposed site in the context of a National Historic Preservation Act contention; LBP-15-5, 81 NRC 249 (2015)

NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 48 (2015)

preliminary injunction halting a solar energy project was granted based on a tribal claim that the project would not avoid most of the 459 cultural sites identified, and that the NEPA and NHPA process had been insufficient; LBP-15-2, 81 NRC 48 (2015)

programmatic agreement may be used to implement the NHPA §106 process in situations where the effects on historic properties cannot be fully determined prior to the approval of an undertaking, such

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as where an applicant proposes a phased approach to developing its project; LBP-15-16, 81 NRC 618 (2015)

though the materials license has already been issued, the land disturbance in the project area will proceed in stages in compliance with NHPA § 106; LBP-15-16, 81 NRC 618 (2015)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT

it is appropriate for NRC Staff to give substantial weight to state agency's decision that issuing the NPDES permit would be environmentally acceptable; LBP-15-11, 81 NRC 401 (2015)

NATIVE AMERICAN GRAVES PROTECTION AND REPATRIATION ACT

NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 48 (2015)

NATIVE AMERICANS

agencies are to ensure that the federal government operates within a government-to-government relationship with federally recognized Native American tribes, reflecting respect for the rights of self-government due the sovereign tribal governments; LBP-15-16, 81 NRC 618 (2015)

consultation must provide an Indian tribe with a reasonable opportunity to identify its concerns about historic properties and advise on their identification and evaluation, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects; LBP-15-16, 81 NRC 618 (2015)

contention claiming that NRC Staff's consultation was inadequate does not ripen until issuance of NRC Staff's draft environmental impact statement; LBP-15-5, 81 NRC 249 (2015)

federal agencies must consult with any Indian tribe that attaches religious and cultural significance to the sites; LBP-15-16, 81 NRC 618 (2015)

harming Native American artifacts would constitute an irreparable injury because artifacts are, by their nature, unique, and their historical and cultural significance make them difficult to value monetarily; LBP-15-2, 81 NRC 48 (2015)

Indian tribe's treaty-based claims of ownership of mining site and international treaty-based claims cannot support the admission of environmental assessment contention; LBP-15-11, 81 NRC 401 (2015)

irreparable harm element of the test for issuance of injunctive relief was met where the tribe's evidence showed that a phase of the project would involve damage to at least one known site, and virtually ensure some loss or damage; LBP-15-2, 81 NRC 48 (2015)

issue of alleged failure to consult with a tribe is material and within the scope of materials license proceeding; LBP-15-16, 81 NRC 618 (2015)

it is the duty of NRC Staff, not applicant, to consult with interested tribes concerning the proposed site in the context of a National Historic Preservation Act contention; LBP-15-5, 81 NRC 249 (2015)

NEPA requires acknowledgment of tribal hunting and fishing rights, as well as an analysis of how the project will affect those rights; LBP-15-5, 81 NRC 249 (2015)

NRC must prepare an environmental impact statement that adequately evaluates the environmental impacts of relicensing, including impacts to tribal hunting and fishing rights and subsistence consumption; LBP-15-5, 81 NRC 249 (2015)

NRC Staff must include in the final supplemental environmental impact statement an analysis of significant problems and objections raised by any affected Indian tribes, and by other interested persons; LBP-15-16, 81 NRC 618 (2015)

preliminary injunction halting a solar energy project was granted based on a tribal claim that the project would not avoid most of the 459 cultural sites identified, and that the NEPA and NHPA process had been insufficient; LBP-15-2, 81 NRC 48 (2015)

to eliminate the inadmissible issue of tribal notification and to clarify the scope of the subsistence consumption issue, board narrows and reformulates a contention; LBP-15-5, 81 NRC 249 (2015)

under NEPA, defining the scope of effects of a project requires engagement with governments of affected tribes through an early and open process aimed at identifying concerns, potential impacts, relevant effects of past actions, and possible alternative actions; LBP-15-16, 81 NRC 618 (2015)

NEUTRON FLUENCE

consistency check is required if three or more surveillance data points measured at three or more different neutron fluences exist for a specific material; LBP-15-17, 81 NRC 753 (2015)

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consistency check seeks to compare, for a specific material type, the model's projected embrittlement with the actual embrittlement values at the same fluence provided by material samples; LBP-15-17, 81 NRC 753 (2015)

if three or more surveillance data points measured at three or more different neutron fluences exist for a specific material, licensee shall determine if the surveillance data show a significantly different trend than the embrittlement model predicts; LBP-15-17, 81 NRC 753 (2015)

in calculating embrittlement reference temperatures, licensee must calculate neutron flux through the reactor pressure vessel using a methodology that has been benchmarked to experimental measurements and with quantified uncertainties and possible biases; LBP-15-17, 81 NRC 753 (2015)

surveillance data must be used in the consistency check when it is a heat-specific match for one or more of the materials for which the reference temperature is being calculated and three or more different neutron fluences exist for a specific material; LBP-15-17, 81 NRC 753 (2015)

NEUTRON IRRADIATION

embrittlement of reactor pressure vessel walls, decreasing their fracture toughness, is discussed; LBP-15-17, 81 NRC 753 (2015)

exemption from the surveillance program is allowed if a reactor's lifetime irradiation levels are below a certain threshold; LBP-15-17, 81 NRC 753 (2015)

long-term exposure to neutron radiation and elevated temperatures in a reactor vessel decrease the vessel materials' fracture toughness, or resistance to fracture; LBP-15-20, 81 NRC 829 (2015)

NO SIGNIFICANT HAZARDS DETERMINATION

determination is a procedural decision barred from litigation; LBP-15-13, 81 NRC 456 (2015); LBP-15-17, 81 NRC 753 (2015)

final determination allows the Commission to issue the challenged license amendment before the petitioner's request for a hearing is adjudicated; LBP-15-17, 81 NRC 753 (2015)

final determination does not either prevent the adjudication from proceeding or restrict the licensing board's substantive determination on public health and safety issues; LBP-15-17, 81 NRC 753 (2015)

when an adjudicatory proceeding has been initiated with respect to a license amendment issued with such a determination, once the presiding officer's initial decision becomes effective, the appropriate official shall take action with respect to that amendment in accordance with the initial decision; LBP-15-13, 81 NRC 456 (2015)

when licensee submits its license amendment application to NRC, it must provide the agency with its analysis about the issue using the standards in 10 C.F.R. 50.92; LBP-15-17, 81 NRC 753 (2015)

NONPARTIES

persons who are not parties may file an amicus curiae brief if a matter is taken up by the Commission under 10 C.F.R. 2.341 or sua sponte; CLI-15-1, 81 NRC 1 (2015)

representative of a governmental entity that wishes to participate as a nonparty in the proceeding must identify those contentions on which it will participate in advance of any hearing held; LBP-15-11, 81 NRC 401 (2015)

NONSAFETY-RELATED

protection of regulatory treatment of nonsafety systems equipment from external hazards at the site is discussed; CLI-15-13, 81 NRC 555 (2015)

NOTICE

Administrative Procedure Act requires no more than a description of the subjects and issues involved in a notice of proposed rulemaking; LBP-15-15, 81 NRC 598 (2015)

advance notice of proposed rulemaking is a formal invitation to participate in shaping the proposed rule; LBP-15-15, 81 NRC 598 (2015)

advance notice of proposed rulemaking was withdrawn due to changes in market demand; LBP-15-15, 81 NRC 598 (2015)

agency can cease a rulemaking all together after a notice of proposed rulemaking has been issued; LBP-15-15, 81 NRC 598 (2015)

agency is generally not required to issue a new notice of proposed rulemaking if it changes its position, as long as the final rule is a logical outgrowth of the proposed rule; LBP-15-15, 81 NRC 598 (2015)

agency need not submit a full draft of a rule in a notice of proposed rulemaking; LBP-15-15, 81 NRC 598 (2015)

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contention quotes text from a notice of proposed rulemaking, but it never ties the statements from the NOPR to any specific section of the environmental assessment, and thus fails to raise a genuine dispute with the EA; LBP-15-15, 81 NRC 598 (2015)

preamble to notice of proposed rulemaking addresses agency's duty to identify and make available technical studies and data that it has employed in reaching the decisions to propose particular rules; LBP-15-15, 81 NRC 598 (2015)

requirement for a notice of proposed rulemaking is to sufficiently and fairly apprise interested parties of the issues involved, rather than to specify every precise proposal that the agency may ultimately adopt; LBP-15-15, 81 NRC 598 (2015)

where the basis behind the determination not to proceed with a rulemaking was a final agency ruling allowing for judicial review, the earlier advance notice of proposed rulemaking itself was not held to have any binding effect on the public; LBP-15-15, 81 NRC 598 (2015)

NOTICE AND COMMENT PROCEDURES

legislative history of the Administrative Procedure Act emphasized the notice requirement for proposed rulemaking in order to fairly apprise the public of the agency's potential action; LBP-15-15, 81 NRC 598 (2015)

many agency statements, including statements sometimes called "rules," do not have force and effect, and advance notice and public participation are required for rules that carry the force of law; LBP-15-15, 81 NRC 598 (2015)

NRC Staff may determine that exigent circumstances exist such that there is insufficient time for a full 30-day public comment period on a license amendment request; LBP-15-13, 81 NRC 456 (2015)

purpose of notice of proposed rulemaking is not to set binding law or policy, but instead to provide interested members of the public an opportunity to comment in a meaningful way on the agency's proposal; LBP-15-15, 81 NRC 598 (2015)

NOTICE OF VIOLATION

intervenor's reliance on long-available documents regarding leakages and notices of violation made a contention untimely as filed; LBP-15-11, 81 NRC 401 (2015)

NOTICE PLEADING

mere notice pleading is insufficient, but requirement for contention specificity and factual support rather than vague or conclusory statements is not intended to prevent intervention when material and concrete issues exist; LBP-15-20, 81 NRC 829 (2015)

NOTIFICATION

notice of renewal of source materials license triggers the 5-day filing deadline to apply for a stay of the license; LBP-15-2, 81 NRC 48 (2015)

publication in the Federal Register is legally sufficient notice to all affected people; LBP-15-5, 81 NRC 249 (2015)

to eliminate the inadmissible issue of tribal notification and to clarify the scope of the subsistence consumption issue, board narrows and reformulates a contention; LBP-15-5, 81 NRC 249 (2015)

NRC GUIDANCE DOCUMENTS

applicability of a guidance document may be challenged in an individual proceeding; LBP-15-20, 81 NRC 829 (2015)

boards should accord special weight to NRC Staff guidance; LBP-15-16, 81 NRC 618 (2015)

guidance documents set neither minimum nor maximum regulatory requirements; CLI-15-6, 81 NRC 340 (2015)

guidance documents that are developed to assist in compliance with applicable regulations are entitled to special weight; CLI-15-6, 81 NRC 340 (2015)

NRC has addressed pressure suppression containment system vulnerability to early failure under severe accident conditions including overpressurization in NUREG-0474; DD-15-1, 81 NRC 193 (2015)

NRC Staff guidance documents do not have the force of law and boards are not bound to follow them; CLI-15-6, 81 NRC 340 (2015)

NRC Staff guidance is entitled to special weight in a decision on the merits; LBP-15-20, 81 NRC 829 (2015)

processes that licensees use to define and deploy strategies to enhance their ability to cope with beyond-design-basis external events, including station blackout are provided; DD-15-5, 81 NRC 877 (2015)

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such documents are not legally binding, and compliance with them is not required; LBP-15-20, 81 NRC 829 (2015)

where no Staff guidance was available for the particular type of facility undergoing license review, the board reasonably selected a standard for a facility most like the facility under review; CLI-15-6, 81 NRC 340 (2015)

where NRC guidance document is not directly applicable to the issue at hand, the presiding officer is afforded greater leeway in its application; CLI-15-6, 81 NRC 340 (2015)

See also Regulatory Guides

NRC POLICY

intervention petitioner may not attack generic NRC requirements or regulations or express generalized grievances about NRC policies; CLI-15-9, 81 NRC 512 (2015)

NRC PROCEEDINGS

Federal Rules of Evidence are not directly applicable to NRC proceedings, but NRC adjudicatory boards often look to those rules for guidance; LBP-15-20, 81 NRC 829 (2015)

NRC STAFF

burden of NEPA compliance lies with NRC Staff; LBP-15-2, 81 NRC 48 (2015); LBP-15-16, 81 NRC 618 (2015)

there is nothing in the record to suggest that applicant or NRC Staff will not act in good faith to ensure that applicant's regulatory responsibilities, including its license conditions, are honored, and the board cannot assume noncompliance; LBP-15-11, 81 NRC 401 (2015)

NRC STAFF REVIEW

absent a rule waiver, NRC Staff is not expected to revisit the impact determinations made in the Continued Storage GEIS as part of its site-specific NEPA reviews; CLI-15-10, 81 NRC 535 (2015)

absent compelling circumstances, NRC Staff is expected to accord sufficient priority and devote sufficient resources to meeting its current estimated safety and environmental review schedule; LBP-15-2, 81 NRC 48 (2015)

adequacy of NRC Staff's review is not a litigable issue in a licensing case; CLI-15-9, 81 NRC 512 (2015)

adequacy of Staff's review of transmission-corridor impacts might be appropriate for the board's consideration sua sponte; CLI-15-1, 81 NRC 1 (2015)

agencies are given broad discretion to keep their NEPA inquiries within appropriate and manageable boundaries; LBP-15-3, 81 NRC 65 (2015)

agency conducting a NEPA review shall independently evaluate the information submitted and shall be responsible for its accuracy; LBP-15-11, 81 NRC 401 (2015)

although a draft supplemental environmental impact statement may rely in part on applicant's environmental report, NRC Staff must independently evaluate and be responsible for the reliability of all information used in the DSEIS; LBP-15-3, 81 NRC 65 (2015)

although NRC regulations do not require NRC Staff to analyze the environmental impacts of NRC licensing actions on the environment of foreign nations, the Staff extended its outreach to international organizations to inform its analysis of the potential environmental impacts of the project; CLI-15-13, 81 NRC 555 (2015)

although the Commission found NRC Staff's review of combined license applications rigorous, it imposed a condition requiring implementation of a squib-valve surveillance program prior to fuel load; CLI-15-13, 81 NRC 555 (2015)

Commission does not review combined license application de novo, but rather considers the sufficiency of NRC Staff's review of the application; CLI-15-13, 81 NRC 555 (2015)

compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act is not a substitute for, and does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality; LBP-15-11, 81 NRC 401 (2015)

contention fails because it contests NRC Staff's safety review rather than the license renewal application; LBP-15-15, 81 NRC 598 (2015)

directing NRC Staff to investigate a safety issue that the board could not reach through the adjudicatory process may put the Commission in a position, after receiving views of applicant if it desired, to assure itself about the significance, or lack thereof, of the shield building cracking issues raised by intervenors,

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and to direct such followup proceedings, if any, as it might deem appropriate; LBP-15-1, 81 NRC 15 (2015)

environmental impact statement must be prepared in connection with a license to possess and use source and AEA § 11e(2) byproduct material for the purpose of in situ uranium recovery; LBP-15-3, 81 NRC 65 (2015)

if applicant did not pursue an early site permit, all relevant site characteristics, including site geology, hydrology, seismology, and man-made hazards, as well as potential environmental impacts of the project, were studied as part of NRC Staff's combined license review and are within the scope of the Commission decision; CLI-15-13, 81 NRC 555 (2015)

in assessing whether applicant/licensee adequately carries out a licensing directive, boards are to assume that NRC Staff will be fair and judge the matter of applicant/licensee's compliance on the merits; LBP-15-3, 81 NRC 65 (2015)

in uncontested hearings, it is NRC's duty to ensure, among other things, that it has adhered to its obligations under the National Environmental Policy Act; CLI-15-1, 81 NRC 1 (2015)

it is appropriate for NRC Staff to give substantial weight to state agency's decision that issuing the NPDES permit would be environmentally acceptable; LBP-15-11, 81 NRC 401 (2015)

it is not clear that NRC Staff relied upon the generic environmental impact statement when preparing the draft supplemental environmental impact statement because it was not incorporated by reference or mentioned in any other manner; LBP-15-11, 81 NRC 401 (2015)

it is NRC Staff, not petitioners, that has the burden of complying with NEPA; LBP-15-5, 81 NRC 249 (2015)

it is the duty of NRC Staff, not applicant, to consult with interested tribes concerning the proposed site in the context of a National Historic Preservation Act contention; LBP-15-5, 81 NRC 249 (2015)

licensing boards can refer potentially significant safety issues that cannot be addressed through the adjudicatory process to NRC Staff for review; LBP-15-1, 81 NRC 15 (2015)

licensing boards cannot superintend the conduct of NRC Staff's technical reviews; LBP-15-2, 81 NRC 48 (2015)

NEPA does not require NRC Staff to examine every conceivable aspect of federally licensed projects in preparing its environmental impact statement; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

NEPA encourages state participation when appropriate and authorized, but coordination between a federal agency and a state requires active involvement between the two in order for the federal agency to meet its independent review burden; LBP-15-11, 81 NRC 401 (2015)

NEPA requires a hard look at the environmental effects of the planned action, not a circular restatement of NRC Staff's own conclusions; LBP-15-11, 81 NRC 401 (2015)

NRC hearings on NEPA issues focus entirely on the adequacy of NRC Staff's work; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

NRC Staff examined special pathways of exposure that could lead to a higher level of radiation exposure in minority and low-income populations in the area, including subsistence consumption of fish, native vegetation, surface waters, sediments, and local produce; CLI-15-6, 81 NRC 340 (2015)

NRC Staff must assess the relationship between local short-term uses and long-term productivity of the environment, consider alternatives, and describe the unavoidable adverse environmental impacts and the irreversible and irretrievable commitments of resources associated with the proposed action; CLI-15-13, 81 NRC 555 (2015)

NRC Staff must have some discretion to draw the line and move forward with decisionmaking; LBP-15-16, 81 NRC 618 (2015)

NRC Staff must provide a reasonably thorough discussion of the significant aspects of the probable environmental consequences of a proposed action; LBP-15-16, 81 NRC 618 (2015)

NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 48 (2015)

NRC Staff must weigh unavoidable adverse environmental impacts and resource commitments (costs) against the project's benefits; CLI-15-13, 81 NRC 555 (2015)

NRC Staff uses applicant's environmental report as a starting point for its own environmental review of a license renewal application, the results of which are published as a supplement to the generic environmental impact statement; CLI-15-6, 81 NRC 340 (2015)

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petitioner's issue of NRC Staff's compliance with its NEPA obligation to undertake a full evaluation of the environmental impacts associated with a proposed federal action is within the scope of an operating license amendment proceeding and material to the findings NRC must make; LBP-15-13, 81 NRC 456 (2015)

relative to factual matters, to carry burden of proof, NRC Staff and/or applicant must establish that its position is supported by a preponderance of the evidence; LBP-15-3, 81 NRC 65 (2015)

review of combined license application relative to regulatory actions that the NRC has taken in response to lessons learned from the Fukushima Dai-ichi accident is discussed; CLI-15-13, 81 NRC 555 (2015)
statutory obligation of complying with NEPA rests with NRC Staff; LBP-15-3, 81 NRC 65 (2015);
LBP-15-16, 81 NRC 618 (2015)

the fact that a competent and responsible state authority has approved the environmental acceptability of a site or a project after extensive and thorough environmentally sensitive hearings is properly entitled to substantial weight in the conduct of NRC's own NEPA analysis; LBP-15-11, 81 NRC 401 (2015)

to evaluate a power reactor license renewal application, NRC reviews management of aging effects and time-limited aging analysis of particular safety-related functions of the plant's systems, structures, and components and environmental impacts and alternatives to the proposed action in accordance; LBP-15-5, 81 NRC 249 (2015)

when considering continued storage in licensing reviews with previously completed final environmental impact statements, NRC Staff is expected to use a consistent and transparent process to ensure that all stakeholders are aware of how the environmental impacts of continued storage are considered in each licensing action affected by this regulation; CLI-15-10, 81 NRC 535 (2015)

NUCLEAR POWER PLANT OPERATIONS

holder of a combined license for a newly built reactor may not load fuel or operate except as provided in accordance with Part 50, Appendix E; LBP-15-4, 81 NRC 156 (2015)

"permanent cessation of operations" for a nuclear power reactor facility is defined as a certification by a licensee to NRC that it has permanently ceased or will permanently cease reactor operations; LBP-15-4, 81 NRC 156 (2015)

when licensees certify permanent cessation of operations and permanent removal of fuel from the reactor vessel, the license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel, and physically the reactor can't be operated; LBP-15-4, 81 NRC 156 (2015)

NUCLEAR POWER PLANTS

all operational nuclear power plants except Big Rock Point must participate in the ERDS program by providing onsite hardware at each unit to interface with the NRC receiving station; LBP-15-4, 81 NRC 156 (2015)

any facility with an operating reactor unit is required to provide ERDS for that unit, regardless of the status of other reactors at the facility; LBP-15-4, 81 NRC 156 (2015)

Congress expressly recognized and impliedly approved NRC's regulatory scheme and practice under which the safety of interim storage of high-level wastes at commercial nuclear power reactor sites has been determined separately from the safety of government-owned permanent storage facilities that have not yet been established; CLI-15-4, 81 NRC 221 (2015)

facility arguably exists until final decommissioning, which may take up to 60 years, or longer if approved by the Commission; LBP-15-4, 81 NRC 156 (2015)

section 50.72(a)(4) directing licensees to activate ERDS during exigent circumstances applies only to operating nuclear power reactors; LBP-15-4, 81 NRC 156 (2015)

NUCLEAR REGULATORY COMMISSION, AUTHORITY

agencies must adhere to their own regulations; LBP-15-17, 81 NRC 753 (2015)

agency has discretion to choose between rulemaking and adjudication; CLI-15-11, 81 NRC 546 (2015);
CLI-15-12, 81 NRC 551 (2015)

although contention ultimately was resolved in NRC Staff's favor, Commission takes review as a matter of discretion because the board's ruling raises substantial questions of precedential importance;
CLI-15-6, 81 NRC 340 (2015)

although NRC rules do not provide for the filing of amicus curiae briefs in this circumstance, as a matter of discretion the Commission has reviewed the brief; CLI-15-5, 81 NRC 329 (2015)

although rules do not provide for filing of reply briefs, as a matter of discretion the Commission reviews a reply brief; CLI-15-7, 81 NRC 481 (2015)

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amicus curiae filings are allowed at the Commission's discretion or sua sponte; CLI-15-1, 81 NRC 1 (2015); CLI-15-4, 81 NRC 221 (2015); CLI-15-10, 81 NRC 535 (2015)

basis for NRC authority to regulate the use of special nuclear material in facilities like nuclear power reactors is established; CLI-15-4, 81 NRC 221 (2015)

because the Commission finds that the suspension petition and new contention fail on the merits, and it considers and takes action on the petition and motions in its supervisory capacity, it need not address procedural issues; CLI-15-4, 81 NRC 221 (2015)

boards must request Commission approval to undertake sua sponte review; CLI-15-1, 81 NRC 1 (2015)

Commission exercised its inherent supervisory authority over agency adjudications to review motion and petition addressing the spent fuel storage issue; LBP-15-1, 81 NRC 15 (2015); LBP-15-9, 81 NRC 396 (2015)

Commission exercised its supervisory authority and dismissed proposed waste confidence safety contention and denied suspension petitions; CLI-15-13, 81 NRC 555 (2015)

Commission exercises its discretion to consider briefs that were not filed via the agency's E-Filing system; LBP-15-4, 81 NRC 156 (2015)

Commission may incorporate in any license at the time of issuance, or thereafter, by appropriate rule, regulation, or order, such additional requirements and conditions with respect to licensee's receipt, possession, use, and transfer of source or byproduct material as it deems appropriate or necessary in order to protect health or to minimize danger of life or property; LBP-15-16, 81 NRC 618 (2015)

Commission may, as a matter of discretion, grant review of a full or partial initial decision, giving due weight to the existence of a substantial question with respect to any of the considerations outlined in 10 C.F.R. 2.341(b)(4); CLI-15-2, 81 NRC 213 (2015)

Commission on its own motion may review a decision that modifies, suspends, or revokes a license; CLI-15-14, 81 NRC 729 (2015)

general scope of NRC's authority is established in Atomic Energy Act § 161, but it does not discuss spent fuel disposal; CLI-15-4, 81 NRC 221 (2015)

interpretation of statutes at issue and the regulations governing their implementation falls within the Commission's province; LBP-15-5, 81 NRC 249 (2015)

it is for the Commission, not licensing boards, to revise its rulings; LBP-15-18, 81 NRC 793 (2015)

NRC can issue nuclear power reactor licenses to applicants only upon a finding that utilization of special nuclear material will be in accord with the common defense and security and will provide adequate protection to the health and safety of the public; CLI-15-4, 81 NRC 221 (2015)

NRC is not required, as a precondition to issuing or renewing operating licenses for nuclear power plants, to make definitive findings concerning technical feasibility of a repository for the disposal of spent nuclear fuel; CLI-15-4, 81 NRC 221 (2015)

NRC's use of rulemaking to address generic issues has been approved by the Supreme Court; CLI-15-6, 81 NRC 340 (2015)

where petition fails on the merits, the Commission need not address procedural issues; CLI-15-10, 81 NRC 535 (2015)

written consent from NRC is required for all direct or indirect license transfers; CLI-15-8, 81 NRC 500 (2015)

OBJECTIONS

evidentiary objections made for the first time after briefing has been completed unfairly deprive the petitioners of the opportunity to file the response expressly provided in the NRC's procedural rules; LBP-15-20, 81 NRC 829 (2015)

in absence of objection, hearsay evidence is treated as being properly admitted and may be given such probative effect and value to which it is entitled; LBP-15-20, 81 NRC 829 (2015)

petitioners would have no opportunity to be heard regarding a sua sponte objection by the board because they would only learn of it when they received the board's ruling and thus would be deprived of the opportunity to file the response expressly provided in procedural rules; LBP-15-5, 81 NRC 249 (2015)

OFFICIAL NOTICE

licensing board takes official notice of NRC regulatory guide; LBP-15-3, 81 NRC 65 (2015)

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OFFSITE POWER

under its certified design, the Economic Simplified Boiling Water Reactor could maintain circulation long enough to permit safe shutdown of the reactor even if it were to lose offsite power and all of its backup generators failed to operate; LBP-15-5, 81 NRC 249 (2015)

OPERATING LICENSE AMENDMENT APPLICATIONS

application to use alternate pressurized thermal shock rule must contain an assessment of flaws in the reactor pressure vessel; LBP-15-17, 81 NRC 753 (2015)

application to use alternate pressurized thermal shock rule must contain the projected embrittlement reference temperatures along various portions of the reactor pressure vessel, from the present to a future point, compared to the alternate screening criteria; LBP-15-17, 81 NRC 753 (2015)

when licensee requests an exemption in a related license amendment application, hearing rights on the amendment application are considered to encompass the exemption request as well; LBP-15-18, 81 NRC 793 (2015)

when licensee submits its license amendment application to NRC, it must provide the agency its analysis about the issue of no significant hazards consideration using the standards in 10 C.F.R. 50.92; LBP-15-17, 81 NRC 753 (2015)

OPERATING LICENSE AMENDMENT PROCEEDINGS

challenges based on 10 C.F.R. 50.61a and the question of whether applicant demonstrated substantial advantage under 10 C.F.R. Part 50, Appendix H as a reason to not test capsules are beyond the scope of a license amendment proceeding, which concerns compliance with Appendix G of 10 C.F.R. Part 50; LBP-15-20, 81 NRC 829 (2015)

generic analyses of environmental impacts of continued storage and disposal in the context of NRC reactor licensing proceedings are acceptable; CLI-15-4, 81 NRC 221 (2015)

intervention petition was not sufficiently specific when it merely repeated the contents of petitioner's earlier petition concerning a prior license amendment; LBP-15-17, 81 NRC 753 (2015)

license amendments related to reactor pressure vessel embrittlement present an obvious potential for offsite public health and safety consequences; LBP-15-17, 81 NRC 753 (2015)

petitioners' contention challenges the sufficiency of the equivalent margins analysis to provide reasonable assurance of reactor safety and is therefore within the scope of the proceeding; LBP-15-20, 81 NRC 829 (2015)

prior to license issuance, NRC must find reasonable assurance that activities authorized by the amendment can be conducted without endangering the health and safety of the public and are in compliance with NRC regulations; LBP-15-17, 81 NRC 753 (2015)

proximity presumption applied where petitioners' contention concerned a license amendment to move the schedule for the withdrawal of reactor vessel material specimens from the technical specifications to the updated safety analysis report; LBP-15-17, 81 NRC 753 (2015)

proximity presumption applies in more limited license amendment proceedings only if the proposed amendment obviously entails an increased potential for offsite consequences; LBP-15-17, 81 NRC 753 (2015)

proximity presumption was applied in a license amendment proceeding where management's lack of the required character and competence was alleged; LBP-15-17, 81 NRC 753 (2015)

radiological claims that represent a direct challenge to prior license amendments authorizing extended power uprates are outside the scope of a license amendment proceeding; LBP-15-13, 81 NRC 456 (2015)

section 50.40 requires that NRC be persuaded that applicant will comply with all applicable regulations, that health and safety of the public will not be endangered, and that issuance of the amendment will not be inimical to the health and safety of the public; LBP-15-20, 81 NRC 829 (2015)

when an adjudicatory proceeding has been initiated with respect to a license amendment issued with a no significant hazards determination, once the presiding officer's initial decision becomes effective, the appropriate official shall take action with respect to that amendment in accordance with the initial decision; LBP-15-13, 81 NRC 456 (2015)

OPERATING LICENSE AMENDMENTS

activities the licensee may pursue without submitting a license amendment request, including certain tests or experiments, are defined in 10 C.F.R. 50.59(c)(1); LBP-15-17, 81 NRC 753 (2015)

SUBJECT INDEX

admissibility of contention that a license amendment will be required for licensee to update and maintain accurate design basis documents is decided; CLI-15-5, 81 NRC 329 (2015)

admissibility of contention that licensee is undertaking modifications for protection against severe flooding in the event of upstream dam failures that will require a license amendment is decided; CLI-15-5, 81 NRC 329 (2015)

agency actions not formally labeled as license amendments nevertheless can constitute de facto license amendments and accordingly trigger hearing rights for the public under Atomic Energy Act § 189a; CLI-15-5, 81 NRC 329 (2015)

any changes to the material specimen withdrawal schedule that conform to the ASTM standard referenced in Appendix H will not alter the plant's license; LBP-15-20, 81 NRC 829 (2015)

applicant requests an operating license amendment to implement alternate fracture toughness requirements for protection against pressurized thermal shock events; LBP-15-17, 81 NRC 753 (2015)

because current levels of emergency planning are required by regulation, licensee cannot make changes contemplated in its license amendment request without first receiving certain regulatory exemptions; LBP-15-18, 81 NRC 793 (2015)

claims of inadequacies in licensee's technical evaluations or noncompliance with its license, standing alone, do not identify an activity that may constitute a license amendment; CLI-15-14, 81 NRC 729 (2015)

court recognized the long-term nature of the concerns associated with spent fuel storage and disposal when it declined to vacate the license amendments that were the subject of the case, noting that doing so would effectively shut down the plants; CLI-15-4, 81 NRC 221 (2015)

in determining whether a license amendment, construction permit, or early site permit will be issued to applicant, the Commission is guided by the considerations that govern issuance of initial licenses, construction permits, or early site permits to the extent applicable and appropriate; LBP-15-20, 81 NRC 829 (2015)

key factors to consider when determining whether agency action constitutes a de facto license amendment are whether the agency action granted licensee any greater authority or otherwise altered the original terms of the license; CLI-15-5, 81 NRC 329 (2015)

license amendment will be effective on issuance, even if adverse public comments have been received and even if an interested person meeting the provisions for intervention has filed a request for a hearing; LBP-15-17, 81 NRC 753 (2015)

license amendments are not contingent upon any additional safety determination regarding spent fuel storage under the Atomic Energy Act; CLI-15-4, 81 NRC 221 (2015)

licensee cannot amend the terms of its license unilaterally, but rather must request and obtain agency approval; CLI-15-5, 81 NRC 329 (2015)

NRC regulations appropriately require a hearing before the proposed license amendment becomes effective whenever the amendment creates the possibility of a new or different kind of accident; LBP-15-20, 81 NRC 829 (2015)

NRC Staff may determine that exigent circumstances exist such that there is insufficient time for a full 30-day public comment period on a license amendment request; LBP-15-13, 81 NRC 456 (2015)

petitioners challenged NRC's approval of operating license amendments to allow for the use of higher-density spent-fuel-storage racks in the reactors' spent fuel pools; CLI-15-4, 81 NRC 221 (2015)

prior to license issuance NRC must find reasonable assurance that activities authorized by the amendment can be conducted without endangering the health and safety of the public, and in compliance with Commission regulations; LBP-15-20, 81 NRC 829 (2015)

to take advantage of the alternate pressurized thermal shock rule, licensee must request approval from the Office of Nuclear Reactor Regulation, in accordance with the procedures for submitting a license amendment; LBP-15-17, 81 NRC 753 (2015)

types of changes, tests, or experiments that may be undertaken without prior NRC approval as well as those that would require a license amendment are outlined in 10 C.F.R. 50.59(c); CLI-15-14, 81 NRC 729 (2015)

OPERATING LICENSE APPLICATIONS

information is specified in Atomic Energy Act § 182 that must be provided by applicant for a license and it has no reference to spent fuel disposal; CLI-15-4, 81 NRC 221 (2015)

SUBJECT INDEX

OPERATING LICENSE PROCEEDINGS

environmental justice is a Category 2 issue, within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

OPERATING LICENSE RENEWAL

active components are excluded from aging management review on the basis of existing regulatory requirements for maintenance and monitoring of structures, systems, and components; CLI-15-6, 81 NRC 340 (2015)

aging management review is required only for equipment that performs its intended function without moving parts or without a change in configuration or property; CLI-15-6, 81 NRC 340 (2015); LBP-15-6, 81 NRC 314 (2015)

applicant for a renewed license must first identify all structures, systems, and components that serve a function relating directly or indirectly to safety, as defined by this regulation; CLI-15-6, 81 NRC 340 (2015)

applicant has the burden of providing reasonable assurance that the current licensing basis will be maintained throughout the renewal period; LBP-15-5, 81 NRC 249 (2015)

applicant is required to show that safety features will fulfill their intended function, not that every structure will maintain its current licensing basis throughout the renewal period; LBP-15-5, 81 NRC 249 (2015)

applicant must perform an integrated plant assessment to identify structures and components that are subject to aging management review; CLI-15-6, 81 NRC 340 (2015)

applicant's environmental report may adopt the generic findings of the generic environmental impact statement, but must also include site-specific analyses of Category 2 issues; CLI-15-6, 81 NRC 340 (2015)

applicants must demonstrate how their programs will be effective in managing the effects of aging during the proposed period of extended operation, at a detailed component and structure level, rather than at a more generalized system level; LBP-15-5, 81 NRC 249 (2015)

applicants must reassess any time-limited aging analyses to show either that the analyses will remain valid throughout the period of extended operation or that the effects of aging on the subject component will be managed during that time period; CLI-15-6, 81 NRC 340 (2015)

application must demonstrate that licensee will adequately manage effects of aging on passive, long-lived components so that their intended functions will be maintained consistent with the current licensing basis for the period of extended operation; CLI-15-6, 81 NRC 340 (2015)

Category 2 issues are reviewed on a site-specific basis because they have not been determined to be essentially similar for all plants; LBP-15-5, 81 NRC 249 (2015)

effects of aging must be adequately managed so that intended functions will be maintained consistent with the current licensing basis for the period of extended operation; LBP-15-6, 81 NRC 314 (2015)

environmental justice is a Category 2 issue that must be considered in each license renewal review; CLI-15-6, 81 NRC 340 (2015)

environmental report for license renewal must consider alternatives to mitigate severe accidents for all plants that have not considered such alternatives; LBP-15-5, 81 NRC 249 (2015)

environmental report for license renewal need not contain environmental analysis of Category 1 issues identified in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 249 (2015)

environmental report must analyze environmental impacts of a license renewal on matters identified as Category 2 issues in 10 C.F.R. Part 51, Subpart A, Appendix B; LBP-15-5, 81 NRC 249 (2015)

existing license will not be deemed to have expired until the license renewal application has been finally determined; CLI-15-6, 81 NRC 340 (2015)

focus of license renewal regulations in 10 C.F.R. Part 54 is to ensure that licensee can manage the effects of aging on certain long-lived, passive components that are important to safety; CLI-15-6, 81 NRC 340 (2015)

goal of NRC's license renewal safety review is to ensure that licensee can successfully manage the detrimental effects of aging; CLI-15-6, 81 NRC 340 (2015)

if, as intervenors allege, applicant's enhanced monitoring program is inadequate, then applicant's unenhanced monitoring program embodied in its license renewal application was *a fortiori* inadequate, and intervenors had a regulatory obligation to challenge it in their original petition to intervene; LBP-15-1, 81 NRC 15 (2015)

SUBJECT INDEX

impact determinations in the Continued Storage generic environmental impact statement shall be deemed incorporated into the environmental impact statements associated with the applications; CLI-15-10, 81 NRC 535 (2015)

integrated plant assessment must demonstrate that effects of aging for each structure and component will be managed so that the intended functions will be maintained consistent with the current licensing basis for the period of extended operation; CLI-15-6, 81 NRC 340 (2015)

intervenors fail to specify what other alternatives to the license renewal application should be discussed in the draft supplemental environmental impact statement, much less show that any proposed alternative would satisfy the purpose of applicant's proposed action; LBP-15-1, 81 NRC 15 (2015)

intervenors opposed renewal of the nuclear power plant license, and proposed new contentions for increased ultrasonic testing of sand bed epoxy coating integrity; LBP-15-1, 81 NRC 15 (2015)

license renewal review is not intended to duplicate NRC's ongoing oversight of operating reactors; CLI-15-6, 81 NRC 340 (2015)

licensee commitment to develop a program by the time the 20-year extension begins does not demonstrate that the effects of aging will be adequately managed; LBP-15-1, 81 NRC 15 (2015)

NRC is not required, as a precondition to issuing or renewing operating licenses for nuclear power plants, to make definitive findings concerning technical feasibility of a repository for the disposal of spent nuclear fuel; CLI-15-4, 81 NRC 221 (2015)

NRC reviews management of aging effects and time-limited aging analysis of particular safety-related functions of the plant's systems, structures, and components and environmental impacts and alternatives to the proposed action in accordance; LBP-15-5, 81 NRC 249 (2015)

plant systems, structures, and components within the scope of license renewal are all non-safety-related systems, structures, and components whose failure could prevent the capability to shut down the reactor and maintain it in a safe shutdown condition; LBP-15-6, 81 NRC 314 (2015)

relay switches and snubbers are not subject to an aging management review; LBP-15-6, 81 NRC 314 (2015)

safety review is limited to licensee's management of aging for certain systems, structures, and components, and review of time-limited aging analyses; LBP-15-5, 81 NRC 249 (2015); LBP-15-6, 81 NRC 314 (2015)

safety significance of a structure, system, or component is defined in terms of its safety-related functions, and within the scope of license renewal are included those SSCs whose failure could prevent satisfactory accomplishment of the safety-related function; CLI-15-6, 81 NRC 340 (2015)

severe accident mitigation alternatives analysis must be considered as part of the environmental report and, ultimately, as part of NRC Staff's supplemental environmental impact statement for a power reactor license renewal; LBP-15-5, 81 NRC 249 (2015)

severe accident mitigation alternatives fall within Category 2 and must therefore be addressed on a site-specific basis; LBP-15-5, 81 NRC 249 (2015)

severe accident mitigation alternatives review identifies and assesses possible changes, such as improvements in hardware, training, or procedures, that could cost-effectively mitigate the environmental impacts that would otherwise flow from a potential severe accident; LBP-15-5, 81 NRC 249 (2015)

structures and components are subject to aging management review if they are not subject to routine replacement; CLI-15-6, 81 NRC 340 (2015)

structures and components are subject to aging management review if they perform an intended function without moving parts or without a change in configuration or properties; CLI-15-6, 81 NRC 340 (2015)

to grant a license renewal, NRC Staff must find that there is reasonable assurance that the effects of aging on relevant systems, structures, and components will be managed during the period of extended operation, that time-limited aging analyses have been identified for review, and that applicable environmental requirements have been met; LBP-15-6, 81 NRC 314 (2015)

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-15-6, 81 NRC 340 (2015)

OPERATING LICENSE RENEWAL PROCEEDINGS

adjudicatory hearings in individual proceedings will share the same scope of issues as NRC Staff review, for NRC's hearing process, like NRC Staff's review, necessarily examines only the questions NRC safety rules make pertinent; LBP-15-5, 81 NRC 249 (2015)

SUBJECT INDEX

admissibility of contention that common-mode failures and/or mutually exacerbating catastrophes are entitled to severe accident mitigation alternatives analysis is decided; LBP-15-5, 81 NRC 249 (2015)

admissibility of contention that environmental report lacks site-specific safety and environmental findings regarding storage and disposal of spent fuel is decided; LBP-15-5, 81 NRC 249 (2015)

allegations of noncompliance with already-issued, existing, and open Commission orders are part of the current licensing basis and therefore cannot be challenged in a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

because the probability of a spent fuel pool accident causing significant harm is remote, there is no need for applicants to assess mitigation alternatives as part of license renewal; LBP-15-5, 81 NRC 249 (2015)

because the shield building functions as a radiation and biological shield, failure or collapse of the shield building due to cracking propagation could lead to health and safety impacts and thus petitioner's contention concerns a subject matter that could impact the grant or denial of a pending license application; LBP-15-1, 81 NRC 15 (2015)

boards do not sit to "fyspeck" environmental documents or to add details or nuances, but the environmental report or environmental impact statement must come to grips with all important considerations; LBP-15-5, 81 NRC 249 (2015)

Category 1 issues are not subject to challenge in a relicensing proceeding, absent a waiver under 10 C.F.R. 2.335, because they involve environmental effects that are essentially similar for all plants and need not be assessed repeatedly on a site-specific basis; LBP-15-5, 81 NRC 249 (2015)

challenges to emergency planning fall outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

claims of past and current mismanagement are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

compliance with orders issued as part of NRC's ongoing oversight program are enforcement issues that are not within the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

contention alleging that environmental assessment has not adequately addressed environmental impacts associated with saltwater intrusion arising from saline water migration from the plant into surrounding waters, and applicant's use of aquifer withdrawals to lower salinity and temperature is admissible; LBP-15-13, 81 NRC 456 (2015)

contention bases that do not pertain specifically to the license renewal application do not provide sufficient information to demonstrate a genuine dispute with the applicant on a material issue and is thus inadmissible; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

contention is within the scope of license renewal proceeding because NRC regulations require that the environmental report include a severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 249 (2015)

contention must explain what specific deficiencies exist and why they materially impact the license renewal application or environmental impact statement; LBP-15-1, 81 NRC 15 (2015)

contention that applicant has failed to establish in its aging management plan that the effects of aging will be adequately managed for the period of extended operation is inadmissible; LBP-15-6, 81 NRC 314 (2015)

contention that application has failed to establish that the effects of aging on relay switches and snubbers will be adequately managed for the period of extended operation is inadmissible; LBP-15-6, 81 NRC 314 (2015)

contention that does not actually challenge any specific part of the integrated plant assessment or time-limited aging analyses fails to demonstrate the existence of a genuine dispute with applicant; LBP-15-6, 81 NRC 314 (2015)

contention that environmental report does not satisfy NEPA because it does not consider a range of mitigation measures to mitigate the risk of catastrophic fires in densely packed, closed-frame spent fuel storage pools is decided; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report is inadequate insofar as it does not consider the risk of spent fuel pool fires is inadmissible; LBP-15-5, 81 NRC 249 (2015)

contention that operating license should not be renewed unless and until applicant establishes that the plant can withstand and be safely shut down following an earthquake is not within the scope of license renewal proceedings; LBP-15-6, 81 NRC 314 (2015)

SUBJECT INDEX

contention that severe accident mitigation alternatives analysis fails to evaluate the impact that a severe accident at one unit would have on the operation of a proposed nearby unit is within the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

current licensing basis issues cannot be challenged in license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

enforcement orders are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

GEIS findings with respect to severe accident consequences are not subject to challenge in individual license renewal proceedings; CLI-15-6, 81 NRC 340 (2015)

generalized economic cost arguments, unsupported by asserted facts or expert opinion, are insufficient to show a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 15 (2015)

generic environmental analysis is incorporated into NRC regulations, and thus Category 1 generic findings may not be challenged in individual licensing proceedings unless accompanied by a petition for rule waiver; CLI-15-6, 81 NRC 340 (2015)

impacts to subsistence consumption must be evaluated as part of the site-specific environmental justice analysis; LBP-15-5, 81 NRC 249 (2015)

in theory, Commission approval of a rule waiver could allow a contention on a Category 1 issue to proceed where special circumstances exist; CLI-15-6, 81 NRC 340 (2015)

intervenor must do more than point to issues with the shield building, but must also indicate what is wrong with applicant's response and its amended inspection program and why intervenor believes the particular inspection program makes the license renewal application unacceptable; LBP-15-1, 81 NRC 15 (2015)

intervenor's requests for more testing, more methods of testing, and more information, without an explanation of why the current program is inadequate, do not create a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 15 (2015)

license renewal provisions cover environmental issues relating to onsite spent fuel storage generically, and all such issues, including accident risk, fall outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

licensee generally bears the ultimate burden of proof, but intervenors must give some basis for further inquiry; LBP-15-5, 81 NRC 249 (2015)

licensing actions that could increase reactor vessel embrittlement, such as license renewals, hold the potential for offsite consequences that are obvious; LBP-15-17, 81 NRC 753 (2015)

NEPA review in license renewal proceedings is not limited to aging management-related issues; LBP-15-5, 81 NRC 249 (2015)

no finding on emergency planning is necessary for issuance of a renewed nuclear power reactor operating license; CLI-15-6, 81 NRC 340 (2015)

petitioners can raise compliance issues only under 10 C.F.R. 2.206, which would allow them to petition NRC to take an enforcement action; LBP-15-5, 81 NRC 249 (2015)

petitioners have the burden of going forward, which requires them to provide factual allegations or expert testimony to show a potential deficiency in applicant's aging management plan; LBP-15-5, 81 NRC 249 (2015)

petitioners must provide site-specific support to show that the severe accident mitigation alternatives analysis is unreasonable; LBP-15-5, 81 NRC 249 (2015)

petitioners question applicant's failure to consider the qualitative benefits of installing engineered filters; LBP-15-5, 81 NRC 249 (2015)

safety culture issues are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

safety issue that does not involve aging management is outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

severe accidents in spent fuel pools are Category 1 issues that do not need to be included in the severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 249 (2015)

to the extent petitioner is challenging the adequacy of computer modeling of plume variability, petitioner bears the burden of providing evidence specific to the license renewal applicant; LBP-15-5, 81 NRC 249 (2015)

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 for hearing; LBP-15-5, 81 NRC 249 (2015)

SUBJECT INDEX

when an application is alleged to be deficient, petitioner must identify the deficiencies and provide supporting reasons for its position that such information is required; LBP-15-1, 81 NRC 15 (2015)

OPERATING LICENSES

Atomic Energy Act does not, as a prerequisite to licensing, require a finding of reasonable assurance that highly hazardous and long-lived radioactive materials can be disposed of safely; CLI-15-4, 81 NRC 221 (2015)

Congress did not intend in enacting the Atomic Energy Act to require a demonstration that nuclear wastes could be safely disposed of before licensing of nuclear plants was permitted; CLI-15-4, 81 NRC 221 (2015)

holder of a license under Part 50, or a combined license under Part 52, shall follow and maintain the effectiveness of an emergency plan that meets the requirements in Part 50, Appendix E; LBP-15-4, 81 NRC 156 (2015)

NRC is not required, as a precondition to issuing or renewing operating licenses for nuclear power plants, to make definitive findings concerning technical feasibility of a repository for the disposal of spent nuclear fuel; CLI-15-4, 81 NRC 221 (2015)

NRC's long-continued regulatory practice of issuing operating licenses, with an implied finding of reasonable assurance that safe permanent disposal of spent nuclear fuel can be available when needed, is in accord with the intent of Congress underlying the Atomic Energy Act and Energy Reorganization Act; CLI-15-4, 81 NRC 221 (2015)

unless the safety findings prescribed by the Atomic Energy Act and the regulations can be made, the reactor does not obtain a license, no matter how badly it is needed; CLI-15-4, 81 NRC 221 (2015)

OPERATIONS

timing of source materials license renewal application enables licensee to operate under NRC's timely renewal provision until the agency renews the license; LBP-15-2, 81 NRC 48 (2015)

See also Nuclear Power Plant Operations

OPINIONS

concurring opinions, by their nature, do not carry the force of law, except in very narrow circumstances; CLI-15-4, 81 NRC 221 (2015)

ORDERS

See Executive Order 12898; Modification Order

OVERPRESSURIZATION

NRC has addressed pressure suppression containment system vulnerability to early failure under severe accident conditions including overpressurization in NUREG-0474; DD-15-1, 81 NRC 193 (2015)

PARTIAL INITIAL DECISIONS

Commission may, as a matter of discretion, grant review of a full or partial initial decision, giving due weight to the existence of a substantial question with respect to any of the considerations outlined in 10 C.F.R. 2.341(b)(4); CLI-15-2, 81 NRC 213 (2015)

PARTIES

any other party to the proceeding may file an answer supporting or opposing Commission review; CLI-15-6, 81 NRC 340 (2015)

parties' duty to report material significant developments in a matter under adjudication arises immediately upon discovery of that information; CLI-15-16, 81 NRC 810 (2015)

PASSIVE COMPONENTS

aging management review is required for components that function without moving parts and without a change in configuration or properties, and includes a non-exhaustive list of components that either do or do not fit this description; CLI-15-6, 81 NRC 340 (2015)

board examined how a transformer performs its intended function to determine whether it undergoes a change in configuration or properties; CLI-15-6, 81 NRC 340 (2015)

license renewal application must demonstrate that licensee will adequately manage effects of aging on passive, long-lived components so that their intended functions will be maintained consistent with the current licensing basis for the period of extended operation; CLI-15-6, 81 NRC 340 (2015)

static components such as transistors and battery chargers are specifically excluded from aging management review; CLI-15-6, 81 NRC 340 (2015)

SUBJECT INDEX

PERFORMANCE ASSESSMENT

intervenor litigated whether the performance-based licensing complies with the Atomic Energy Act and National Environmental Policy Act, and whether undue discretion was accorded to licensee; LBP-15-16, 81 NRC 618 (2015)

PERMITS

deference can be given to a state permit's findings as to the acceptability of environmental impacts; LBP-15-11, 81 NRC 401 (2015)

in determining whether a license or permit amendment will be issued to applicant, the Commission is to be guided by the considerations that govern issuance of initial licenses, construction permits, or early site permits to the extent applicable and appropriate; LBP-15-17, 81 NRC 753 (2015)

non-NRC permits are interdependent parts of applicant's proposed action and thus are connected actions; LBP-15-16, 81 NRC 618 (2015)

reliance on a state permit, let alone one prepared and adopted by a state government, cannot satisfy a federal agency's obligations under NEPA; LBP-15-11, 81 NRC 401 (2015)

See also National Pollutant Discharge Elimination System Permit

PETITIONERS

only the petitioning party may file reply briefs; CLI-15-7, 81 NRC 481 (2015)

PHYSICAL SECURITY

"material access area" is any location which contains special nuclear material, within a vault or a building, the roof, walls, and floor of which constitute a physical barrier; CLI-15-9, 81 NRC 512 (2015)

"tamper-safing" refers to use of devices on containers or vaults in a manner and at a time that ensures a clear indication of any violation of the integrity of previously made measurements of special nuclear material within the container or vault; CLI-15-9, 81 NRC 512 (2015)

PIPING

because petitioner has not shown how a proposed plan would fail to ensure that buried pipes continue to fulfill their intended safety purposes, the contention is inadmissible; LBP-15-5, 81 NRC 249 (2015)

PLEADINGS

although a totally deficient pleading may not be justified on the basis that it was prepared without the assistance of counsel, pro se petitioners should not be held to those standards of clarity and precision to which a lawyer might reasonably be expected to adhere; LBP-15-13, 81 NRC 456 (2015)

any other party to the proceeding may file an answer supporting or opposing Commission review; CLI-15-6, 81 NRC 340 (2015)

Commission discourages incorporating pleadings or arguments by reference; LBP-15-5, 81 NRC 249 (2015)

when a party requests action from the presiding officer in an NRC adjudicatory proceeding, the request must come in the form of a motion; CLI-15-13, 81 NRC 555 (2015)

wholesale incorporation by reference does not serve the purposes of a pleading; LBP-15-5, 81 NRC 249 (2015)

See also Amicus Pleadings

PLUTONIUM

contention that applicant's revised material control and accounting plan fails to show how confirmation and verification of theft of plutonium will be carried out in the specified timelines is inadmissible; CLI-15-9, 81 NRC 512 (2015)

POLICY

Environmental Protection Agency is recognized as an expert in environmental protection, and its final policy determinations deserve consideration; LBP-15-15, 81 NRC 598 (2015)

POPULATION DENSITY

contention that applicant's severe accident mitigation alternatives analysis is significantly flawed because of the use of inaccurate factual assumptions about population is admissible; LBP-15-5, 81 NRC 249 (2015)

POST-HEARING RESOLUTION

post-hearing resolution must not be employed to obviate the basic findings prerequisite to a license; LBP-15-3, 81 NRC 65 (2015)

SUBJECT INDEX

POWER UPRATE

radiological claims that represent a direct challenge to prior license amendments authorizing extended power uprates are outside the scope of a license amendment proceeding; LBP-15-13, 81 NRC 456 (2015)

PRECEDENTIAL EFFECT

although contention ultimately was resolved in NRC Staff's favor, Commission takes review as a matter of discretion because the board's ruling raises substantial questions of precedential importance; CLI-15-6, 81 NRC 340 (2015)
concurring opinions, by their nature, do not carry the force of law, except in very narrow circumstances; CLI-15-4, 81 NRC 221 (2015)
party may seek reconsideration of an earlier ruling whereby the party was not actually prejudiced, where the ruling could well have an impact upon the course of many licensing hearings; CLI-15-6, 81 NRC 340 (2015)

PRECONSTRUCTION ACTIVITIES

applicant's monitoring program for establishing existing site characterization baseline values for certain site groundwater constituents prior to issuance of a source materials license for ISR facility construction and operation need not be conducted so as to also provide background information needed to set Appendix A, Criterion 5B groundwater protection standards; LBP-15-3, 81 NRC 65 (2015)
See also Limited Work Authorization

PREJUDICE

lack of prejudice, standing alone, does not excuse an untimely filing, but it is a factor the Commission has considered in determining whether good cause exists; LBP-15-4, 81 NRC 156 (2015)

PRESSURIZED THERMAL SHOCK

alternate PTS rule changes how licensees derive projected reference temperatures for the components of their reactor pressure vessels; LBP-15-17, 81 NRC 753 (2015)
alternate PTS rule is designed to enable all commercial pressurized water reactor licensees to assess the state of their reactor pressure vessels relative to a new criterion without the need to make new material property measurements, instead using only information that is currently available; LBP-15-17, 81 NRC 753 (2015)
alternate PTS rule provides measures for ongoing reporting; LBP-15-17, 81 NRC 753 (2015)
alternate PTS rule specifies mitigation processes for licensees if they project they will exceed (or they do exceed) the rules' screening criteria; LBP-15-17, 81 NRC 753 (2015)
applicant requests an operating license amendment to implement alternate fracture toughness requirements for protection against PTS events; LBP-15-17, 81 NRC 753 (2015)
application to use alternate PTS rule must contain an assessment of flaws in the reactor pressure vessel; LBP-15-17, 81 NRC 753 (2015)
application to use alternate PTS rule must contain the projected embrittlement reference temperatures along various portions of the reactor pressure vessel, from the present to a future point, compared to the alternate screening criteria; LBP-15-17, 81 NRC 753 (2015)
if NRC does not approve continued operation based on licensee's safety analysis, licensee must request an opportunity to modify the reactor pressure vessel or related reactor systems to reduce the potential for failure of the reactor vessel due to PTS events; LBP-15-17, 81 NRC 753 (2015)
PTS rule and embrittlement screening program are discussed; LBP-15-17, 81 NRC (2015); LBP-15-17, 81 NRC 753 (2015)
screening criterion is given for plates, forgings, and axial and circumferential weld materials; LBP-15-17, 81 NRC 753 (2015)
to take advantage of the alternate PTS rule, licensee must request approval from the Office of Nuclear Reactor Regulation, in accordance with the procedures for submitting a license amendment; LBP-15-17, 81 NRC 753 (2015)
when the reference temperature of a reactor pressure vessel is above the screening limit, the RPV is considered to have an unreasonably high risk of fracture from a PTS event; LBP-15-17, 81 NRC 753 (2015)

PRESSURIZED-WATER REACTOR

surveillance program to monitor pressurized water reactor pressure vessel is described; LBP-15-17, 81 NRC 753 (2015)

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PRESUMPTION OF REGULARITY

boards cannot assume that applicants will not comply with its regulatory responsibilities, including its license conditions; LBP-15-3, 81 NRC 65 (2015)
Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses or NRC regulations; LBP-15-4, 81 NRC 156 (2015)

PRIMA FACIE SHOWING

if a contention makes a prima facie allegation that the application omits information required by law, it necessarily presents a genuine dispute with applicant on a material issue and raises an issue plainly material to an essential finding of regulatory compliance needed for license issuance; LBP-15-5, 81 NRC 249 (2015)
special circumstances required to obtain a rule waiver have been described as a prima facie showing that application of a rule in a particular way would not serve the purposes for which the rule was adopted; LBP-15-5, 81 NRC 249 (2015)

PRO SE LITIGANTS

although a totally deficient pleading may not be justified on the basis that it was prepared without the assistance of counsel, pro se petitioners should not be held to those standards of clarity and precision to which a lawyer might reasonably be expected to adhere; LBP-15-13, 81 NRC 456 (2015)
pleadings submitted by pro se petitioners are afforded greater leniency than petitions drafted with the assistance of counsel; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015)

PROBABILISTIC RISK ASSESSMENT

agency conducting a NEPA analysis must examine both the probability of a given harm occurring and the consequences of that harm if it does occur; CLI-15-6, 81 NRC 340 (2015)
embrittlement model is used to predict future reference temperatures across the reactor pressure vessel, which is then verified by existing surveillance data in a process called the consistency check; LBP-15-17, 81 NRC 753 (2015)
only if the probability of a severe accident is so small as to be effectively zero could NRC Staff dispense with the consequences portion of the analysis; CLI-15-6, 81 NRC 340 (2015)
probability-weighted environmental consequences of severe accidents are small; CLI-15-6, 81 NRC 340 (2015)

PROOF

See Burden of Proof; Standard of Proof

PROPERTY INTERESTS

Atomic Energy Act authorizes NRC to accord protection from radiological injury to both health and property interests, and thus a genuine property interest is sufficient to accord petitioner proximity-based standing; LBP-15-17, 81 NRC 753 (2015)
proximity presumption applies to persons who have a significant property interest in the area near a nuclear power plant; LBP-15-17, 81 NRC 753 (2015)

PROXIMITY PRESUMPTION

Atomic Energy Act authorizes NRC to accord protection from radiological injury to both health and property interests, and thus a genuine property interest is sufficient to accord petitioner proximity-based standing; LBP-15-17, 81 NRC 753 (2015)
Commission affirmed board ruling on standing and upheld the validity of the proximity presumption; CLI-15-13, 81 NRC 555 (2015)
governmental body within close proximity of a proposed nuclear reactor has standing under the proximity presumption, effectively dispensing with the need to make an affirmative showing of injury, causation, and redressability; LBP-15-19, 81 NRC 815 (2015)
license amendments related to reactor pressure vessel embrittlement present an obvious potential for offsite public health and safety consequences; LBP-15-17, 81 NRC 753 (2015)
licensing actions that could increase reactor vessel embrittlement, such as license renewals, hold the potential for offsite consequences that are obvious; LBP-15-17, 81 NRC 753 (2015)
living within 50 miles of a nuclear power reactor is enough to confer standing on an individual or group in proceedings for construction permits, operating licenses, or significant amendments thereto; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015); LBP-15-17, 81 NRC 753 (2015); LBP-15-20, 81 NRC 829 (2015)

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mother was denied standing based on her son's residence within 50 miles of a power plant, because she herself lived more than 50 miles away; LBP-15-17, 81 NRC 753 (2015)

organization members living within 50 miles of a reactor are presumed to have standing; LBP-15-5, 81 NRC 249 (2015)

petitioner could not rely on caretakers maintaining and farming the property in petitioner's absence as grounds for proximity-based standing; LBP-15-17, 81 NRC 753 (2015)

petitioner who lives, has frequent contacts, or has significant property interest in within 50 miles of a nuclear power reactor has standing without the need to make an individualized showing of injury, causation, and redressability; LBP-15-17, 81 NRC 753 (2015)

petitioners had proximity-based standing even though they did not provide a reactor vessel failure scenario; LBP-15-17, 81 NRC 753 (2015)

petitioning member's affidavit must be sufficiently specific to show frequent contact within 50 miles of the plant; LBP-15-17, 81 NRC 753 (2015)

presumption applies across the board to all proceedings regardless of type because the rationale underlying it is not based on the type of proceeding per se but on whether the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-15-17, 81 NRC 753 (2015)

presumption applies in more limited license amendment proceedings only if the proposed amendment obviously entails an increased potential for offsite consequences; LBP-15-17, 81 NRC 753 (2015)

presumption applies to persons who have a significant property interest in the area near a nuclear power plant; LBP-15-17, 81 NRC 753 (2015)

presumption applies to persons who have frequent contacts in the area near a nuclear power plant; LBP-15-17, 81 NRC 753 (2015)

presumption applies when there are clear implications for the offsite environment, or major alterations to the facility with a clear potential for offsite consequences; LBP-15-17, 81 NRC 753 (2015)

presumption applies where petitioners' contention concerns a license amendment to move the schedule for the withdrawal of reactor vessel material specimens from the technical specifications to the updated safety analysis report; LBP-15-17, 81 NRC 753 (2015)

presumption was applied in a license amendment proceeding where management's lack of the required character and competence was alleged; LBP-15-17, 81 NRC 753 (2015)

radius for the proximity presumption has to be at least as large as the range where obvious offsite consequences can occur; LBP-15-17, 81 NRC 753 (2015)

standing based on frequent contacts is a determination to be made by a licensing board after weighing all the information provided; LBP-15-17, 81 NRC 753 (2015)

statement that petitioner lives, recreates, and conducts business within the vicinity of the plant is too vague to demonstrate a substantial or regular presence within 50 miles of the plant; LBP-15-17, 81 NRC 753 (2015)

to demonstrate frequent contacts within the 50-mile site radius under the proximity presumption, petitioner must show that her contacts are substantial and regular, and must describe them with specificity; LBP-15-17, 81 NRC 753 (2015)

PUBLIC COMMENTS

members of the public had the opportunity to fully participate in the Continued Storage rulemaking proceeding; CLI-15-10, 81 NRC 535 (2015)

PUBLIC PARTICIPATION

NRC must make a diligent effort to involve the public in implementation of NEPA procedures; LBP-15-16, 81 NRC 618 (2015)

PUMPS

request for immediate action to prevent restart because a piece of primary coolant pump impeller was lodged between the reactor vessel and the flow skirt is denied; DD-15-3, 81 NRC 713 (2015)

request for licensee to replace the primary coolant pumps with others designed for their intended duty is denied; DD-15-3, 81 NRC 713 (2015)

QUALITATIVE ANALYSIS

although license requirements and other environmental quality standards are to be considered in assessing environmental impacts, they do not negate NRC Staff's responsibility to consider all environmental effects; LBP-15-3, 81 NRC 65 (2015)

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important qualitative considerations or factors that cannot be quantified in the environmental impact statement will be discussed in qualitative terms; LBP-15-3, 81 NRC 65 (2015)
petitioners question applicant's failure to consider the qualitative benefits of installing engineered filters; LBP-15-5, 81 NRC 249 (2015)

to the extent there are important NEPA qualitative considerations or factors that cannot be quantified, these considerations or factors will be discussed in qualitative terms; LBP-15-5, 81 NRC 249 (2015)

QUALITY ASSURANCE

petitioners' concerns about tube leaks, unplanned power changes, and potential primary coolant contamination did not constitute any violations that were more than minor; DD-15-2, 81 NRC 205 (2015)

QUANTITATIVE DATA

agency's failure to adequately validate a quantitative model on which it relies may lead the reviewing court to conclude that the agency's decision is arbitrary, capricious, or contrary to law; LBP-15-20, 81 NRC 829 (2015)

relative to an individual ISR facility, when NRC Staff formulates its draft and final supplemental environmental impact statement conclusions regarding the environmental impacts of a proposed action or alternative actions, it uses as guidance a standard scheme to categorize or quantify the impacts; LBP-15-3, 81 NRC 65 (2015)

to the extent there are important NEPA qualitative considerations or factors that cannot be quantified, these considerations or factors will be discussed in qualitative terms; LBP-15-5, 81 NRC 249 (2015)
where environmental impacts are practically quantifiable, NRC has a duty to discuss them in those terms in the final supplemental environmental impact statement; LBP-15-3, 81 NRC 65 (2015)

RADIOACTIVE PLUME

to the extent petitioner is challenging the adequacy of computer modeling of plume variability, petitioner bears the burden of providing evidence specific to the license renewal applicant; LBP-15-5, 81 NRC 249 (2015)

RADIOACTIVE WASTE, HIGH-LEVEL

Atomic Energy Act does not, as a prerequisite to licensing, require a finding of reasonable assurance that highly hazardous and long-lived radioactive materials can be disposed of safely; CLI-15-4, 81 NRC 221 (2015)

NRC is not required to conduct a rulemaking proceeding or to withhold action on pending or future applications for nuclear power reactor operating licenses until it makes a determination that high-level radioactive wastes can be permanently disposed of safely; CLI-15-4, 81 NRC 221 (2015)

RADIOACTIVE WASTE, LOW-LEVEL

decommissioning funding requirements encompass costs of low-level waste burial; CLI-15-8, 81 NRC 500 (2015)

RADIOACTIVE WASTE DISPOSAL

Congress did not intend in enacting the Atomic Energy Act to require a demonstration that nuclear wastes could safely be disposed of before licensing of nuclear plants was permitted; CLI-15-4, 81 NRC 221 (2015)

decommissioning funding requirements encompass costs of low-level waste burial; CLI-15-8, 81 NRC 500 (2015)

final environmental impact statement as amplified by both board and Commission decisions, provides adequate consideration of environmental impacts of near-surface waste disposal; CLI-15-6, 81 NRC 340 (2015)

NRC is not required to conduct a rulemaking proceeding or to withhold action on pending or future applications for nuclear power reactor operating licenses until it makes a determination that high-level radioactive wastes can be permanently disposed of safely; CLI-15-4, 81 NRC 221 (2015)

statutory findings required by AEA § 103 do not apply to disposal activities that might result from the operation of a licensed facility; CLI-15-4, 81 NRC 221 (2015)

RADIOACTIVE WASTE STORAGE

Atomic Energy Act does not, as a prerequisite to licensing, require a finding of reasonable assurance that highly hazardous and long-lived radioactive materials can be disposed of safely; CLI-15-4, 81 NRC 221 (2015)

See also Continued Storage Rule

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RADON EMISSIONS

Environmental Protection Agency regulates radon; LBP-15-16, 81 NRC 618 (2015)

REACTOR CONTROL RODS

request for immediate action on flaws in the control rod drive mechanisms did not meet the criteria for review; DD-15-3, 81 NRC 713 (2015)

REACTOR PRESSURE VESSEL

alternate pressurized thermal shock rule is designed to enable all commercial PWR licensees to assess the state of their reactor pressure vessels relative to a new criterion without the need to make new material property measurements, instead using only information that is currently available; LBP-15-17, 81 NRC 753 (2015)

alternate screening criteria consist of eighteen different reference temperature limits that depend on RPV wall thickness and the part of the RPV under consideration; LBP-15-17, 81 NRC 753 (2015)

application to use alternate pressurized thermal shock rule must contain an assessment of flaws in the RPV; LBP-15-17, 81 NRC 753 (2015)

ASTM Standard E 185 anticipates that during the course of a nuclear power plant's life the surveillance capsule withdrawal schedule may need to be revised and allows and provides for such changes; LBP-15-20, 81 NRC 829 (2015)

board has ample authority to ensure that evidence offered concerning microcracking is limited to that specific material issue and does not stray into issues outside the scope of the license amendment proceeding; LBP-15-20, 81 NRC 829 (2015)

if NRC does not approve continued operation based on licensee's safety analysis, licensee must request an opportunity to modify the RPV or related reactor systems to reduce the potential for failure of the reactor vessel due to pressurized thermal shock events; LBP-15-17, 81 NRC 753 (2015)

if part of an RPV is expected to fall below the 50 ft-lb standard, licensee must demonstrate that lower values of Charpy upper-shelf energy will provide margins of safety against fracture equivalent to those required by the ASME Boiler and Pressure Vessel Code; LBP-15-20, 81 NRC 829 (2015)

if the reference values projected at specific areas of the RPV for the end of life of the plant surpass the current screening criteria, licensee must submit a safety analysis and obtain NRC approval to continue to operate; LBP-15-17, 81 NRC 753 (2015)

in calculating embrittlement reference temperatures, licensee must calculate neutron flux through the RPV using a methodology that has been benchmarked to experimental measurements and with quantified uncertainties and possible biases; LBP-15-17, 81 NRC 753 (2015)

licensee must establish the nil-ductility reference temperature for the RPV material in the annealed state, before the reactor was operational for various key points along the RPV; LBP-15-17, 81 NRC 753 (2015)

licensees have the option of demonstrating that values of Charpy upper-shelf energy below 50 ft-lb will provide margins of safety against fracture equivalent to those required by Appendix G of Section XI of the ASME BPV Code; LBP-15-20, 81 NRC 829 (2015)

licensees must attach a particular number of surveillance capsules to specified areas within the reactor vessel, typically near the inside vessel wall at the beltline; LBP-15-20, 81 NRC 829 (2015)

licensing actions that could increase reactor vessel embrittlement, such as license renewals, hold the potential for offsite consequences that are obvious; LBP-15-17, 81 NRC 753 (2015)

long-term exposure to neutron radiation and elevated temperatures in a reactor vessel decrease the vessel materials' fracture toughness, or resistance to fracture; LBP-15-20, 81 NRC 829 (2015)

material condition of a plant's reactor vessel obviously bears on the health and safety of those members of the public who reside in the plant's vicinity; LBP-15-20, 81 NRC 829 (2015)

materials in a reactor vessel must maintain a minimum level of 50 ft-lb of Charpy upper-shelf energy, which is a measurement of the amount of energy the material can absorb at high temperatures before it fractures and fails; LBP-15-20, 81 NRC 829 (2015)

minimum frequency with which surveillance capsules must be tested is set by ASTM Standard E 185 (1982 version), which is incorporated into Appendix H; LBP-15-20, 81 NRC 829 (2015)

neutron radiation embrittlement of reactor pressure vessel walls, decreasing their fracture toughness, is discussed; LBP-15-17, 81 NRC 753 (2015)

NRC must preapprove the schedule for removing material samples from the reactor vessel; LBP-15-17, 81 NRC 753 (2015)

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petitioners are not barred from contending that additional testing is necessary to show margins of safety equivalent to those of the ASME BPV Code, Section XI, Appendix G because the petitioners allege noncompliance with 10 C.F.R. Part 50, Appendix G and not Appendix H; LBP-15-20, 81 NRC 829 (2015)

physical specimens must come from near the inside vessel wall in the beltline region so that the specimen irradiation history duplicates the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface; LBP-15-17, 81 NRC 753 (2015)

pressurized water reactor pressure vessel surveillance program relies on physical material samples, also known as specimens, capsules, or coupons; LBP-15-17, 81 NRC 753 (2015)

probabilistic embrittlement model is used to predict future reference temperatures across the reactor pressure vessel, which is then verified by existing surveillance data in a process called the consistency check; LBP-15-17, 81 NRC 753 (2015)

reference temperature values are compared to the alternate screening criteria to determine whether the reactor pressure vessel is safe to operate; LBP-15-17, 81 NRC 753 (2015)

surveillance data need not be obtained from the same reactor pressure vessel that is the subject of the license amendment; LBP-15-17, 81 NRC 753 (2015)

surveillance program to monitor pressurized water reactor pressure vessel is described; LBP-15-17, 81 NRC 753 (2015)

when the reference temperature of an RPV is above the screening limit, the RPV is considered to have an unreasonably high risk of fracture from a pressurized thermal shock event; LBP-15-17, 81 NRC 753 (2015)

REACTORS

See Boiling-Water Reactors; Economic Simplified Boiling Water Reactor

REASONABLE ASSURANCE

applicant has the burden of providing reasonable assurance that the current licensing basis will be maintained throughout the renewal period; LBP-15-5, 81 NRC 249 (2015)

applicant is required to show that safety features will fulfill their intended function, not that every structure will maintain its current licensing basis throughout the renewal period; LBP-15-5, 81 NRC 249 (2015)

Atomic Energy Act does not, as a prerequisite to licensing, require a finding of reasonable assurance that highly hazardous and long-lived radioactive materials can be disposed of safely; CLI-15-4, 81 NRC 221 (2015)

court directed NRC to determine whether there is reasonable assurance that an offsite storage solution will be available by the end of a reactor's license term, and if not, whether there is reasonable assurance that the fuel can be stored safely at the sites beyond those dates; CLI-15-4, 81 NRC 221 (2015)

license transfer applicant must show reasonable assurance of sufficient funds to decommission the facility; CLI-15-8, 81 NRC 500 (2015)

licensee must show with reasonable assurance that its proposed methodology for material control and accounting will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public; CLI-15-9, 81 NRC 512 (2015)

NRC's long-continued regulatory practice of issuing operating licenses with an implied finding of reasonable assurance that safe permanent disposal of spent nuclear fuel can be available when needed is in accord with the intent of Congress underlying the Atomic Energy Act and Energy Reorganization Act; CLI-15-4, 81 NRC 221 (2015)

prior to license issuance NRC must find reasonable assurance that activities authorized by the amendment can be conducted without endangering the health and safety of the public, and in compliance with Commission regulations; LBP-15-17, 81 NRC 753 (2015); LBP-15-20, 81 NRC 829 (2015)

to grant a license renewal, NRC Staff must find that there is reasonable assurance that the effects of aging on relevant systems, structures, and components will be managed during the period of extended operation, that time-limited aging analyses have been identified for review, and that applicable environmental requirements have been met; LBP-15-6, 81 NRC 314 (2015)

REASONABLENESS STANDARD

determination as to whether requests or petitions are filed in a timely manner shall be subject to a reasonableness standard and are not subject to the 30-day deadline applicable to motions by existing parties to add or amend contentions; LBP-15-6, 81 NRC 314 (2015)

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REBUTTABLE PRESUMPTION

in any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on questions of adequacy and implementation ability of state and local emergency plans; LBP-15-4, 81 NRC 156 (2015)

RECONSIDERATION

party may seek reconsideration of an earlier ruling whereby the party was not actually prejudiced, where the ruling could well have an impact upon the course of many licensing hearings; CLI-15-6, 81 NRC 340 (2015)

RECORD OF DECISION

agency's record of decision must include a concise discussion of mitigation measures; LBP-15-16, 81 NRC 618 (2015)

at the time of its decision, each agency shall prepare a concise public record of decision; LBP-15-16, 81 NRC 618 (2015)

board may incorporate material from another agency's environmental impact statement, which was submitted in the hearing record, as part of the record of decision; CLI-15-6, 81 NRC 340 (2015)

board's ultimate NEPA judgments can be made on the basis of the entire adjudicatory record in addition to NRC Staff's final environmental impact statement; LBP-15-3, 81 NRC 65 (2015)

decision of the board or Commission becomes the record of decision, which may also incorporate the final supplemental environmental impact statement; CLI-15-6, 81 NRC 340 (2015)

environmental impact statement may be deemed modified by the hearing record because hearing procedures allow for additional and a more rigorous public scrutiny of the FSEIS than does the usual circulation for comment; CLI-15-6, 81 NRC 340 (2015)

fact-finding administrative body, such as a licensing board, with authority to develop an evidentiary record, is distinguished from reviewing adjudicatory and judicial bodies, generally with a more limited record-creating authority; LBP-15-3, 81 NRC 65 (2015)

final supplemental environmental impact statement is supplemented by the board's decision as well as by the hearing record; CLI-15-6, 81 NRC 340 (2015)

in an NRC adjudicatory proceeding, even if a board finds an environmental impact statement prepared by NRC Staff inadequate in certain respects, the board's findings, as well as the adjudicatory record, become, in effect, part of the final EIS; LBP-15-16, 81 NRC 618 (2015)

initial decision of the presiding officer or final decision of the Commissioners acting as a collegial body will constitute the record of decision; CLI-15-6, 81 NRC 340 (2015)

objectives of the NRC adjudicatory procedures and policies include producing an informed adjudicatory record that supports agency decisionmaking on public health and safety, the common defense and security, and the environment; LBP-15-20, 81 NRC 829 (2015)

overall record for the licensing action includes a complete analysis of the cultural resources; LBP-15-16, 81 NRC 618 (2015)

REFERRAL OF PROCEEDINGS

Commission refers a limited portion of the hearing request to the licensing board to determine whether petitioner has identified an NRC activity that requires an opportunity to request an adjudicatory hearing; CLI-15-14, 81 NRC 729 (2015)

referral to licensing board includes threshold issues such as standing, timeliness, and satisfaction of contention admissibility standards; CLI-15-14, 81 NRC 729 (2015)

scope of the referral is limited to whether NRC granted licensee greater authority than that provided by its existing licenses or otherwise altered the terms of its existing licenses thereby entitling petitioner to an opportunity to request a hearing; CLI-15-14, 81 NRC 729 (2015)

REFERRED RULINGS

referred rulings or certified questions must raise significant and novel legal or policy issues or issues whose early resolution would materially advance the orderly disposition of the proceeding; CLI-15-1, 81 NRC 1 (2015)

REGULATIONS

absent a waiver, no rule or regulation of the Commission, or any provision thereof, concerning the licensing of production and utilization facilities is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding; CLI-15-1, 81 NRC 1 (2015); LBP-15-4, 81

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NRC 156 (2015); LBP-15-5, 81 NRC 249 (2015); LBP-15-6, 81 NRC 314 (2015); LBP-15-17, 81 NRC 753 (2015)

agencies must adhere to their own regulations; LBP-15-17, 81 NRC 753 (2015)

alternate pressurized thermal shock rule provides measures for ongoing reporting; LBP-15-17, 81 NRC 753 (2015)

boards cannot prohibit what regulations allow except under specific conditions; LBP-15-17, 81 NRC 753 (2015)

contention contesting adequacy of licensee's equivalent margins analysis is not a challenge to 10 C.F.R. Part 50, Appendix H; LBP-15-20, 81 NRC 829 (2015)

contention that regulatory provisions are themselves insufficient to protect the public health and safety constitutes an improper collateral attack upon NRC regulations; LBP-15-4, 81 NRC 156 (2015)

contentions calling for requirements in excess of those imposed by NRC regulations will be rejected as a collateral attack on the regulations; LBP-15-4, 81 NRC 156 (2015)

Council on Environmental Quality and the Advisory Council on Historic Preservation regulations provide guidance on agency compliance with NEPA and are not binding on NRC when the agency has not expressly adopted them, but are entitled to considerable deference; LBP-15-16, 81 NRC 618 (2015)

environmental impacts of continued storage have been incorporated into the environmental impact statements at issue in the proceedings by operation of law; CLI-15-10, 81 NRC 535 (2015)

focus of the license renewal regulations in 10 C.F.R. Part 54 is to ensure that licensee can manage the effects of aging on certain long-lived, passive components that are important to safety; CLI-15-6, 81 NRC 340 (2015)

intervention petitioner may not attack generic NRC requirements or regulations or express generalized grievances about NRC policies; CLI-15-9, 81 NRC 512 (2015)

latest edition and addenda of the ASME Boiler and Pressure Vessel Code has been incorporated by reference in 10 C.F.R. 50.55a(b)(2); LBP-15-20, 81 NRC 829 (2015)

licensing board lacks authority to hold a hearing on the adequacy of a different agency's regulations; LBP-15-5, 81 NRC 249 (2015)

licensing boards should not accept in individual license proceedings contentions that are, or are about to become, the subject of general rulemaking by the Commission; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

NRC has not expressly adopted Council on Environmental Quality regulations, but they are entitled to considerable deference; LBP-15-3, 81 NRC 65 (2015)

NRC Staff is incorporating the 2012 edition of the ASME code by reference into 10 C.F.R. 50.55a; CLI-15-13, 81 NRC 555 (2015)

proposed rule or proposed law may not support an admissible contention because its ultimate effect is at best speculative; LBP-15-15, 81 NRC 598 (2015)

proposed rules are not binding upon administrative agencies and are not ripe for review by NRC boards; LBP-15-15, 81 NRC 598 (2015)

provisions of 10 C.F.R. Part 2, Subpart M, together with the generally applicable intervention provisions in 10 C.F.R. Part 2, Subpart C, govern adjudicatory proceedings on license transfer applications; CLI-15-8, 81 NRC 500 (2015)

regulations can be challenged only under extremely limited circumstances; LBP-15-5, 81 NRC 249 (2015)

section 51.102(c) replaced a previous version that expressly permitted licensing boards to modify the content of an environmental impact statement; CLI-15-6, 81 NRC 340 (2015)

tentative conclusion articulated in a nonfinal, proposed rule does not command deference from the court nor is it binding on the agency; LBP-15-15, 81 NRC 598 (2015)

to challenge a Category 1 issue such as public health, petitioner must request a waiver and show that unique circumstances warrant a site-specific determination; LBP-15-5, 81 NRC 249 (2015)

to obtain waiver of a rule, the allegation of special circumstances must be set forth with particularity and supported by an affidavit or other proof; LBP-15-5, 81 NRC 249 (2015)

to the extent a contention would require licensee to maintain the ERDS link or to create another ERDS-like system after its reactor is permanently shut down and defueled, it is an impermissible collateral attack on a regulation; LBP-15-4, 81 NRC 156 (2015)

waiver of rule or regulation may be obtained upon a showing that applying provision at issue would not serve the purposes for which the rule or regulation was adopted; LBP-15-3, 81 NRC 65 (2015)

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when an NRC regulation permits use of a particular analysis, a contention asserting that a different analysis or technique should be used is inadmissible because it indirectly attacks the Commission's regulations; LBP-15-17, 81 NRC 753 (2015)

See also Amendment of Regulations; Rules of Practice

REGULATIONS, INTERPRETATION

although 10 C.F.R. Part 40 applies to ISL mining, some of the specific requirements in Part 40, such as many of those found in Appendix A, address hazards posed only by conventional uranium milling operations, and do not carry over to ISL mining; LBP-15-16, 81 NRC 618 (2015)

any alleged ambiguity in the exception provision of 10 C.F.R. Part 50, Appendix E, § VI is eliminated when the regulatory language is examined in light of the regulatory history and framework; LBP-15-4, 81 NRC 156 (2015)

because 10 C.F.R. 51.23(b) prescribes a specific procedure for incorporating the environmental impacts of continued storage into a site-specific analysis, this procedure, rather than a procedure set forth in the general provisions of Part 51, governs NRC environmental review; CLI-15-10, 81 NRC 535 (2015)

crux of the "genuine dispute" prong under 10 C.F.R. 2.309(f)(1)(vi) is the requirement for specificity, that a contention must have more than general allegations; LBP-15-1, 81 NRC 15 (2015)

"deemed incorporated" function of 10 C.F.R. 51.23(b) provides administrative efficiency by adding the environmental impacts of continued storage to site-specific environmental impact statements without additional work by the Staff; CLI-15-10, 81 NRC 535 (2015)

exception in 10 C.F.R. 50.72 is most reasonably interpreted as exempting from the ERDS program all nuclear reactors that have permanently ceased operations and defueled, i.e., that are permanently shut down; LBP-15-4, 81 NRC 156 (2015)

"good cause" in 10 C.F.R. 2.307 does not share the same definition that is used for good cause in section 2.309(c); LBP-15-1, 81 NRC 15 (2015)

if 10 C.F.R. Part 50, Appendix E, § VI were a one-time requirement that applied only to units existing in 1991, that would mean it was not intended to apply prospectively to newly built reactors; LBP-15-4, 81 NRC 156 (2015)

interpretation of statutes at issue and the regulations governing their implementation falls within the Commission's province; LBP-15-5, 81 NRC 249 (2015)

neither "baseline" nor "background" is explicitly defined in 10 C.F.R. Part 40, Appendix A; LBP-15-16, 81 NRC 618 (2015)

nothing in the definition of "construction" in 10 C.F.R. 40.4 precludes the installation of wells or the use of monitoring protocols as needed to provide those background data; LBP-15-3, 81 NRC 65 (2015)

nuclear power facility has shut down permanently within the meaning of 10 C.F.R. Part 50, Appendix E, § VI.2 when it has permanently ceased reactor operations, and permanently removed fuel from the reactor vessel, as those terms are defined in 10 C.F.R. 50.2; LBP-15-4, 81 NRC 156 (2015)

petitioners' argument that power reactor is being operated as a test reactor reflects a misreading of 10 C.F.R. 50.59; LBP-15-20, 81 NRC 829 (2015)

"prompt" issuance is not defined as an immediate one in 10 C.F.R. 2.1202(a); LBP-15-2, 81 NRC 48 (2015)

regulation's title can aid in construing regulatory text; LBP-15-4, 81 NRC 156 (2015)

regulatory history, like 10 C.F.R. Part 50, App. E, § VI itself, is focused entirely on implementation and maintenance of the ERDS operations with not one word about decommissioning the system; LBP-15-4, 81 NRC 156 (2015)

requirements in Part 40, such as many of the provisions in Appendix A, that, by their own terms, apply only to conventional uranium milling activities, cannot sensibly govern in situ leach mining; LBP-15-16, 81 NRC 618 (2015)

scope of the ERDS exception is informed by the regulatory history, which states that ERDS is to be used by licensees of operating reactors; LBP-15-4, 81 NRC 156 (2015)

specific regulations control over general regulations; CLI-15-10, 81 NRC 535 (2015)

REGULATORY GUIDES

licensees may follow regulatory guides to determine equivalent safety margins, or may use any other methods, procedures, or selection of materials data and transients to demonstrate compliance with this regulation; LBP-15-20, 81 NRC 829 (2015)

licensing board takes official notice of NRC regulatory guide; LBP-15-3, 81 NRC 65 (2015)

SUBJECT INDEX

petitioners may challenge a Staff guidance document such as a Regulatory Guide; LBP-15-20, 81 NRC 829 (2015)

See also NRC Guidance Documents

REGULATORY OVERSIGHT PROCESS

compliance with orders issued as part of NRC's ongoing oversight program are enforcement issues that are not within the scope of a license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

except for the detrimental effects of aging on the functionality of certain plant systems, structures, and components in the period of extended operation, the regulatory process is adequate to ensure that the licensing bases of all currently operating plants provide and maintain an acceptable level of safety; LBP-15-6, 81 NRC 314 (2015)

license renewal review is not intended to duplicate NRC's ongoing oversight of operating reactors; CLI-15-6, 81 NRC 340 (2015)

NRC Staff inspections and confirmatory action letters are oversight activities normally conducted to ensure that licensees comply with existing NRC requirements and license conditions and therefore do not typically trigger the opportunity for a hearing under the AEA; CLI-15-5, 81 NRC 329 (2015)

NRC's ongoing regulatory process ensures that the current licensing basis of an operating plant remains acceptably safe; LBP-15-5, 81 NRC 249 (2015)

oversight activities at times involve enforcement actions, including orders and civil penalties, to which a hearing right or opportunity attaches; CLI-15-5, 81 NRC 329 (2015)

petitioners' premise that a series of NRC Staff communications relating to plant oversight should be considered as an element of a single, overarching de facto license amendment was rejected; CLI-15-14, 81 NRC 729 (2015)

Reactor Oversight Process Action Matrix reflects performance issues at plants and integrates NRC's inspection, assessment, and enforcement programs; DD-15-3, 81 NRC 713 (2015)

regulatory process continuously reassesses whether there is a need for additional oversight or regulations to protect public health and safety; LBP-15-4, 81 NRC 156 (2015)

RELAYS

contention that license renewal application has failed to establish that the effects of aging on switches and snubbers will be adequately managed for the period of extended operation is inadmissible; LBP-15-6, 81 NRC 314 (2015)

switches and snubbers do not rely on time-limited assumptions based on the plant's operating term, but rather are subject to ongoing maintenance programs; LBP-15-6, 81 NRC 314 (2015)

RENEWABLE ENERGY SOURCES

failure to provide a direct critique of the analysis in the environmental report discussing the potential for offshore power and interconnected wind farms is a failure to identify a genuine dispute with applicant; LBP-15-5, 81 NRC 249 (2015)

failure to reference specific sources showing that wind or other renewables are viable sources of baseload power within the service area, renders a contention inadmissible; LBP-15-5, 81 NRC 249 (2015)

it is not enough to demonstrate a theoretical possibility that wind farms spread across a wide area could provide consistent power, but rather petitioners must show concretely that wind could be a reliable, commercially viable source of baseload power during the license renewal period; LBP-15-5, 81 NRC 249 (2015)

REOPENING A RECORD

given the need for finality in adjudications, reopening the record is an extraordinary action imposing a deliberately heavy burden on intervenor; LBP-15-14, 81 NRC 591 (2015)

heavy barrier to reopening applies whenever an adjudication has been closed and not merely after a case has been terminated following a full evidentiary hearing on the merits; LBP-15-14, 81 NRC 591 (2015)

petitioner has not satisfied reopening standards because it has not raised a significant environmental issue and has not demonstrated that a materially different result would be likely if the contention had been considered initially; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

petitioners have not raised an issue material to findings that NRC must make to support final decisions and they are unable to satisfy contention admissibility standards or meet the criteria to reopen a closed record; CLI-15-4, 81 NRC 221 (2015)

there would be little hope of completing administrative proceedings if each newly arising allegation required an agency to reopen its hearings; LBP-15-14, 81 NRC 591 (2015)

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REPLY BRIEFS

although rules do not provide for filing of reply briefs, as a matter of discretion the Commission reviews a reply brief; CLI-15-7, 81 NRC 481 (2015)

board considered a letter written after the original petition was filed and submitted with petitioner's reply; LBP-15-5, 81 NRC 249 (2015)

issues raised in an intervention petition or answer are within the appropriate scope of a reply brief; LBP-15-5, 81 NRC 249 (2015)

new arguments in support of petitioner's contentions cannot be raised for the first time in reply briefs; LBP-15-4, 81 NRC 156 (2015); LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015); LBP-15-17, 81 NRC 753 (2015)

only the petitioning party may file reply briefs; CLI-15-7, 81 NRC 481 (2015); LBP-15-13, 81 NRC 456 (2015)

petitioner may use its reply as an opportunity to cure potential defects in standing; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015)

petitioners would have no opportunity to be heard regarding a sua sponte objection by the board because they would only learn of it when they received the board's ruling and thus would be deprived of the opportunity to file the response expressly provided in procedural rules; LBP-15-5, 81 NRC 249 (2015)

right to reply is intended to provide an opportunity to legitimately amplify arguments made in the intervention petition in response to applicant and NRC Staff answers; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015)

REPORTING REQUIREMENTS

alternate pressurized thermal shock rule provides measures for ongoing reporting; LBP-15-17, 81 NRC 753 (2015)

licensee is obliged to give local union notice and an opportunity to bargain over the effects of its decision to implement changes in the terms and conditions of the employees' employment regarding behavioral observations of security concerns; CLI-15-16, 81 NRC 810 (2015)

parties' duty to report material significant developments in a matter under adjudication arises immediately upon discovery of that information; CLI-15-16, 81 NRC 810 (2015)

REQUEST FOR ACTION

any member of the public may seek enforcement action associated with matters affecting plant operation, including the vitality of component maintenance programs; CLI-15-6, 81 NRC 340 (2015)

challenges to licensee actions taken under 10 C.F.R. 50.59 may only be taken by means of a petition for enforcement action under 10 C.F.R. 2.206; CLI-15-5, 81 NRC 329 (2015)

Commission denies hearing request, but refers the matters raised to the Executive Director of Operations for consideration as a request for enforcement action; CLI-15-5, 81 NRC 329 (2015)

concerns about current design and operation of a nuclear power plant are more properly addressed through a petition for enforcement action; LBP-15-13, 81 NRC 456 (2015)

concerns about facility's emergency plans may be raised at any time pursuant to 10 C.F.R. 2.206; CLI-15-6, 81 NRC 340 (2015)

concerns about safety, licensee's compliance with regulatory requirements, and adequacy of NRC oversight are appropriately addressed as requests for enforcement action; CLI-15-8, 81 NRC 500 (2015); CLI-15-14, 81 NRC 729 (2015)

contention claiming that modifications to repair or replace inadequate structural beams and columns is more appropriately presented as a request for enforcement action; CLI-15-5, 81 NRC 329 (2015)

if a license were amended, the public's only means to participate in future schedule changes would be through a request for action under 10 C.F.R. 2.206; LBP-15-17, 81 NRC 753 (2015)

if petitioner has a credible basis to question the adequacy of licensee's compliance with 10 C.F.R. 50.54(q)(3), it may petition for enforcement action; LBP-15-4, 81 NRC 156 (2015)

NRC's 2.206 process affords a meaningful opportunity to seek review of and action on safety-related concerns; CLI-15-5, 81 NRC 329 (2015); LBP-15-4, 81 NRC 156 (2015); LBP-15-6, 81 NRC 314 (2015)

petition under 10 C.F.R. 2.206 will be reviewed only where petitioner specifies the bases for taking the requested action; DD-15-6, 81 NRC 884 (2015)

petitioner's request that the NRC take escalated enforcement action against licensee concerning flooding protection is being addressed by the NRC's request for information; DD-15-5, 81 NRC 877 (2015)

SUBJECT INDEX

request for enforcement action based on support beam deficiencies, flood protection inadequacy, flood risks from upstream dams, and primary reactor containment electrical penetration seals containing Teflon is denied because petitioner's requests have been addressed through other actions; DD-15-4, 81 NRC 869 (2015)

request for immediate action on flaws in the control rod drive mechanisms did not meet the criteria for review; DD-15-3, 81 NRC 713 (2015)

request for immediate action on leakage from the safety injection refueling water tank did not meet the criteria for review; DD-15-3, 81 NRC 713 (2015)

request for immediate action to prevent restart because a piece of primary coolant pump impeller was lodged between the reactor vessel and the flow skirt is denied; DD-15-3, 81 NRC 713 (2015)

request for licensee to replace the primary coolant pumps with others designed for their intended duty is denied; DD-15-3, 81 NRC 713 (2015)

request that NRC order the immediate shutdown of all nuclear power reactors that are known to be located on or near an earthquake fault line is denied; DD-15-6, 81 NRC 884 (2015)

request that NRC order the immediate suspension of the operating licenses of all General Electric boiling-water reactors that use the Mark I primary containment system citing the Fukushima Dai-ichi accident in Japan as its rationale basis is resolved; DD-15-1, 81 NRC 193 (2015)

REQUEST FOR ADDITIONAL INFORMATION

although an admissible contention requires no more than some minimal factual and legal foundation in support, the Commission expects that in almost all instances a petitioner must go beyond merely quoting a request for additional information to justify admission; LBP-15-1, 81 NRC 15 (2015)

as part of the NRC post-Fukushima lessons-learned activities, NRC is requiring all licensees to reevaluate seismic hazards at their sites, and to this end, issued a request for information; DD-15-1, 81 NRC 193 (2015)

issuance of an RAI does not alone establish deficiencies in an application or that NRC Staff will go on to find any of applicant's clarifications, justifications, or other responses to be unsatisfactory; CLI-15-8, 81 NRC 500 (2015)

petitioners must do more than rest on the mere existence of RAIs as a basis for their contention; CLI-15-8, 81 NRC 500 (2015)

RAIs are a routine means for NRC Staff to ask for clarification or additional corroborating information from an applicant; CLI-15-8, 81 NRC 500 (2015)

RESOURCE CONSERVATION & RECOVERY ACT

admissibility of contention that environmental assessment fails to adequately describe and analyze the impacts of maintaining post-operational wellfields as long-term hazardous waste facilities is decided; LBP-15-15, 81 NRC 598 (2015)

proper sampling plan for establishing baseline values is described; LBP-15-3, 81 NRC 65 (2015)

RESPONSE TIME

contention that applicant's revised material control and accounting plan is inadequate to satisfy the alarm resolution requirements is inadmissible; CLI-15-9, 81 NRC 512 (2015)

RESTART

NRC approvals of plant restart and lifting suspensions did not trigger AEA §189a hearing rights; CLI-15-14, 81 NRC 729 (2015)

REVERSAL OF RULING

Commission reviews board's legal rulings de novo and will reverse a board's legal rulings if they are contrary to established law; CLI-15-6, 81 NRC 340 (2015)

deficiency in a final environmental impact statement is not automatic ground for reversal of an order granting a permit although the issue has been opened for full consideration in an agency hearing; CLI-15-6, 81 NRC 340 (2015)

REVIEW

See Appellate Review; Environmental Review; NRC Staff Review; Safety Review; Standard of Review; Standard Review Plans

REVIEW, DISCRETIONARY

although contention ultimately was resolved in NRC Staff's favor, Commission takes review as a matter of discretion because the board's ruling raises substantial questions of precedential importance; CLI-15-6, 81 NRC 340 (2015)

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Commission exercised its inherent supervisory authority over agency adjudications to review motion and petition addressing the spent fuel storage issue; LBP-15-1, 81 NRC 15 (2015); LBP-15-9, 81 NRC 396 (2015)

Commission on its own motion may review a decision that modifies, suspends, or revokes a license; CLI-15-14, 81 NRC 729 (2015)

grant of discretionary review must show that a board's ruling was a departure from, or contrary to, established law; CLI-15-7, 81 NRC 481 (2015)

petition for review will be granted at Commission discretion upon a showing that petitioner has raised a substantial question as to any of the five factors of 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-15-1, 81 NRC 1 (2015); CLI-15-9, 81 NRC 512 (2015)

standard for discretionary review is described; CLI-15-7, 81 NRC 481 (2015)

REVIEW, SUA SPONTE

adequacy of NRC Staff's review of transmission-corridor impacts might be appropriate for the board's consideration sua sponte; CLI-15-1, 81 NRC 1 (2015)

authority shall be used only in extraordinary circumstances; CLI-15-1, 81 NRC 1 (2015)

boards must request Commission approval to undertake sua sponte review; CLI-15-1, 81 NRC 1 (2015)

persons who are not parties may file an amicus curiae brief if a matter is taken up by the Commission under 10 C.F.R. 2.341 or sua sponte; CLI-15-1, 81 NRC 1 (2015)

with Commission's express approval, a licensing board may make findings on a serious safety, environmental, or common defense and security matter not put into controversy by the parties; CLI-15-1, 81 NRC 1 (2015)

REVOCATION OF LICENSES

if a board determines after full adjudication that the license amendment should not have been granted, it may be revoked or conditioned; LBP-15-16, 81 NRC 618 (2015)

issued licenses can be revoked, conditioned, modified, or affirmed based on the evidence reviewed at the evidentiary hearing; LBP-15-16, 81 NRC 618 (2015)

request under 10 C.F.R. 50.54(f) is to enable the Commission to determine whether or not the license should be modified, suspended, or revoked; CLI-15-14, 81 NRC 729 (2015)

RIPENESS

courts decline to review tentative agency positions because doing so severely compromises the interests that the ripeness doctrine protects; LBP-15-15, 81 NRC 598 (2015)

nonfinal rulemaking action can be ripe for review; LBP-15-15, 81 NRC 598 (2015)

RISK ASSESSMENT

request for information instructed all licensees to reevaluate seismic hazards at their sites using updated seismic hazard information, present-day guidance and methodologies, and a risk evaluation; DD-15-6, 81 NRC 884 (2015)

RISKS

when the reference temperature of a reactor pressure vessel is above the screening limit, the RPV is considered to have an unreasonably high risk of fracture from a pressurized thermal shock event; LBP-15-17, 81 NRC 753 (2015)

RULE OF REASON

hard look under NEPA is subject to a rule of reason, and consideration of environmental impacts need not address all theoretical possibilities, but only those that have some reasonable possibility of occurring; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

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-15-3, 81 NRC 65 (2015)

with regard to reasonably foreseeable impacts, NEPA does not call for certainty or precision, but an estimate of anticipated (not unduly speculative) impacts; LBP-15-3, 81 NRC 65 (2015)

RULEMAKING

Administrative Procedure Act requires no more than a description of the subjects and issues involved in a notice of proposed rulemaking; LBP-15-15, 81 NRC 598 (2015)

advance notice of proposed rulemaking is a formal invitation to participate in shaping the proposed rule; LBP-15-15, 81 NRC 598 (2015)

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advance notice of proposed rulemaking was withdrawn due to changes in market demand; LBP-15-15, 81 NRC 598 (2015)

agency can cease a rulemaking all together after a notice of proposed rulemaking has been issued; LBP-15-15, 81 NRC 598 (2015)

agency has discretion to choose between rulemaking and adjudication; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

agency is generally not required to issue a new notice of proposed rulemaking if it changes its position, as long as the final rule is a logical outgrowth of the proposed rule; LBP-15-15, 81 NRC 598 (2015)

agency need not submit a full draft of a rule in a notice of proposed rulemaking; LBP-15-15, 81 NRC 598 (2015)

choice made between proceeding by general rule or by individual, ad hoc litigation is one that lies primarily in the informed discretion of the administrative agency; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

contentions that are the subject of general rulemaking by NRC may not be litigated in individual licensing proceedings; LBP-15-4, 81 NRC 156 (2015); LBP-15-17, 81 NRC 753 (2015)

courts have relied on language accompanying proposed rulemakings to determine agency intent; LBP-15-15, 81 NRC 598 (2015)

if intervenor wishes to effect a substantive change to Part 50, Appendix E, § VI.2, it may petition for rulemaking; LBP-15-4, 81 NRC 156 (2015)

legislative history of the Administrative Procedure Act emphasized the notice requirement for proposed rulemaking in order to fairly apprise the public of the agency's potential action; LBP-15-15, 81 NRC 598 (2015)

licensing boards should not accept in individual license proceedings contentions that are, or are about to become, the subject of general rulemaking by the Commission; CLI-15-9, 81 NRC 512 (2015); CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

licensing proceedings are not the appropriate venue for generic rulemaking issues; CLI-15-9, 81 NRC 512 (2015)

many agency statements, including statements sometimes called "rules," do not have force and effect, and advance notice and public participation are required for rules that carry the force of law; LBP-15-15, 81 NRC 598 (2015)

members of the public had the opportunity to fully participate in the Continued Storage rulemaking proceeding; CLI-15-10, 81 NRC 535 (2015)

nonfinal rulemaking action can be ripe for review; LBP-15-15, 81 NRC 598 (2015)

NRC is not required to conduct a rulemaking proceeding or to withhold action on pending or future applications for nuclear power reactor operating licenses until it makes a determination that high-level radioactive wastes can be permanently disposed of safely; CLI-15-4, 81 NRC 221 (2015)

NRC regulations provide procedural mechanisms under 10 C.F.R. 2.206 and 2.802 by which petitioner may pursue its concerns about current deficiencies; LBP-15-6, 81 NRC 314 (2015)

NRC's use of rulemaking to address generic issues has been approved by the Supreme Court; CLI-15-6, 81 NRC 340 (2015)

post-Fukushima spent fuel pool concerns are being addressed through rulemaking on mitigation of beyond-design-basis events; DD-15-1, 81 NRC 193 (2015)

preamble to notice of proposed rulemaking addresses agency's duty to identify and make available technical studies and data that it has employed in reaching the decisions to propose particular rules; LBP-15-15, 81 NRC 598 (2015)

precedence requires a licensing board to let EPA's rulemaking run its course, allowing intelligent resolution of any remaining claims instead of piecemeal and repetitive litigation; LBP-15-15, 81 NRC 598 (2015)

purpose of notice of proposed rulemaking is not to set binding law or policy, but instead to provide interested members of the public an opportunity to comment in a meaningful way on the agency's proposal; LBP-15-15, 81 NRC 598 (2015)

requirement for a notice of proposed rulemaking is to sufficiently and fairly apprise interested parties of the issues involved, rather than to specify every precise proposal that the agency may ultimately adopt; LBP-15-15, 81 NRC 598 (2015)

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suspension request that would have halted final licensing decisions pending action on a petition for rulemaking regarding NRC Staff's review of the potential expedited transfer of spent fuel from pools to dry casks was denied; CLI-15-13, 81 NRC 555 (2015)
where the basis behind the determination not to proceed with a rulemaking was a final agency ruling allowing for judicial review, the earlier advance notice of proposed rulemaking itself was not held to have any binding effect on the public; LBP-15-15, 81 NRC 598 (2015)

RULES

Administrative Procedure Act broadly defines "rule" to include nearly every statement an agency may make; LBP-15-15, 81 NRC 598 (2015)
contention quotes text from a notice of proposed rulemaking, but it never ties the statements from the NOPR to any specific section of the environmental assessment, and thus fails to raise a genuine dispute with the EA; LBP-15-15, 81 NRC 598 (2015)
intervenor was correct to file contentions on a newly adopted rule because, unlike a proposed rule, it now has indisputable legal effect; LBP-15-15, 81 NRC 598 (2015)
See Continued Storage Rule; Regulations; Temporary Storage Rule; Waiver of Rule; Waste Confidence Rule

RULES OF PRACTICE

absent a waiver, contentions that raise a direct or indirect challenge to a Commission regulation are inadmissible; LBP-15-3, 81 NRC 65 (2015); LBP-15-4, 81 NRC 156 (2015); LBP-15-5, 81 NRC 249 (2015)
adequacy of NRC Staff's review of transmission-corridor impacts might be appropriate for the board's consideration sua sponte; CLI-15-1, 81 NRC 1 (2015)
admissible contention is required for grant of a hearing request; LBP-15-17, 81 NRC 753 (2015)
admissible contention must satisfy all six criteria of 10 C.F.R. 2.309(f)(1); LBP-15-5, 81 NRC 249 (2015); LBP-15-6, 81 NRC 314 (2015); LBP-15-17, 81 NRC 753 (2015); LBP-15-18, 81 NRC 793 (2015); LBP-15-20, 81 NRC 829 (2015)
affidavits accompanying motions 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; LBP-15-14, 81 NRC 591 (2015)
although rules do not provide for filing of reply briefs, as a matter of discretion the Commission reviews a reply brief; CLI-15-7, 81 NRC 481 (2015)
amended regulations apply to obligations and disputes that arise after the effective date of the regulation; LBP-15-1, 81 NRC 15 (2015)
amendment of 10 C.F.R. 2.309 in 2012 was to simplify the rules, not fundamentally change the rationale boards use to admit new/amended contentions; LBP-15-11, 81 NRC 401 (2015)
amicus briefs may be filed for matters taken up at Commission discretion or sua sponte; CLI-15-4, 81 NRC 221 (2015); CLI-15-5, 81 NRC 329 (2015); CLI-15-10, 81 NRC 535 (2015)
board has discretion to consider an untimely motion to reopen if the motion presents an exceptionally grave issue; LBP-15-14, 81 NRC 591 (2015)
boards may afford an interested state, local governmental body, and federally recognized Indian tribe that has not been admitted as a party under section 2.309 a reasonable opportunity to participate in a hearing; LBP-15-19, 81 NRC 815 (2015)
boards must request Commission approval to undertake sua sponte review; CLI-15-1, 81 NRC 1 (2015)
Commission affirmed the board's standing ruling, but declined to accept review of challenges to the board's admission of two contentions because petitioner had failed to perfect its appeal by challenging the validity of the board's admissibility rulings regarding other contentions; LBP-15-3, 81 NRC 65 (2015)
Commission may, as a matter of discretion, grant review of a full or partial initial decision, giving due weight to the existence of a substantial question with respect to any of the considerations outlined in 10 C.F.R. 2.341(b)(4); CLI-15-2, 81 NRC 213 (2015)
conditions necessary for grant of a rule waiver are outlined; LBP-15-6, 81 NRC 314 (2015)
contention admissibility requirements seek to ensure that NRC hearings serve to adjudicate genuine, substantive safety and environmental issues placed in contention by qualified intervenors; CLI-15-8, 81 NRC 500 (2015)

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contention admissibility rules are strict by design and exist to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-15-15, 81 NRC 598 (2015); LBP-15-20, 81 NRC 829 (2015)

contention of omission claims that the application fails to contain information on a relevant matter as required by law and provides the supporting reasons for petitioner's belief; LBP-15-5, 81 NRC 249 (2015)

contention rule reflects a deliberate effort to prevent the major adjudicatory delays caused in the past by ill-defined or poorly supported contentions that were admitted for hearing although based on little more than speculation; CLI-15-8, 81 NRC 500 (2015)

contention that final environmental assessment fails to present relevant information in a clear and concise manner that is readily accessible to the public and other reviewers is inadmissible; LBP-15-11, 81 NRC 401 (2015)

contentions must be raised at the earliest possible opportunity; CLI-15-1, 81 NRC 1 (2015)

contentions must meet the six pleading criteria of 10 C.F.R. 2.309(f)(1)(i)-(vi), and failure to meet any of them renders the contention inadmissible; LBP-15-1, 81 NRC 15 (2015); LBP-15-4, 81 NRC 156 (2015); LBP-15-16, 81 NRC 618 (2015)

contentions must provide sufficient information to show a genuine dispute with applicant on a material issue of law or fact; CLI-15-8, 81 NRC 500 (2015)

contentions need to have some reasonably specific factual or legal basis; CLI-15-8, 81 NRC 500 (2015)

contentions proposed after the filing deadline, which would have been allowable under the previous 10 C.F.R. 2.309(f)(2) requirements, will also be allowable under the current section 2.309(c)(1) requirements; LBP-15-11, 81 NRC 401 (2015)

contentions should refer to portions of the application that petitioner disputes along with supporting reasons for each dispute, if petitioner believes that an application fails altogether to contain information required by law, petitioner must identify each failure and provide supporting reasons for petitioner's belief; CLI-15-8, 81 NRC 500 (2015)

crux of the "genuine dispute" prong under 10 C.F.R. 2.309(f)(1)(vi) is the requirement for specificity, that a contention must have more than general allegations; LBP-15-1, 81 NRC 15 (2015)

determination as to whether requests or petitions are filed in a timely manner shall be subject to a reasonableness standard and are not subject to the 30-day deadline applicable to motions by existing parties to add or amend contentions; LBP-15-6, 81 NRC 314 (2015)

eight-factor test that allowed a board to consider new or amended contentions that did not meet the three requirements for admissibility of late-filed contentions available under 10 C.F.R. 2.309(f)(2) is no longer available; LBP-15-1, 81 NRC 15 (2015)

evidence contained in affidavits accompanying motions to reopen must meet admissibility standards; LBP-15-14, 81 NRC 591 (2015)

evidentiary objections made for the first time after briefing has been completed unfairly deprive the petitioners of the opportunity to file the response expressly provided in the NRC's procedural rules; LBP-15-20, 81 NRC 829 (2015)

failure to comply with any of the section 2.309(f)(1) requirements renders a contention inadmissible; LBP-15-19, 81 NRC 815 (2015)

failure to comply with NRC's e-filing requirements without good cause or without obtaining an exemption from the requirements under 10 C.F.R. 2.302(g) can result in rejection of a pleading; LBP-15-4, 81 NRC 156 (2015)

generic environmental analysis is incorporated into NRC regulations, and thus Category 1 generic findings may not be challenged in individual licensing proceedings unless accompanied by a petition for rule waiver; CLI-15-6, 81 NRC 340 (2015)

genuine dispute prong of 10 C.F.R. 2.309(f)(1)(vi) requires a nexus between alleged deficiencies and a material consequence; LBP-15-1, 81 NRC 15 (2015)

good cause for a newly proposed contention exists when information on which it is based was not previously available and is materially different than information previously available and has been submitted in a timely fashion based on the availability of the subsequent information; LBP-15-1, 81 NRC 15 (2015); LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

SUBJECT INDEX

governmental entity is permitted to participate in the proceeding as an interested local governmental body and will thus have the opportunity to support intervenors' already-admitted contention; LBP-15-19, 81 NRC 815 (2015)

hearing is granted where petitioner has proffered at least one admissible contention and established standing; LBP-15-5, 81 NRC 249 (2015)

if a party submits a proposed contention after the initial filing deadline announced in the applicable Federal Register notice for submitting a hearing petition, it will not be entertained absent a determination by the presiding officer that a participant has demonstrated good cause; LBP-15-11, 81 NRC 401 (2015)

if intervenor cannot meet the requirements for filing a contention under the new section 2.309(c)(1), he or she can still take advantage of an extension request if unanticipated events, such as a weather event or unexpected health issues, prevented the participant from filing for a reasonable period of time after the deadline; LBP-15-1, 81 NRC 15 (2015)

in addition to being timely, new contention must satisfy the six-factor admissibility standard; LBP-15-19, 81 NRC 815 (2015)

in determining whether to grant or deny an application for a stay, a board must balance four separate interests; LBP-15-2, 81 NRC 48 (2015)

intervenors may seek a stay of NRC Staff's immediately effective license issuance; LBP-15-3, 81 NRC 65 (2015)

intervention as a matter of discretion is permitted only where at least one petitioner has established standing and at least one admissible contention has been admitted, and petitioner is required to address six factors in its initial petition; CLI-15-14, 81 NRC 729 (2015)

intervention petition must be filed within the time specified in any notice of proposed action; LBP-15-13, 81 NRC 456 (2015)

intervention petition must contain the name, address, and phone number of the requestor or petitioner; LBP-15-20, 81 NRC 829 (2015)

intervention petition must satisfy the six pleading requirements of 10 C.F.R. 2.309(f)(1); LBP-15-13, 81 NRC 456 (2015)

intervention petition must state the nature of petitioner's statutory right to be made a party to the proceeding, nature and extent of petitioner's property, financial, or other interest in the proceeding, and possible effect of any decision or order that may be issued on petitioner's interest; LBP-15-13, 81 NRC 456 (2015)

intervention petitioner may not attack generic NRC requirements or regulations or express generalized grievances about NRC policies; CLI-15-9, 81 NRC 512 (2015)

intervention petitions must be timely, demonstrate standing, and proffer at least one admissible contention; CLI-15-5, 81 NRC 329 (2015); LBP-15-6, 81 NRC 314 (2015); LBP-15-13, 81 NRC 456 (2015)

intervention petitions must set forth with particularity the contentions a petitioner seeks to have litigated in a hearing; CLI-15-8, 81 NRC 500 (2015)

irreparable injury is the most important of the factors for grant or denial of a stay; LBP-15-2, 81 NRC 48 (2015)

issue raised in a contention must fall within the scope of the proceeding and be material to the findings that the NRC must make; CLI-15-8, 81 NRC 500 (2015)

licensing boards are obliged to independently assess petitioners' standing; LBP-15-5, 81 NRC 249 (2015)

litigants may not challenge a rule in NRC adjudicatory proceedings absent a showing of special circumstances; CLI-15-1, 81 NRC 1 (2015)

litigation opportunities available to an entity participating as a local governmental body pursuant to 10 C.F.R. 2.315(c) are discussed; LBP-15-19, 81 NRC 815 (2015)

material difference must exist between information on which a contention is based and information that was previously available, e.g., a difference between the environmental report and the draft EIS or the draft EIS and the final EIS; CLI-15-1, 81 NRC 1 (2015)

most important among the late-filing factors was that the intervenors demonstrate good cause; LBP-15-1, 81 NRC 15 (2015)

motions to reopen must also be accompanied by affidavits that set forth the factual and/or technical bases for movant's claim; LBP-15-14, 81 NRC 591 (2015)

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motions to reopen must be timely, 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; LBP-15-14, 81 NRC 591 (2015)

new or amended contention is considered timely if it is filed within 60 days of the date when the material information first became available to the moving party through service, publication, or any other means; LBP-15-1, 81 NRC 15 (2015)

new or amended contentions must satisfy the substantive contention admissibility standards and failure to meet any of them renders a contention inadmissible; LBP-15-11, 81 NRC 401 (2015); LBP-15-15, 81 NRC 598 (2015)

no rule or regulation of the Commission, or any provision thereof, concerning the licensing of production and utilization facilities is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding; LBP-15-5, 81 NRC 249 (2015)

notification of renewal of source materials license triggers the 5-day filing deadline to apply for a stay of the license; LBP-15-2, 81 NRC 48 (2015)

NRC rules are designed to avoid unfocused inquiry in contested proceedings; CLI-15-1, 81 NRC 1 (2015)

once the deadline for filing petitions to intervene has passed, a party may file new or amended contentions if it is able to demonstrate good cause by meeting the three requirements specified in this section; LBP-15-1, 81 NRC 15 (2015)

only the petitioning party may file reply briefs; CLI-15-7, 81 NRC 481 (2015)

persons not currently a party may file timely petitions to intervene provided that they satisfy the good-cause criteria; LBP-15-6, 81 NRC 314 (2015)

persons who are not parties may file an amicus curiae brief if a matter is taken up by the Commission under 10 C.F.R. 2.341 or sua sponte; CLI-15-1, 81 NRC 1 (2015)

petition for review will be granted at Commission's discretion upon a showing that petitioner has raised a substantial question as to any of the factors of 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-15-1, 81 NRC 1 (2015); CLI-15-9, 81 NRC 512 (2015)

petitioner must demonstrate that a contention asserts an issue of law or fact that is material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-15-20, 81 NRC 829 (2015)

petitioner must demonstrate that a contention of omission is within the scope of the proceeding; LBP-15-5, 81 NRC 249 (2015)

petitioner must explain the basis for each proffered contention by stating alleged facts or expert opinions that support petitioner's position and on which petitioner intends to rely in litigating the contention at hearing; CLI-15-8, 81 NRC 500 (2015); LBP-15-5, 81 NRC 249 (2015)

petitioner must show that a genuine dispute exists on a material issue of law or fact relating to the application; LBP-15-19, 81 NRC 815 (2015)

petitioner must state the nature of right under either the Atomic Energy Act or the National Environmental Policy Act to be made a party, nature and extent of property, financial, or other interest, and possible effect of any decision or order that may be issued in the proceeding on his/her interest; LBP-15-19, 81 NRC 815 (2015)

petitioner's burden on a contention of omission is to identify the omission and the supporting reasons for petitioners' belief that the application fails to contain information on a relevant matter as required by law; LBP-15-5, 81 NRC 249 (2015)

petitioners cannot challenge an NRC regulation without first obtaining a waiver; LBP-15-20, 81 NRC 829 (2015)

petitioners do not need to cite a specific portion of the application to support a contention of omission; LBP-15-5, 81 NRC 249 (2015)

petitioners have not raised an issue material to findings that NRC must make to support final decisions and they are unable to satisfy contention admissibility standards or meet the criteria to reopen a closed record; CLI-15-4, 81 NRC 221 (2015)

petitioners must provide a statement of the alleged facts or expert opinions upon which they rely; LBP-15-5, 81 NRC 249 (2015)

petitioners who choose to wait to raise contentions that could have been raised earlier risk the possibility that there will not be a material difference between the application and NRC Staff's review documents,

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thus rendering any newly proposed contention on previously available information impermissibly late; CLI-15-1, 81 NRC 1 (2015)

pleading requirements calling for a recitation of facts or expert opinion supporting the issue raised are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-15-5, 81 NRC 249 (2015); LBP-15-11, 81 NRC 401 (2015)

“prompt” issuance is not defined as an immediate one in 10 C.F.R. 2.1202(a); LBP-15-2, 81 NRC 48 (2015)

proponents of new or amended contentions are required to demonstrate good cause for their filing, which includes showing that information on which the contention is based is materially different from information previously available; CLI-15-1, 81 NRC 1 (2015)

purpose of 10 C.F.R. 2.309(f)(1) is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-15-5, 81 NRC 249 (2015)

referred rulings or certified questions must raise significant and novel legal or policy issues or issues whose early resolution would materially advance the orderly disposition of the proceeding; CLI-15-1, 81 NRC 1 (2015)

representative of a governmental entity that wishes to participate as a nonparty in the proceeding must identify those contentions on which it will participate in advance of any hearing held; LBP-15-11, 81 NRC 401 (2015)

requirement for brief explanation of the basis for a contention merely requires an explanation of the rationale or theory of the contention; LBP-15-20, 81 NRC 829 (2015)

requirement that a contention refer to specific portions of the application ensures that the board will be able to determine whether the contention is within the scope of the proceeding and that applicant knows which portions of the application it must defend; LBP-15-20, 81 NRC 829 (2015)

requirement that a contention refer to specific portions of the application is satisfied when a commonsense reading of the petition makes abundantly clear which sections of the application petitioners are challenging, even though petitioners do not specifically cite particular sections; LBP-15-20, 81 NRC 829 (2015)

requirements for an admissible contention are provided in 10 C.F.R. 2.309(f)(i)-(vi); CLI-15-8, 81 NRC 500 (2015)

requirements for demonstrating good cause are the same as the requirements for filing late contentions previously available under section 2.309(f)(2)(i)-(iii); LBP-15-1, 81 NRC 15 (2015)

review is granted where petitions for review raise substantial questions of law and procedure; CLI-15-6, 81 NRC 340 (2015)

rules on contention admissibility are strict by design; LBP-15-5, 81 NRC 249 (2015)

scope of the proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-15-20, 81 NRC 829 (2015)

section 2.206 provides a process for stakeholders to advance concerns and obtain full or partial relief, or written reasons why the requested relief is not warranted; LBP-15-4, 81 NRC 156 (2015)

section 2.309(c)(1)(iii) does not stipulate what is considered timely, and the board looks to Commission precedent; LBP-15-11, 81 NRC 401 (2015)

standard for discretionary review is described; CLI-15-7, 81 NRC 481 (2015)

state government may file an amicus brief within the time allowed to the party whose position the brief will support

state intervenor provided good cause for its late E-filing submission because the State submitted its petition to NRC by e-mail before the deadline lapsed and the delay was purely a matter of obtaining digital credentials for the system, not an attempt to gain extra time to prepare a pleading or otherwise to flout NRC’s procedural requirements; LBP-15-4, 81 NRC 156 (2015)

stay movant has the burden of persuasion on the four factors of 10 C.F.R. 2.1213(d); LBP-15-2, 81 NRC 48 (2015)

sua sponte review authority shall be used only in extraordinary circumstances; CLI-15-1, 81 NRC 1 (2015)

timeliness of an initial hearing petition in different situations is defined as being filed between 20 and 60 days after certain specified events; LBP-15-11, 81 NRC 401 (2015)

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timing of license issuance is informed by instruction for NRC Staff to promptly issue its approval or denial of the application consistent with its findings, and despite the pendency of a hearing; LBP-15-2, 81 NRC 48 (2015)

to gain the admission of a new or amended contention, a party must meet the requirements of 10 C.F.R. 2.309(c) and (f); LBP-15-16, 81 NRC 618 (2015)

to participate in an NRC licensing proceeding, petitioner must establish standing to intervene; LBP-15-13, 81 NRC 456 (2015); LBP-15-19, 81 NRC 815 (2015)

two issues in one contention are best evaluated as separate contentions; LBP-15-5, 81 NRC 249 (2015)

unless the presiding officer otherwise orders, applicant or the proponent of an order has the burden of proof; LBP-15-2, 81 NRC 48 (2015)

waiver of rule or regulation may be obtained upon a showing that applying provision at issue would not serve the purposes for which the rule or regulation was adopted; LBP-15-3, 81 NRC 65 (2015)

when a contention is considered to be timely filed is not specified in 10 C.F.R. 2.309(c)(1)(iii); LBP-15-15, 81 NRC 598 (2015)

when petitioner seeks leave to intervene after the initial deadline for the filing of contentions, it must demonstrate good cause for its belated filing; LBP-15-19, 81 NRC 815 (2015)

SAFE SHUTDOWN SYSTEMS

ability of a facility to shut down safely following a potential earthquake is a current operating issue, and is not unique to whether licenses should be renewed; LBP-15-6, 81 NRC 314 (2015)

contention that operating license should not be renewed unless and until applicant establishes that the plant can withstand and be safely shut down following an earthquake is not within the scope of a license renewal proceeding; LBP-15-6, 81 NRC 314 (2015)

under its certified design, the Economic Simplified Boiling Water Reactor could maintain circulation long enough to permit safe shutdown of the reactor even if it were to lose offsite power and all of its backup generators failed to operate; LBP-15-5, 81 NRC 249 (2015)

SAFETY

Congress expressly recognized and impliedly approved NRC's regulatory scheme and practice under which the safety of interim storage of high-level wastes at commercial nuclear power reactor sites has been determined separately from the safety of government-owned permanent storage facilities that have not yet been established; CLI-15-4, 81 NRC 221 (2015)

NRC's long-continued regulatory practice of issuing operating licenses with an implied finding of reasonable assurance that safe permanent disposal of spent nuclear fuel can be available when needed is in accord with the intent of Congress underlying the Atomic Energy Act and Energy Reorganization Act; CLI-15-4, 81 NRC 221 (2015)

stringent safety requirements apply to the construction and operation of reactor spent fuel pools and independent spent fuel storage installations; CLI-15-4, 81 NRC 221 (2015)

See also Health and Safety

SAFETY ANALYSIS

if NRC does not approve continued operation based on licensee's safety analysis, licensee must request an opportunity to modify the reactor pressure vessel or related reactor systems to reduce the potential for failure of the reactor vessel due to pressurized thermal shock events; LBP-15-17, 81 NRC 753 (2015)

if the reference values projected at specific areas of the reactor pressure vessel for the end of life of the plant surpass the current screening criteria, licensee must submit a safety analysis and obtain NRC approval to continue to operate; LBP-15-17, 81 NRC 753 (2015)

independent assessment of the safety aspects of the combined license application is required; CLI-15-13, 81 NRC 555 (2015)

license amendments are not contingent upon any additional safety determination regarding spent fuel storage under the Atomic Energy Act; CLI-15-4, 81 NRC 221 (2015)

licensees have the option of demonstrating that values of Charpy upper-shelf energy below 50 ft-lb will provide margins of safety against fracture equivalent to those required by Appendix G of Section XI of the ASME BPV Code; LBP-15-20, 81 NRC 829 (2015)

petitioners' contention challenges the sufficiency of the equivalent margins analysis to provide reasonable assurance of reactor safety and is therefore within the scope of the proceeding; LBP-15-20, 81 NRC 829 (2015)

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when an NRC regulation permits use of a particular analysis, a contention asserting that a different analysis or technique should be used is inadmissible because it indirectly attacks NRC's regulations; LBP-15-20, 81 NRC 829 (2015)

SAFETY CULTURE

contention challenging applicant's safety culture and claiming to rely on NRC Staff's Safety Evaluation Report was inadmissible because the SER did not discuss safety culture as a general matter and could not serve as a reasonably apparent foundation for a safety culture contention; LBP-15-11, 81 NRC 401 (2015)

such issues are outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

SAFETY EVALUATION REPORT

contention challenging applicant's safety culture and claiming to rely on NRC Staff's Safety Evaluation Report was inadmissible because the SER did not discuss safety culture as a general matter and could not serve as a reasonably apparent foundation for a safety culture contention; LBP-15-11, 81 NRC 401 (2015)

SAFETY ISSUES

adjudicatory hearings in individual license renewal proceedings will share the same scope of issues as NRC Staff review, for NRC's hearing process, like NRC Staff's review, necessarily examines only the questions NRC safety rules make pertinent; LBP-15-5, 81 NRC 249 (2015)

although intervenors disagree with applicant's opportunistic inspection strategy for managing rebar corrosion, they merely assert, and do not plausibly explain, how applicant's approach will lead to a material safety impact; LBP-15-1, 81 NRC 15 (2015)

applicant is required to show that safety features will fulfill their intended function, not that every structure will maintain its current licensing basis throughout the renewal period; LBP-15-5, 81 NRC 249 (2015)

Commission chose to review intervenors' motion along with similar motions in other proceedings and associated petitions to suspend reactor licensing pending issuance of waste confidence safety findings; CLI-15-6, 81 NRC 340 (2015)

concerns about current or ongoing safety deficiencies can be raised as a petition for enforcement action; CLI-15-8, 81 NRC 500 (2015)

contention about a matter not covered by a specific rule need only allege that the matter poses a significant safety problem; LBP-15-17, 81 NRC 753 (2015); LBP-15-20, 81 NRC 829 (2015)

court directed NRC to determine whether there is reasonable assurance that an offsite storage solution will be available by the end of a reactor's license term], and if not, whether there is reasonable assurance that the fuel can be stored safely at the sites beyond those dates; CLI-15-4, 81 NRC 221 (2015)

directing NRC Staff to investigate a safety issue that the board could not reach through the adjudicatory process may put the Commission in a position, after receiving views of applicant if it desired, to assure itself about the significance, or lack thereof, of the shield building cracking issues raised by intervenors, and to direct such followup proceedings, if any, as it might deem appropriate; LBP-15-1, 81 NRC 15 (2015)

if there were any doubt over the intent of Congress not to require a safety finding on spent fuel disposal, it was laid to rest by enactment of the Energy Reorganization Act of 1974; CLI-15-4, 81 NRC 221 (2015)

issue that does not involve aging management is outside the scope of the license renewal proceeding; LBP-15-5, 81 NRC 249 (2015)

issues that the Commission must consider in the mandatory portion of a combined license proceeding are outlined; CLI-15-13, 81 NRC 555 (2015)

licensing boards can refer potentially significant safety issues that cannot be addressed through the adjudicatory process to NRC Staff for review; LBP-15-1, 81 NRC 15 (2015)

NRC Staff review of combined license application relative to regulatory actions that the NRC has taken in response to lessons learned from the Fukushima Dai-ichi accident is discussed; CLI-15-13, 81 NRC 555 (2015)

NRC Staff's safety analysis and environmental analysis occur separately, and intervenors are expected to raise safety challenges in response to the safety reports and environmental challenges in response to the environmental statements; LBP-15-11, 81 NRC 401 (2015)

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pending tax litigation would not have a significant implication for public health and safety and, to the extent the claim is viable, it would be better handled through a petition for enforcement action; LBP-15-15, 81 NRC 598 (2015)

protection of regulatory treatment of non-safety systems equipment from external hazards at the site is discussed; CLI-15-13, 81 NRC 555 (2015)

severe accident mitigation alternatives analysis is conducted pursuant to the National Environmental Policy Act, and thus is an environmental issue, not a safety issue; LBP-15-1, 81 NRC 15 (2015)

soil-structure interaction analysis is discussed; CLI-15-13, 81 NRC 555 (2015)

unless the safety findings prescribed by the Atomic Energy Act and the regulations can be made, the reactor does not obtain a license, no matter how badly it is needed; CLI-15-4, 81 NRC 221 (2015)

See also Generic Safety Issues

SAFETY-RELATED

all structures and components that are important to safety must be maintained to manage the effects of aging, but most systems, structures, and components are adequately maintained under existing programs as required by the Maintenance Rule; CLI-15-6, 81 NRC 340 (2015)

focus of the license renewal regulations in 10 C.F.R. Part 54 is to ensure that licensee can manage the effects of aging on certain long-lived, passive components that are important to safety; CLI-15-6, 81 NRC 340 (2015)

inspection to determine effects of wet or underwater conditions on underground safety-related electrical cables is discussed; DD-15-1, 81 NRC 193 (2015)

plants must employ an ultimate heat sink to transfer heat from structures, systems, and components that are important to safety; LBP-15-13, 81 NRC 456 (2015)

safety significance of a structure, system, or component is defined in terms of its safety-related functions, and within the scope of license renewal are included those SSCs whose failure could prevent satisfactory accomplishment of the safety-related function; CLI-15-6, 81 NRC 340 (2015)

SAFETY REVIEW

aging management review is required for components that function without moving parts and without a change in configuration or properties, and includes a non-exhaustive list of components that either do or do not fit this description; CLI-15-6, 81 NRC 340 (2015)

applicant for a renewed license must first identify all structures, systems, and components that serve a function relating directly or indirectly to safety, as defined by this regulation; CLI-15-6, 81 NRC 340 (2015)

contention fails because it contests NRC Staff's safety review rather than the license renewal application; LBP-15-15, 81 NRC 598 (2015)

goal of NRC's license renewal safety review is to ensure that licensee can successfully manage the detrimental effects of aging; CLI-15-6, 81 NRC 340 (2015)

license renewal safety review is limited to licensee's management of aging for certain systems, structures, and components, and review of time-limited aging analyses; LBP-15-5, 81 NRC 249 (2015); LBP-15-6, 81 NRC 314 (2015)

NRC's AEA safety review under Part 54 does not compromise or limit NEPA; LBP-15-5, 81 NRC 249 (2015)

proximity of nuclear power plant site to the Canadian border is considered in the contexts of environmental and safety reviews; CLI-15-13, 81 NRC 555 (2015)

SALTWATER INTRUSION

contention alleging that environmental assessment has not adequately addressed environmental impacts associated with saltwater intrusion arising from saline water migration from the plant into surrounding waters, and applicant's use of aquifer withdrawals to lower salinity and temperature is admissible; LBP-15-13, 81 NRC 456 (2015)

SCHEDULING

ASTM Standard E 185 anticipates that during the course of a nuclear power plant's life the surveillance capsule withdrawal schedule may need to be revised and allows and provides for such changes; LBP-15-20, 81 NRC 829 (2015)

if a board issues a scheduling order before the effective date of the final rule that incorporates 10 C.F.R. 2.336(d), which currently requires parties to update their disclosures every 14 days, that obligation

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would change to every month on a day specified by the board, unless the parties agree otherwise, once the effective date of the rule is reached; LBP-15-1, 81 NRC 15 (2015)

NRC must preapprove the schedule for removing material samples from the reactor vessel; LBP-15-17, 81 NRC 753 (2015)

SECURITY

“controlled access area” is any temporarily or permanently established area that is clearly demarcated, access to which is controlled, and which affords isolation of the material or persons within it; CLI-15-9, 81 NRC 512 (2015)

whether a foreign entity has the ability to restrict or inhibit compliance with security or other regulations of the Atomic Energy Commission is of greatest significance to a foreign ownership, control, or domination review; CLI-15-7, 81 NRC 481 (2015)

SECURITY PROGRAM

licensee is obliged to give local union notice and an opportunity to bargain over the effects of its decision to implement changes in the terms and conditions of the employees’ employment regarding behavioral observations of security concerns; CLI-15-16, 81 NRC 810 (2015)

SEISMIC ANALYSIS

as part of the NRC post-Fukushima lessons-learned activities, NRC is requiring all licensees to reevaluate seismic hazards at their sites, and to this end, issued a request for information; DD-15-1, 81 NRC 193 (2015)

contention that final safety analysis report is deficient because it does not include information provided in applicant’s seismic evaluation process report is rejected; LBP-15-14, 81 NRC 591 (2015)

request for information instructed all licensees to reevaluate seismic hazards at their sites using updated seismic hazard information, present-day guidance and methodologies, and a risk evaluation; DD-15-6, 81 NRC 884 (2015)

See also Earthquakes

SEISMIC DESIGN

NRC issued an order on station blackout mitigation strategies requiring mitigation strategies to protect against, among many other hazards, postulated seismic events; DD-15-1, 81 NRC 193 (2015)

SETTLEMENT NEGOTIATIONS

when a filing deadline is approaching, notwithstanding that an attorney is engaged in good-faith settlement discussions, prudence should compel the attorney to take all actions that are necessary to ensure the deadline will be met in the event that settlement discussions are unsuccessful; LBP-15-4, 81 NRC 156 (2015)

SEVERE ACCIDENT MITIGATION ALTERNATIVES

SAMAs fall within Category 2 and must therefore be addressed on a site-specific basis; LBP-15-5, 81 NRC 249 (2015)

SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS

admissibility of contention that common-mode failures and/or mutually exacerbating catastrophes are entitled SAMA analysis is decided; LBP-15-5, 81 NRC 249 (2015)

admissibility of contention that SAMA analysis fails to evaluate the impact that a severe accident at one unit would have on the operation of a proposed nearby unit is decided; LBP-15-5, 81 NRC 249 (2015)

analysis is conducted pursuant to the National Environmental Policy Act, and thus is an environmental issue, not a safety issue; LBP-15-1, 81 NRC 15 (2015)

analysis issues can present difficult judgment calls at the contention admission stage; LBP-15-5, 81 NRC 249 (2015)

analysis must be considered as part of the environmental report and, ultimately, as part of NRC Staff’s supplemental environmental impact statement for a power reactor license renewal; LBP-15-5, 81 NRC 249 (2015)

because the probability of a spent fuel pool accident causing significant harm is remote, there is no need for applicants to assess spent fuel pool accident mitigation alternatives as part of license renewal; LBP-15-5, 81 NRC 249 (2015)

Commission requests briefing from NRC Staff on the circumstances, if any, NRC Staff would judge a potentially cost-beneficial mitigation alternative to warrant further NRC consideration outside of the license renewal review, either via a backfit analysis or as part of another process; CLI-15-3, 81 NRC 217 (2015)

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Commission requests briefing from NRC Staff on the level of uncertainty that NRC Staff considers acceptable for the implementation cost portion of the cost-benefit analysis, and why; CLI-15-3, 81 NRC 217 (2015)

Commission requests briefing from NRC Staff on whether it has a process in place to follow up with licensee to determine which potentially cost-beneficial mitigation alternatives ultimately were found by licensee to be cost-beneficial, if any, and which alternatives, if any, licensee implemented; CLI-15-3, 81 NRC 217 (2015)

contention is within the scope of license renewal proceeding because NRC regulations require that the environmental report include a SAMA analysis; LBP-15-5, 81 NRC 249 (2015)

contention that applicant's SAMA analysis is significantly flawed because of the use of inaccurate factual assumptions about population is admissible; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report does not satisfy NEPA because it does not consider a range of mitigation measures to mitigate the risk of catastrophic fires in densely packed, closed-frame spent fuel storage pools is decided; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report fails to accurately and thoroughly conduct SAMA analysis to design vulnerability of GE Mark I boiling water reactor pressure suppression containment system and environmental consequences of a to-be-anticipated severe accident post-Fukushima Daiichi fails to present a genuine material dispute; LBP-15-5, 81 NRC 249 (2015)

contention that population used for analysis might underestimate the exposed population in a severe accident and, in turn, underestimate the benefit achieved in implementing a SAMA analysis is admissible; LBP-15-5, 81 NRC 249 (2015)

environmental report for license renewal must consider SAMAs for all plants that have not considered such alternatives; LBP-15-5, 81 NRC 249 (2015)

inadequacy in the SAMA analysis is material if license renewal applicant failed to consider complete information without justifying why particular information was omitted; LBP-15-5, 81 NRC 249 (2015)

it must be genuinely plausible that revising the severe accident mitigation alternatives analysis would change the outcome so that one or more of the SAMA candidates that applicant evaluated and rejected would become cost-beneficial; LBP-15-5, 81 NRC 249 (2015)

only if the probability of a severe accident is so small as to be effectively zero could NRC Staff dispense with the consequences portion of the analysis; CLI-15-6, 81 NRC 340 (2015)

parties are directed to provide further briefing on questions relating to severe accident decontamination time values and costs used in the SAMA analysis; CLI-15-2, 81 NRC 213 (2015)

petitioner need not rerun applicant's own cost-benefit calculations, but must do more than merely suggest that additional factors be evaluated or that different analytical techniques be used; LBP-15-5, 81 NRC 249 (2015)

petitioner's failure to address applicant's supplemental economic analyses, demonstrate specific knowledge of the analysis, and not indicate, even broadly that the SAMA economic cost-benefit conclusions are not sufficiently conservative renders a contention inadmissible; LBP-15-5, 81 NRC 249 (2015)

petitioners must provide site-specific support to show that the SAMA analysis is unreasonable; LBP-15-5, 81 NRC 249 (2015)

possible changes, such as improvements in hardware, training, or procedures, that could cost-effectively mitigate the environmental impacts that would otherwise flow from a potential severe accident are identified and addressed; LBP-15-5, 81 NRC 249 (2015)

severe accidents in the spent fuel pools are Category 1 issues that do not need to be included in the SAMA analysis; LBP-15-5, 81 NRC 249 (2015)

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 SAMA candidates evaluated, no purpose would be served to further refine the SAMA analysis; LBP-15-5, 81 NRC 249 (2015)

See also Consideration of Alternatives

SHELTERING

lack of detail for emergency sheltering option is not significant because size of sheltering population is very small; LBP-15-18, 81 NRC 793 (2015)

SHIELD BUILDING

because the building functions as a radiation and biological shield, failure or collapse of the shield building due to cracking propagation could lead to health and safety impacts and thus petitioner's

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contention concerns a subject matter that could impact the grant or denial of a pending license application; LBP-15-1, 81 NRC 15 (2015)

directing NRC Staff to investigate a safety issue that the board could not reach through the adjudicatory process may put the Commission in a position, after receiving views of applicant if it desired, to assure itself about the significance, or lack thereof, of the shield building cracking issues raised by intervenors, and to direct such followup proceedings, if any, as it might deem appropriate; LBP-15-1, 81 NRC 15 (2015)

intervenor must do more than point to issues with the shield building, but must also indicate what is wrong with applicant's response and its amended inspection program and why intervenor believes the particular inspection program makes the license renewal application unacceptable; LBP-15-1, 81 NRC 15 (2015)

intervenors' allegations do not plausibly indicate that the shield building would lose its functionality under the proposed aging management plan; LBP-15-1, 81 NRC 15 (2015)

SHUTDOWN

all nuclear power facilities that are shut down permanently or indefinitely are exempted from participating in the ERDS program; LBP-15-4, 81 NRC 156 (2015)

all Part 50 licensees must meet emergency planning requirements, regardless of whether the facility is operating or has been permanently shut down and defueled; LBP-15-18, 81 NRC 793 (2015)

"exigent circumstances" determination seems compelled by the fact that violation of the technical specifications limit for the plant, whatever the cause of the temperature increase, requires a dual-unit shutdown; LBP-15-13, 81 NRC 456 (2015)

licensee must provide certifications when a nuclear power station has permanently ceased power operations and all fuel has been permanently removed from the reactor vessel and placed in the spent fuel pool; DD-15-1, 81 NRC 193 (2015)

licensee of a permanently shutdown reactor is never required to activate the ERDS link, and thus it follows that such a licensee need not maintain the ERDS link; LBP-15-4, 81 NRC 156 (2015)

nuclear power facility has shut down permanently within the meaning of 10 C.F.R. Part 50, Appendix E, § VI.2 when it has permanently ceased reactor operations, and permanently removed fuel from the reactor vessel, as those terms are defined in 10 C.F.R. 50.2; LBP-15-4, 81 NRC 156 (2015)

request that NRC order the immediate shutdown of all nuclear power reactors that are known to be located on or near an earthquake fault line is denied; DD-15-6, 81 NRC 884 (2015)

where the Commission finds that an emergency situation exists, in that failure to act in a timely way would result in derating or shutdown of a nuclear power plant, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment; LBP-15-13, 81 NRC 456 (2015)

See also Safe Shutdown Systems

SITE CHARACTERIZATION

admissibility of contention that NRC Staff must conduct a new baseline groundwater characterization study of the license renewal area rather than relying on the baseline study conducted during the original license application is decided; LBP-15-11, 81 NRC 401 (2015)

applicant for a uranium ISR license is required to provide data from a groundwater monitoring program that are sufficient to establish a precensuring site characterization baseline for assessing the potential effects of facility operations on local groundwater quality; LBP-15-3, 81 NRC 65 (2015)

applicant must provide complete baseline data on a milling site and its environs; LBP-15-16, 81 NRC 618 (2015)

applicant's monitoring program for establishing existing site characterization baseline values for certain site groundwater constituents prior to issuance of a source materials license for ISR facility construction and operation need not, to comply with NEPA and NRC's Part 51 implementing regulations, be conducted so as to also provide background information needed to set Appendix A, Criterion 5B groundwater protection standards; LBP-15-3, 81 NRC 65 (2015)

applicants referencing a certified design must provide sufficient information for NRC Staff to determine whether the site's characteristics fall within the design's parameters; CLI-15-13, 81 NRC 555 (2015)

contention alleging that final supplemental environmental impact statement fails to provide an adequate baseline groundwater characterization or demonstrate that groundwater samples were collected in a

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scientifically defensible manner, using proper sampling methodologies is decided; LBP-15-16, 81 NRC 618 (2015)

if applicant did not pursue an early site permit, all relevant site characteristics, including site geology, hydrology, seismology, and man-made hazards, as well as potential environmental impacts of the project, were studied as part of NRC Staff's combined license review and are within the scope of the Commission decision; CLI-15-13, 81 NRC 555 (2015)

nothing in 10 C.F.R. Part 40, Appendix A, Criterion 5B precludes an inquiry, based on a well-pleaded contention, into whether the particular measures used in applicant's precertification program were adequate to provide the necessary information to characterize properly the environmental impacts of employing an ISR mining process in the aquifers below a proposed site; LBP-15-3, 81 NRC 65 (2015)

site-specific data to confirm proper baseline quality values, and confirm whether existing rock units provide adequate confinement cannot be collected until an in situ leach well field has been installed; LBP-15-3, 81 NRC 65 (2015)

soil-structure interaction analysis is discussed; CLI-15-13, 81 NRC 555 (2015)

waiting until after licensing, but before mining operations begin, to establish definitively the groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology, given the sequential development of in situ leach well fields; LBP-15-3, 81 NRC 65 (2015)

SITE RESTORATION

admissibility of contention that environmental assessment fails to adequately describe and analyze aquifer restoration goals in light of new standards for determining alternative control limits is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental documents and associated monitoring values and restoration goals rely on baseline data calculations that are inadequate and unacceptable is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that environmental documents lack an adequate description of adequate financial assurances sufficient to pay the costs of restoration and long-term monitoring of up to 30 years is decided; LBP-15-15, 81 NRC 598 (2015)

admissibility of contention that final environmental assessment failed to conduct the required hard look at impacts of the proposed mine associated with restoration standards and difficulty and cost in achieving them and the use of the alternative standards permitted under the proposed rules is decided; LBP-15-15, 81 NRC 598 (2015)

bounding analysis provided in the final supplemental environmental impact statement, as supplemented in the record, provides sufficient information about a reasonable range of hazardous constituent concentration values associated with potential post-operational alternate concentration limits so as to provide an appropriate NEPA assessment of the environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits; LBP-15-3, 81 NRC 65 (2015)

contention that FSEIS fails to analyze environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits is decided; LBP-15-3, 81 NRC 65 (2015)

EPA drinking water maximum contaminant levels continue to be an accepted groundwater restoration standard; LBP-15-3, 81 NRC 65 (2015)

no in situ recovery facility has ever requested that all OZ aquifer groundwater hazardous constituents be restored to CAB concentrations or Criterion 5B(5)(b) MCLs, as those are currently defined; LBP-15-3, 81 NRC 65 (2015)

"primary groundwater restoration" is to return the constituent to background levels; LBP-15-3, 81 NRC 65 (2015)

requirements for groundwater restoration standards for ISR mining operations are set forth in 10 C.F.R. Part 40, Appendix A, Criterion 5B(5); LBP-15-3, 81 NRC 65 (2015)

restoration to an alternate concentration limit is permitted only when restoration to a primary or the secondary Table 5C standard is not practically achievable; LBP-15-3, 81 NRC 65 (2015)

"secondary groundwater restoration" is restoration of constituent levels to the drinking water limits enumerated in Appendix A, Table 5C; LBP-15-3, 81 NRC 65 (2015)

SOURCE MATERIAL

uranium being extracted through the ISL process is defined as "source material"; LBP-15-16, 81 NRC 618 (2015)

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SOURCE MATERIALS LICENSES

applicant for a license to possess and use source and AEA §11e(2) byproduct material for the purpose of in situ uranium recovery must submit an environmental report with its application; LBP-15-3, 81 NRC 65 (2015)

issuing a license to possess and use source material to a uranium milling facility is identified as a major federal action; LBP-15-16, 81 NRC 618 (2015)

notification of renewal of source materials license triggers the 5-day filing deadline to apply for a stay of the license; LBP-15-2, 81 NRC 48 (2015)

NRC Staff must prepare an environmental impact statement in connection with a license to possess and use source and AEA §11e(2) byproduct material for the purpose of in situ uranium recovery; LBP-15-3, 81 NRC 65 (2015)

NRC Staff must take steps necessary to identify the presence of historic properties within the area encompassed by the source materials license renewal application; LBP-15-2, 81 NRC 48 (2015)

timing of source materials license renewal application enables licensee to operate under NRC's timely renewal provision until the agency renews the license; LBP-15-2, 81 NRC 48 (2015)

when licensee has made timely and sufficient application for a license renewal, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency; LBP-15-2, 81 NRC 48 (2015); LBP-15-11, 81 NRC 401 (2015)

SPECIAL CIRCUMSTANCES

Commission approval of a rule waiver could allow a contention on a Category 1 issue to proceed where special circumstances exist; CLI-15-6, 81 NRC 340 (2015)

party may petition the Commission for permission to challenge a rule, but that party must make a showing of special circumstances; LBP-15-5, 81 NRC 249 (2015)

special circumstances required to obtain a rule waiver have been described as a prima facie showing that application of a rule in a particular way would not serve the purposes for which the rule was adopted; LBP-15-5, 81 NRC 249 (2015)

to obtain waiver of a rule, the allegation of special circumstances must be set forth with particularity and supported by an affidavit or other proof; LBP-15-5, 81 NRC 249 (2015)

where special circumstances make a generic rule inapplicable to a particular proceeding, participant may petition for a rule waiver or exception; CLI-15-6, 81 NRC 340 (2015)

SPECIAL NUCLEAR MATERIALS

accuracy is an integral component of the portion of the regulatory requirement that addresses item presence verification; CLI-15-9, 81 NRC 512 (2015)

basis for NRC authority to regulate the use of special nuclear material in facilities like nuclear power reactors is established; CLI-15-4, 81 NRC 221 (2015)

"material access area" is any location which contains special nuclear material, within a vault or a building, the roof, walls, and floor of which constitute a physical barrier; CLI-15-9, 81 NRC 512 (2015)

meaning of "verify" in the context of item presence verification is discussed; CLI-15-9, 81 NRC 512 (2015)

special nuclear material "item" is any discrete quantity or container of special nuclear material or source material, not undergoing processing, having a unique identity and also having an assigned element and isotope quantity; CLI-15-9, 81 NRC 512 (2015)

"tamper-safing" refers to use of devices on containers or vaults in a manner and at a time that ensures a clear indication of any violation of the integrity of previously made measurements of special nuclear material within the container or vault; CLI-15-9, 81 NRC 512 (2015)

SPENT FUEL COOLING SYSTEM

NRC imposed requirements to provide makeup water independent of offsite power and the normal emergency alternating current power sources to maintain or restore spent fuel pool cooling capability in the event of an accident; DD-15-1, 81 NRC 193 (2015)

SPENT FUEL MANAGEMENT

admissibility of contention that environmental report lacks site-specific safety and environmental findings regarding storage and disposal of spent fuel is decided; LBP-15-5, 81 NRC 249 (2015)

contention that does not dispute any specific portion of applicant's fuel handling accident analysis is inadmissible for lack of a genuine dispute; LBP-15-18, 81 NRC 793 (2015)

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licensee must provide certifications when a nuclear power station has permanently ceased power operations and all fuel has been permanently removed from the reactor vessel and placed in the spent fuel pool; DD-15-1, 81 NRC 193 (2015)
licensees must submit for NRC approval their plans to manage spent fuel after the permanent cessation of reactor operation; CLI-15-4, 81 NRC 221 (2015)
structural integrity of GE Mark I boiling water reactor spent fuel pools and spent fuel management in dry storage casks are discussed; DD-15-1, 81 NRC 193 (2015)

SPENT FUEL POOL EXPANSION

petitioners challenged NRC's approval of operating license amendments to allow for the use of higher-density spent-fuel-storage racks in the reactors' spent fuel pools; CLI-15-4, 81 NRC 221 (2015)

SPENT FUEL POOLS

because the probability of a spent fuel pool accident causing significant harm is remote, there is no need for applicants to assess spent fuel pool accident mitigation alternatives as part of license renewal; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report does not satisfy NEPA because it does not consider a range of mitigation measures to mitigate the risk of catastrophic fires in densely packed, closed-frame spent fuel storage pools is decided; LBP-15-5, 81 NRC 249 (2015)

contention that environmental report is inadequate insofar as it does not consider the risk of spent fuel pool fires is inadmissible; LBP-15-5, 81 NRC 249 (2015)

generic environmental impact statement for spent fuel pools is not limited to discussing only normal operations, but also discusses potential accidents and other nonroutine events, and thus need not be included in the severe accident mitigation alternatives analysis for license renewal; LBP-15-5, 81 NRC 249 (2015)

in its Waste Confidence Decision, NRC failed to consider environmental impacts of a repository never becoming available, its analysis of spent fuel pool leaks was not forward-looking, and it had not sufficiently considered the consequences of spent fuel pool fires; CLI-15-4, 81 NRC 221 (2015)

post-Fukushima spent fuel pool concerns are being addressed through rulemaking on mitigation of beyond-design-basis events; DD-15-1, 81 NRC 193 (2015)

request for additional instrumentation for all Mark I spent fuel storage pools has been addressed through an order modifying licenses with regard to reliable spent fuel pool instrumentation; DD-15-1, 81 NRC 193 (2015)

severe accidents in the spent fuel pools are Category 1 issues that do not need to be included in the severe accident mitigation alternatives analysis; LBP-15-5, 81 NRC 249 (2015)

stringent safety requirements apply to the construction and operation of reactor spent fuel pools and independent spent fuel storage installations; CLI-15-4, 81 NRC 221 (2015)

structural integrity of GE Mark I boiling water reactor spent fuel pools and spent fuel management in dry storage casks are discussed; DD-15-1, 81 NRC 193 (2015)

suspension request that would have halted final licensing decisions pending action on a petition for rulemaking regarding NRC Staff's review of the potential expedited transfer of spent fuel from pools to dry casks was denied; CLI-15-13, 81 NRC 555 (2015)

SPENT FUEL STORAGE

assumptions used in the analysis of impacts of continued storage of spent fuel are sufficiently conservative to bound the impacts such that variances that may occur between sites are unlikely to result in environmental impact determinations greater than those presented in the continued storage generic environmental impact statement; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

Commission adopted a generic environmental impact statement to identify and analyze the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-12, 81 NRC 452 (2015)

Commission denied petition to supplement and declined to admit "placeholder" contention; CLI-15-13, 81 NRC 555 (2015)

Commission directed all licensing boards to reject pending waste confidence contentions that had been held in abeyance, because the generic impact determinations have been the subject of extensive public participation in the rulemaking process, and therefore are excluded from litigation in individual proceedings; LBP-15-1, 81 NRC 15 (2015); LBP-15-5, 81 NRC 249 (2015)

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Commission directed that all spent fuel storage contentions be held in abeyance; CLI-15-6, 81 NRC 340 (2015); LBP-15-1, 81 NRC 15 (2015)

Commission exercised its inherent supervisory authority over agency adjudications to review motion and petition addressing the spent fuel storage issue; LBP-15-1, 81 NRC 15 (2015)

Commission exercised its supervisory authority and dismissed proposed waste confidence safety contention and denied suspension petitions; CLI-15-13, 81 NRC 555 (2015)

concurrent with approval of the final Continued Storage Rule and companion Generic Environmental Impact Statement, the Commission lifted the suspension on final licensing decisions and directed that the proposed spent fuel storage contentions be dismissed; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

Congress expressly recognized and impliedly approved NRC's regulatory scheme and practice under which the safety of interim storage of high-level wastes at commercial nuclear power reactor sites has been determined separately from the safety of government-owned permanent storage facilities that have not yet been established; CLI-15-4, 81 NRC 221 (2015)

contention that supplementation of the environmental impact statement is necessary to allow members of the public to lodge placeholder contentions challenging Commission reliance, in individual licensing proceedings, on the continued storage GEIS and Continued Storage Rule is inadmissible; CLI-15-10, 81 NRC 535 (2015)

Continued Storage Rule and supporting generic environmental impact statement to assess the environmental impacts of spent fuel storage after the end of a reactor's license term were approved; CLI-15-10, 81 NRC 535 (2015)

Continued Storage Rule makes generic safety findings concerning feasibility and capacity of spent fuel disposal; LBP-15-9, 81 NRC 396 (2015)

court directed NRC to determine whether there is reasonable assurance that an offsite storage solution will be available by the end of a reactor's license term, and if not, whether there is reasonable assurance that the fuel can be stored safely at the sites beyond those dates; CLI-15-4, 81 NRC 221 (2015)

court recognized the long-term nature of the concerns associated with spent fuel storage and disposal when it declined to vacate the license amendments that were the subject of the case, noting that doing so would effectively shut down the plants; CLI-15-4, 81 NRC 221 (2015)

"deemed incorporated" function of 10 C.F.R. 51.23(b) provides administrative efficiency by adding the environmental impacts of continued storage to site-specific environmental impact statements without additional work by the Staff; CLI-15-10, 81 NRC 535 (2015)

environmental impacts of at-reactor and away-from-reactor storage of spent fuel are considered for 60 years after the end of a reactor's licensed life for operation, an additional 100 years of storage, and the indefinite storage of spent nuclear fuel and incorporated into site-specific environmental impact statements; CLI-15-10, 81 NRC 535 (2015)

environmental impacts of continued storage have been incorporated into the environmental impact statements at issue in the proceedings by operation of law; CLI-15-10, 81 NRC 535 (2015)

following adoption of a revised Continued Storage Rule, boards were ordered to reject continued storage contentions pending before them, except contentions unresolved by the Continued Storage Rule; CLI-15-6, 81 NRC 340 (2015)

general license may be granted to all Part 50 and Part 52 reactor licensees to store spent fuel in an independent spent fuel storage installation; CLI-15-4, 81 NRC 221 (2015)

general scope of NRC's authority is established in Atomic Energy Act § 161, but it does not discuss spent fuel disposal; CLI-15-4, 81 NRC 221 (2015)

generic analyses of the environmental impacts of continued storage and disposal in the context of NRC reactor licensing proceedings are acceptable; CLI-15-4, 81 NRC 221 (2015)

hearing on exemption-related matters is necessary insofar as resolution of the exemption request directly affects the licensability of a proposed fuel storage site and the exemption raises material questions directly connected to an agency licensing action; LBP-15-18, 81 NRC 793 (2015)

if there were any doubt over the intent of Congress not to require a safety finding on spent fuel disposal, it was laid to rest by enactment of the Energy Reorganization Act of 1974; CLI-15-4, 81 NRC 221 (2015)

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impact determinations in the Continued Storage generic environmental impact statement shall be deemed incorporated into the environmental impact statements associated with combined license and license renewal applications; CLI-15-10, 81 NRC 535 (2015)

impacts of continued storage will not vary significantly across sites and can be analyzed generically; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

information is specified in Atomic Energy Act § 182 that must be provided by applicant for a license and it has no reference to spent fuel disposal; CLI-15-4, 81 NRC 221 (2015)

license amendments are not contingent upon any additional safety determination regarding spent fuel storage under the Atomic Energy Act; CLI-15-4, 81 NRC 221 (2015)

license renewal provisions cover environmental issues relating to onsite spent fuel storage generically, and all such issues, including accident risk, fall outside the scope of license renewal proceedings; LBP-15-5, 81 NRC 249 (2015)

NRC adopted a generic environmental impact statement identifying and analyzing environmental impacts of continued storage of spent nuclear fuel and associated revisions to the Temporary Storage Rule in 10 C.F.R. 51.23; LBP-15-1, 81 NRC 15 (2015)

NRC is not required, as a precondition to issuing or renewing operating licenses for nuclear power plants, to make definitive findings concerning technical feasibility of a repository for the disposal of spent nuclear fuel; CLI-15-4, 81 NRC 221 (2015)

NRC Staff must account for the environmental impacts of continued storage before finalizing individual licensing decisions, and, when appropriate circumstances exist, the question of whether to prepare a supplemental final environmental impact statement is to be part of that analysis; CLI-15-10, 81 NRC 535 (2015)

NRC's long-continued regulatory practice of issuing operating licenses with an implied finding of reasonable assurance that safe permanent disposal of spent nuclear fuel can be available when needed is in accord with the intent of Congress underlying the Atomic Energy Act and Energy Reorganization Act; CLI-15-4, 81 NRC 221 (2015)

placeholder contentions that challenge the 2014 Continued Storage Rule and associated Generic Environmental Impact Statement for Continued Storage are inadmissible; CLI-15-15, 81 NRC 803 (2015)

systems must be designed to ensure adequate safety under normal and postulated accident conditions; CLI-15-4, 81 NRC 221 (2015)

Temporary Storage Rule was vacated; LBP-15-1, 81 NRC 15 (2015)

to the extent NRC takes action with respect to waste confidence on a case-by-case basis, litigants can challenge such site-specific agency actions in the adjudicatory process; CLI-15-11, 81 NRC 546 (2015); CLI-15-12, 81 NRC 551 (2015)

when considering continued storage in licensing reviews with previously completed final environmental impact statements, NRC Staff is expected to use a consistent and transparent process to ensure that all stakeholders are aware of how the environmental impacts of continued storage are considered in each licensing action affected by this regulation; CLI-15-10, 81 NRC 535 (2015)

See also Dry Cask Storage

STANDARD OF PROOF

relative to factual matters, to carry burden of proof, NRC Staff and/or applicant must establish that its position is supported by a preponderance of the evidence; LBP-15-3, 81 NRC 65 (2015); LBP-15-16, 81 NRC 618 (2015)

STANDARD OF REVIEW

Commission does not review combined license application de novo, but rather considers the sufficiency of NRC Staff's review of the application; CLI-15-13, 81 NRC 555 (2015)

Commission reviews board's legal rulings de novo and will reverse a board's legal rulings if they are contrary to established law; CLI-15-6, 81 NRC 340 (2015)

Commission reviews questions of law de novo, but defers to the board's findings with respect to the underlying facts unless they are clearly erroneous; CLI-15-6, 81 NRC 340 (2015); CLI-15-7, 81 NRC 481 (2015); CLI-15-9, 81 NRC 512 (2015)

grant of discretionary review must show that a board's ruling was a departure from, or contrary to, established law; CLI-15-7, 81 NRC 481 (2015)

important questions of law and material fact merit Commission review; CLI-15-6, 81 NRC 340 (2015)

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license renewal review is not intended to duplicate NRC's ongoing oversight of operating reactors;

CLI-15-6, 81 NRC 340 (2015)

mere presence of evidence supporting both sides does not call for Commission review, where it appears that the board considered all the evidence and arguments before it; CLI-15-7, 81 NRC 481 (2015)

petition for review must raise a substantial question with respect to whether a necessary legal conclusion is without governing precedent or is contrary to established law; CLI-15-7, 81 NRC 481 (2015)

petition for review will be granted at Commission discretion upon a showing that petitioner has raised a substantial question as to any of the five factors of 10 C.F.R. 2.341(b)(4)(i)-(v); CLI-15-9, 81 NRC 512 (2015)

petition under 10 C.F.R. 2.206 will be reviewed only where petitioner specifies the bases for taking the requested action; DD-15-6, 81 NRC 884 (2015)

review is granted where petitions for review raise substantial questions of law and procedure; CLI-15-6, 81 NRC 340 (2015)

standard for discretionary review is described; CLI-15-7, 81 NRC 481 (2015)

standard for showing clear error is difficult to meet, requiring that intervenors demonstrate that the board's determination is not even plausible in light of the record as a whole; CLI-15-7, 81 NRC 481 (2015); CLI-15-9, 81 NRC 512 (2015)

STANDARD REVIEW PLANS

SRPs do not have the force and effect of law; CLI-15-6, 81 NRC 340 (2015)

where no Staff guidance was available for the particular type of facility undergoing license review, the board reasonably selected a standard for a facility most like the facility under review; CLI-15-6, 81 NRC 340 (2015)

STANDING TO INTERVENE

although petitioner bears the burden of establishing standing, licensing boards should evaluate petitioner's standing construing the petition in favor of petitioner; LBP-15-13, 81 NRC 456 (2015)

Atomic Energy Act authorizes NRC to accord protection from radiological injury to both health and property interests, and thus a genuine property interest is sufficient to accord petitioner proximity-based standing; LBP-15-17, 81 NRC 753 (2015)

board is obliged to independently assess petitioners' standing, even if it is unchallenged; LBP-15-17, 81 NRC 753 (2015)

Commission affirmed board ruling on standing and upheld the validity of the proximity presumption; CLI-15-13, 81 NRC 555 (2015)

Commission affirmed the board's standing ruling, but declined to accept review of challenges to the board's admission of two contentions because petitioner had failed to perfect its appeal by challenging the validity of the board's admissibility rulings regarding other contentions; LBP-15-3, 81 NRC 65 (2015)

Commission permits petitioners to cure deficiencies with regard to standing in their replies; LBP-15-5, 81 NRC 249 (2015)

contemporaneous judicial concepts of standing are applied in NRC proceedings; LBP-15-17, 81 NRC 753 (2015); LBP-15-19, 81 NRC 815 (2015)

hearing request is granted where petitioners have submitted a timely petition, established representational standing, and proffered an admissible contention; LBP-15-20, 81 NRC 829 (2015)

in situations involving obvious potential for offsite consequences, Commission has routinely granted standing to petitioners who live within a certain distance of the facility at issue under the proximity presumption, effectively dispensing with the need to make an affirmative showing of injury, causation, and redressability; LBP-15-13, 81 NRC 456 (2015)

interests that representative organization seeks to protect must be germane to its own purpose, and neither the asserted claim nor the required relief must require an individual member to participate in the organization's legal action; LBP-15-5, 81 NRC 249 (2015)

license amendments related to reactor pressure vessel embrittlement present an obvious potential for offsite public health and safety consequences; LBP-15-17, 81 NRC 753 (2015)

licensing actions that could increase reactor vessel embrittlement, such as license renewals, hold the potential for offsite consequences that are obvious; LBP-15-17, 81 NRC 753 (2015)

licensing boards are obliged to independently assess petitioners' standing; LBP-15-5, 81 NRC 249 (2015)

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living within 50 miles of a nuclear power reactor is enough to confer standing on an individual or group in proceedings for construction permits, operating licenses, or significant amendments thereto; LBP-15-17, 81 NRC 753 (2015); LBP-15-20, 81 NRC 829 (2015)

mother was denied standing based on her son's residence within 50 miles of a power plant, because she herself lived more than 50 miles away; LBP-15-17, 81 NRC 753 (2015)

NRC applies judicial concepts of standing, under which petitioner must allege a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015); LBP-15-17, 81 NRC 753 (2015)

parent could attain proximity-based standing through reference to her child if the child was a minor or otherwise under a legal disability and thus unable to participate herself; LBP-15-17, 81 NRC 753 (2015)

participation in a licensing proceeding requires a demonstration of standing; LBP-15-13, 81 NRC 456 (2015); LBP-15-17, 81 NRC 753 (2015); LBP-15-19, 81 NRC 815 (2015)

petitioner could not rely on caretakers maintaining and farming the property in petitioner's absence as grounds for proximity-based standing; LBP-15-17, 81 NRC 753 (2015)

petitioner may use its reply as an opportunity to cure potential defects in standing; LBP-15-13, 81 NRC 456 (2015)

petitioner who lives, has frequent contacts, or has significant property interest in within 50 miles of a nuclear power reactor has standing without the need to make an individualized showing of injury, causation, and redressability; LBP-15-17, 81 NRC 753 (2015)

petitioners cannot gain standing from the interests of third parties except in very limited circumstances; LBP-15-17, 81 NRC 753 (2015)

petitioners had proximity-based standing even though they did not provide a reactor vessel failure scenario; LBP-15-17, 81 NRC 753 (2015)

proximity presumption allows petitioner living within 50 miles of the reactor to establish standing without the need to make an individualized showing of injury, causation, and redressability; LBP-15-5, 81 NRC 249 (2015)

proximity presumption applied where petitioners' contention concerned a license amendment to move the schedule for the withdrawal of reactor vessel material specimens from the technical specifications to the updated safety analysis report; LBP-15-17, 81 NRC 753 (2015)

proximity presumption applies across the board to all proceedings regardless of type because the rationale underlying it is not based on the type of proceeding per se but on whether the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-15-17, 81 NRC 753 (2015)

proximity presumption applies in more limited license amendment proceedings only if the proposed amendment obviously entails an increased potential for offsite consequences; LBP-15-17, 81 NRC 753 (2015)

proximity presumption applies to persons who have a significant property interest in the area near a nuclear power plant; LBP-15-17, 81 NRC 753 (2015)

proximity presumption applies to persons who have frequent contacts in the area near a nuclear power plant; LBP-15-17, 81 NRC 753 (2015)

proximity presumption applies when there are clear implications for the offsite environment, or major alterations to the facility with a clear potential for offsite consequences; LBP-15-17, 81 NRC 753 (2015)

proximity presumption was applied in a license amendment proceeding where management's lack of the required character and competence was alleged; LBP-15-17, 81 NRC 753 (2015)

proximity-based standing based on frequent contacts is a determination to be made by a licensing board after weighing all the information provided; LBP-15-17, 81 NRC 753 (2015)

radius for the proximity presumption has to be at least as large as the range where obvious offsite consequences can occur; LBP-15-17, 81 NRC 753 (2015)

remedy that makes even a small contribution to resolving a larger, more complex injury can still support a standing claim; LBP-15-13, 81 NRC 456 (2015)

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requirement to demonstrate standing is derived from instruction to NRC to provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-15-5, 81 NRC 249 (2015)

state government has standing because the facility is located within the boundaries of the state and, accordingly, no further demonstration of standing is required; LBP-15-4, 81 NRC 156 (2015); LBP-15-18, 81 NRC 793 (2015); LBP-15-19, 81 NRC 815 (2015)

statement that petitioner lives, recreates, and conducts business within the vicinity of the plant is too vague to demonstrate a substantial or regular presence within 50 miles of the plant; LBP-15-17, 81 NRC 753 (2015)

to demonstrate frequent contacts within the 50-mile site radius under the proximity presumption, petitioner must show that her contacts are substantial and regular, and must describe them with specificity; LBP-15-17, 81 NRC 753 (2015)

STANDING TO INTERVENE, ORGANIZATIONAL

members living within 50 miles of a reactor are presumed to have standing under the Commission's 50-mile proximity presumption; LBP-15-5, 81 NRC 249 (2015)

organization that seeks representational standing must show that at least one of its members would be affected by the proceeding, identify that member by name and address, show that members would have standing to intervene in their own right, and that identified members have authorized the organization to request a hearing on their behalf; LBP-15-5, 81 NRC 249 (2015)

petitioner must show a discrete injury to the organization itself; LBP-15-5, 81 NRC 249 (2015); LBP-15-17, 81 NRC 753 (2015)

when an organization seeks to intervene on behalf of its members, it may establish standing by showing that one or more of its members would individually meet the above articulated standing requirements, the member has authorized the organization to represent its interest, and the interest represented is germane to the organization's purpose; LBP-15-13, 81 NRC 456 (2015)

STANDING TO INTERVENE, REPRESENTATIONAL

failure of organization member to provide an exact address in her affidavit is not a limiting concern; LBP-15-17, 81 NRC 753 (2015)

interests that a representative organization seeks to protect must be germane to its own purpose, and neither the asserted claim nor the relief sought must require an individual member to participate in the organization's legal action; LBP-15-5, 81 NRC 249 (2015); LBP-15-17, 81 NRC 753 (2015)

organization members living within 50 miles of a reactor are presumed to have standing under the Commission's 50-mile proximity presumption; LBP-15-5, 81 NRC 249 (2015)

organization seeking representational standing on behalf of its members may meet the injury-in-fact requirement by demonstrating that at least one of its members, who has authorized the organization to represent his or her interest, will be injured by the possible outcome of the proceeding; LBP-15-5, 81 NRC 249 (2015); LBP-15-13, 81 NRC 456 (2015); LBP-15-17, 81 NRC 753 (2015)

petitioning member's affidavit must be sufficiently specific to show frequent contact within 50 miles of the plant; LBP-15-17, 81 NRC 753 (2015)

STATE GOVERNMENT

deference can be given to a state permit's findings as to the acceptability of environmental impacts; LBP-15-11, 81 NRC 401 (2015)

government entity may file an amicus brief within the time allowed to the party whose position the brief will support; CLI-15-2, 81 NRC 213 (2015)

NEPA encourages state participation when appropriate and authorized, but coordination between a federal agency and a state requires active involvement between the two in order for the federal agency to meet its independent review burden; LBP-15-11, 81 NRC 401 (2015)

radiological emergency response plan was developed by the State and approved by the Federal Emergency Management Agency to ensure that the State is prepared to handle the offsite effects of a radiological emergency; LBP-15-4, 81 NRC 156 (2015)

reliance on a state permit, let alone one prepared and adopted by a state government, cannot satisfy a federal agency's obligations under NEPA; LBP-15-11, 81 NRC 401 (2015)

state government has standing because the facility is located within its boundaries and, accordingly, no further demonstration of standing is required; LBP-15-4, 81 NRC 156 (2015); LBP-15-18, 81 NRC 793 (2015)

SUBJECT INDEX

the fact that a competent and responsible state authority has approved the environmental acceptability of a site or a project after extensive and thorough environmentally sensitive hearings is properly entitled to substantial weight in the conduct of NRC's own NEPA analysis; LBP-15-11, 81 NRC 401 (2015)

See also Agreement State Programs

STATION BLACKOUT

licensees must develop strategies to mitigate a simultaneous loss of all a.c. power and loss of normal access to the ultimate heat sink; DD-15-5, 81 NRC 877 (2015)

NRC guidance documents outline the process licensees use to define and deploy strategies to enhance their ability to cope with beyond-design-basis external events, including station blackout; DD-15-5, 81 NRC 877 (2015)

NRC issued an order on station blackout mitigation strategies requiring mitigation strategies to protect against, among many other hazards, postulated seismic events; DD-15-1, 81 NRC 193 (2015)

under its certified design, the Economic Simplified Boiling Water Reactor could maintain circulation long enough to permit safe shutdown of the reactor even if it were to lose offsite power and all of its backup generators failed to operate; LBP-15-5, 81 NRC 249 (2015)

STATUTES

contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications; LBP-15-5, 81 NRC 249 (2015)

STATUTORY CONSTRUCTION

interpretation of statutes at issue and the regulations governing their implementation falls within the Commission's province; LBP-15-5, 81 NRC 249 (2015)

it is fair to read the AEC and NRC history as a de facto acquiescence in and ratification of the Commission's licensing procedure by Congress; CLI-15-4, 81 NRC 221 (2015)

"owned, controlled, or dominated" refers to relationships in which the will of one party is subjugated to the will of another; CLI-15-7, 81 NRC 481 (2015)

STAY

even if movant fails to show irreparable injury, a board may still grant a stay if movant has made an overwhelming showing or a demonstration of virtual certainty that it will prevail on the merits; LBP-15-2, 81 NRC 48 (2015)

in addressing the stay criteria in a Subpart L proceeding, litigant must come forth with more than general or conclusory assertions in order to demonstrate its entitlement to relief; LBP-15-2, 81 NRC 48 (2015)

in determining whether to grant or deny an application for a stay, a board must balance four separate interests; LBP-15-2, 81 NRC 48 (2015)

irreparable injury is the most important of the factors for grant or denial of a stay; LBP-15-2, 81 NRC 48 (2015)

movant has the burden of persuasion on the four factors of 10 C.F.R. 2.1213(d); LBP-15-2, 81 NRC 48 (2015)

movant must specifically and reasonably demonstrate an injury, not merely allege generalized harm; LBP-15-2, 81 NRC 48 (2015)

to qualify as an irreparable injury, the potential harm cited by stay movant first must be related to the underlying claim that is the focus of the adjudication; LBP-15-2, 81 NRC 48 (2015)

upon a strong showing of irreparable injury, movant need not always establish a high probability of success on the merits; LBP-15-2, 81 NRC 48 (2015)

where movant cannot show either irreparable injury or a likelihood of prevailing on the merits, a board need not consider the remaining factors; LBP-15-2, 81 NRC 48 (2015)

STAY OF EFFECTIVENESS

intervenor may seek a stay of NRC Staff's immediately effective license issuance; LBP-15-3, 81 NRC 65 (2015)

notification of renewal of source materials license triggers the 5-day filing deadline to apply for a stay of the license; LBP-15-2, 81 NRC 48 (2015)

stay of an NRC license is an extraordinary remedy, and a rare occurrence in NRC practice; LBP-15-2, 81 NRC 48 (2015)

SUBJECT INDEX

STEAM GENERATOR TUBE DEGRADATION

petitioners' concerns about tube leaks, unplanned power changes, and potential primary coolant contamination did not constitute any violations that were more than minor; DD-15-2, 81 NRC 205 (2015)

STIPULATIONS

appeal board's ruling that the environmental impact statement was deemed modified by the parties' stipulations at hearing did not violate the letter or spirit of NEPA; CLI-15-6, 81 NRC 340 (2015)
Commission directs litigants to provide either a joint stipulation that local union's appeal should be dismissed or briefing on the question whether the appeal should be dismissed as moot and the proceeding terminated; CLI-15-16, 81 NRC 810 (2015)

STRATEGIC SPECIAL NUCLEAR MATERIAL

any statistical sampling plan for verifying the presence and integrity of SSNM items must have at least 99 percent power of detecting item losses that total 5 formula kg or more, plantwide, within 30 calendar days for Category IA items and 60 calendar days for Category IB items contained in a vault or in a permanently controlled access area isolated from the rest of the material access area; CLI-15-9, 81 NRC 512 (2015)

contention that applicant's revised material control and accounting plan is deficient because its item monitoring program does not have the capability to verify, on a statistical sampling basis, the presence and integrity of SSNM losses that total 5 formula kilograms of plutonium or more, plantwide, within the time frames specified by the regulation is inadmissible; CLI-15-9, 81 NRC 512 (2015)

"Category IA" material means any SSNM directly usable in the manufacture of a nuclear explosive device; CLI-15-9, 81 NRC 512 (2015)

"Category IB" material refers to all SSNM other than Category IA material; CLI-15-9, 81 NRC 512 (2015)

"controlled access area" is any temporarily or permanently established area that is clearly demarcated, access to which is controlled, and which affords isolation of the material or persons within it; CLI-15-9, 81 NRC 512 (2015)

"formula kilogram" means SSNM in any combination in a quantity of 1000 grams computed by the formula, grams = (grams contained U-235) + 2.5 (grams U-233 + grams plutonium); CLI-15-9, 81 NRC 512 (2015)

licensee must be able to rapidly assess the validity of alleged thefts; CLI-15-9, 81 NRC 512 (2015)

licensees must verify on a statistical sampling basis, the presence and integrity of SSNM items; CLI-15-9, 81 NRC 512 (2015)

"power of detection" means the probability that the critical value of a statistical test will be exceeded when there is an actual loss of a specific quantity of SSNM; CLI-15-9, 81 NRC 512 (2015)

"unit process" means an identifiable segment or segments of processing activities for which the amounts of input and output SSNM are based on measurements; CLI-15-9, 81 NRC 512 (2015)

"vault" is a windowless enclosure with walls, floor, roof and door(s) designed and constructed to delay penetration from forced entry; CLI-15-9, 81 NRC 512 (2015)

STRUCTURAL ANALYSIS

because the shield building functions as a radiation and biological shield, failure or collapse of the shield building due to cracking propagation could lead to health and safety impacts and thus petitioner's contention concerns a subject matter that could impact the grant or denial of a pending license application; LBP-15-1, 81 NRC 15 (2015)

STRUCTURAL INTEGRITY

contention claiming that modifications to repair or replace inadequate structural beams and columns is more appropriately presented as a request for enforcement action; CLI-15-5, 81 NRC 329 (2015)

request for enforcement action based on support beam deficiencies, flood protection inadequacy, flood risks from upstream dams, and primary reactor containment electrical penetration seals containing Teflon is denied because petitioner's requests have been addressed through other actions; DD-15-4, 81 NRC 869 (2015)

SUBPART L PROCEEDINGS

in addressing the stay criteria in a Subpart L proceeding, litigant must come forth with more than general or conclusory assertions in order to demonstrate its entitlement to relief; LBP-15-2, 81 NRC 48 (2015)

SUBJECT INDEX

SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

agencies shall prepare supplements to either draft or final EISs if there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; LBP-15-13, 81 NRC 456 (2015)

although a draft SEIS may rely in part on applicant's environmental report, NRC Staff must independently evaluate and be responsible for the reliability of all information used in the DSEIS; LBP-15-3, 81 NRC 65 (2015)

although NRC has issued a generic environmental impact statement for in situ uranium recovery facilities that assesses potential ISR facility construction/operation/decommissioning impacts, for the initial licensing of each individual ISR facility, NRC Staff will first prepare a draft SEIS; LBP-15-3, 81 NRC 65 (2015)

board's findings and the adjudicatory record are, in effect, part of the final SEIS; LBP-15-16, 81 NRC 618 (2015)

bounding analysis provided in the final SEIS, as supplemented in the record, provides sufficient information about a reasonable range of hazardous constituent concentration values associated with potential post-operational alternate concentration limits to provide an appropriate NEPA assessment of the environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits; LBP-15-3, 81 NRC 65 (2015)

contention that final SEIS fails to analyze environmental impacts that will occur if applicant cannot restore groundwater to primary or secondary limits is decided; LBP-15-3, 81 NRC 65 (2015)

contention that final SEIS fails to comply with NRC regulations 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 is decided; LBP-15-3, 81 NRC 65 (2015)

contention that supplementation of the EIS is necessary to allow members of the public to lodge placeholder contentions challenging Commission reliance, in individual licensing proceedings, on the continued storage GEIS and Continued Storage Rule is inadmissible; CLI-15-10, 81 NRC 535 (2015)

decision of the board or Commission becomes the record of decision, which may also incorporate the final SEIS; CLI-15-6, 81 NRC 340 (2015)

distribution requirements for a final EIS and SEIS are imposed by 10 C.F.R. 51.93; LBP-15-3, 81 NRC 65 (2015)

final EIS and SEIS must be considered in the agency's decisionmaking; LBP-15-3, 81 NRC 65 (2015)

final SEIS is a snapshot in time of expected environmental consequences; CLI-15-6, 81 NRC 340 (2015)

final EIS is supplemented by the board's decision as well as by the hearing record; CLI-15-6, 81 NRC 340 (2015)

final EIS must be supplemented to provide complete, accurate, and up-to-date sources of information for members of the public and state and local governments; CLI-15-10, 81 NRC 535 (2015)

final SEIS must include an analysis of cultural impacts; LBP-15-16, 81 NRC 618 (2015)

intervenor fail to establish the validity of their various challenges to the adequacy of the final SEIS description of the baseline water quality at the ISR site; LBP-15-3, 81 NRC 65 (2015)

intervenor fail to specify what other alternatives to the license renewal application should be discussed in the draft SEIS, much less show that any proposed alternative would satisfy the purpose of applicant's proposed action; LBP-15-1, 81 NRC 15 (2015)

it is not clear that NRC Staff relied on the generic environmental impact statement when preparing the draft SEIS because it was not incorporated by reference or mentioned in any other manner; LBP-15-11, 81 NRC 401 (2015)

new information on the need to supplement an issued final EIS must point to impacts that affect the quality of the human environment in a significant manner or to a significant extent not already considered; LBP-15-16, 81 NRC 618 (2015)

NRC Staff must account for the environmental impacts of continued storage before finalizing individual licensing decisions, and, when appropriate circumstances exist, the question of whether to prepare a supplemental FEIS is to be part of that analysis; CLI-15-10, 81 NRC 535 (2015)

NRC Staff must include in the final SEIS an analysis of significant problems and objections raised by any affected Indian tribes, and by other interested persons; LBP-15-16, 81 NRC 618 (2015)

SUBJECT INDEX

NRC Staff uses applicant's environmental report as a starting point for its own environmental review of a license renewal application, the results of which are published as a supplement to the generic EIS;

CLI-15-6, 81 NRC 340 (2015)

purpose of the final SEIS is to inform the decisionmaking agency and the public of a broad range of environmental impacts that will result, with a fair degree of likelihood, from a proposed project, rather than to speculate about worst-case scenarios and how to prevent them; CLI-15-6, 81 NRC 340 (2015) relative to an individual ISR facility, when NRC Staff formulates its draft and final SEIS conclusions regarding the environmental impacts of a proposed action or alternative actions, it uses as guidance a standard scheme to categorize or quantify the impacts; LBP-15-3, 81 NRC 65 (2015)

severe accident mitigation alternatives analysis must be considered as part of the environmental report and, ultimately, as part of NRC Staff's SEIS for a power reactor license renewal; LBP-15-5, 81 NRC 249 (2015)

standard for preparing a supplemental environmental assessment is the same as for preparing a SEIS;

LBP-15-13, 81 NRC 456 (2015)

supplementation of the FEIS is not necessary every time new information comes to light after the environmental impact statement is finalized; CLI-15-10, 81 NRC 535 (2015)

supplementation of the FEIS is required when a final action has not been taken and there are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts; CLI-15-10, 81 NRC 535 (2015)

to warrant supplementation of the FEIS, new information must paint a seriously different picture of the environmental landscape; CLI-15-10, 81 NRC 535 (2015)

when a supplement to a FEIS is required and what it must contain are outlined; LBP-15-3, 81 NRC 65 (2015)

where environmental impacts are practically quantifiable, NRC has a duty to discuss them in those terms in the final SEIS; LBP-15-3, 81 NRC 65 (2015)

with respect to the need to supplement an issued FEIS, the party offering the new contention has the burden of presenting information sufficient to show that there is a genuine issue regarding whether the NRC Staff should supplement its document; LBP-15-16, 81 NRC 618 (2015)

SURVEILLANCE

after the rulemaking is completed, licensees for new reactors will be required to comply with the ASME code preservice and inservice surveillance provisions for squib valves; CLI-15-13, 81 NRC 555 (2015)

licensee must perform a consistency check of its embrittlement model against available surveillance data; LBP-15-17, 81 NRC 753 (2015)

surveillance data are continuously integrated into future embrittlement projections; LBP-15-17, 81 NRC 753 (2015)

SURVEILLANCE PROGRAMS

although the Commission found NRC Staff's review of combined license applications rigorous, it imposed a condition requiring implementation of a squib-valve surveillance program prior to fuel load;

CLI-15-13, 81 NRC 555 (2015)

integrated surveillance program among similar reactors is allowed if the reactors have sufficiently similar design and operating features to permit accurate comparisons of the predicted amount of radiation damage; LBP-15-17, 81 NRC 753 (2015)

results from plant-specific surveillance program must be integrated into the fracture toughness estimate if the plant-specific surveillance data have been deemed credible; LBP-15-17, 81 NRC 753 (2015)

SURVEILLANCE TESTING

any changes to the material specimen withdrawal schedule that conform to the ASTM standard referenced in Appendix H will not alter the plant's license; LBP-15-20, 81 NRC 829 (2015)

ASTM Standard E 185 anticipates that during the course of a nuclear power plant's life the surveillance capsule withdrawal schedule may need to be revised and allows and provides for such changes;

LBP-15-20, 81 NRC 829 (2015)

challenges based on 10 C.F.R. 50.61a and the question of whether applicant demonstrated substantial advantage under 10 C.F.R. Part 50, Appendix H as a reason to not test capsules are beyond the scope of a license amendment proceeding, which concerns compliance with Appendix G of 10 C.F.R. Part 50; LBP-15-20, 81 NRC 829 (2015)

SUBJECT INDEX

consistency check compares mean and slope of the embrittlement model curve against surveillance data and checks to confirm that outliers fall within acceptable residual values provided in the regulation; LBP-15-17, 81 NRC 753 (2015)

consistency check is required if three or more surveillance data points measured at three or more different neutron fluences exist for a specific material; LBP-15-17, 81 NRC 753 (2015)

consistency check seeks to compare, for a specific material type, the model's projected embrittlement with the actual embrittlement values at the same fluence provided by material samples; LBP-15-17, 81 NRC 753 (2015)

data must consist of material samples that are the same composition, or heat, as the materials being evaluated by the model; LBP-15-17, 81 NRC 753 (2015)

differing amounts of copper, nickel, phosphorus, and manganese between material samples for the consistency check are accounted for; LBP-15-17, 81 NRC 753 (2015)

exemption from the surveillance program is allowed if a reactor's lifetime irradiation levels are below a certain threshold; LBP-15-17, 81 NRC 753 (2015)

if fewer than three surveillance data points exist for a specific material, then the embrittlement model must be used without performing the consistency check; LBP-15-17, 81 NRC 753 (2015)

if the embrittlement model deviates from the physical samples over the limits specified in 10 C.F.R. 50.61a(f)(6)(vi), licensee must submit additional evaluations and seek approval for the deviations from the Director of the Office of Nuclear Reactor Regulation; LBP-15-17, 81 NRC 753 (2015)

if three or more surveillance data points measured at three or more different neutron fluences exist for a specific material, licensee shall determine if the surveillance data show a significantly different trend than the embrittlement model predicts; LBP-15-17, 81 NRC 753 (2015)

in calculating embrittlement reference temperatures, licensee must calculate neutron flux through the reactor pressure vessel using a methodology that has been benchmarked to experimental measurements and with quantified uncertainties and possible biases; LBP-15-17, 81 NRC 753 (2015)

licensees have some discretion in considering other plant-specific information that may be helpful in aligning their embrittlement models with the surveillance data; LBP-15-17, 81 NRC 753 (2015)

licensees must attach a particular number of surveillance capsules to specified areas within the reactor vessel, typically near the inside vessel wall at the beltline; LBP-15-20, 81 NRC 829 (2015)

minimum frequency with which surveillance capsules must be tested is set by ASTM Standard E 185 (1982 version), which is incorporated into Appendix H; LBP-15-20, 81 NRC 829 (2015)

NRC must preapprove the schedule for removing material samples from the reactor vessel; LBP-15-17, 81 NRC 753 (2015)

petitioners are not barred from contending that additional testing is necessary to show margins of safety equivalent to those of the ASME BPV Code, Section XI, Appendix G because the petitioners allege noncompliance with 10 C.F.R. Part 50, Appendix G and not Appendix H; LBP-15-20, 81 NRC 829 (2015)

physical specimens must come from near the inside vessel wall in the beltline region so that the specimen irradiation history duplicates the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface; LBP-15-17, 81 NRC 753 (2015)

plant-specific surveillance data must be integrated into the transition fracture toughness reference temperature estimate; LBP-15-17, 81 NRC 753 (2015)

pressurized thermal shock rule and embrittlement screening program are discussed; LBP-15-17, 81 NRC (2015); LBP-15-17, 81 NRC 753 (2015)

pressurized water reactor pressure vessel surveillance program relies on physical material samples, also known as specimens, capsules, or coupons; LBP-15-17, 81 NRC 753 (2015)

purpose of the consistency check is to determine if the surveillance data show a significantly different trend than the embrittlement model predicts; LBP-15-17, 81 NRC 753 (2015)

surveillance data include any data that demonstrate embrittlement trends for the beltline materials; LBP-15-17, 81 NRC 753 (2015)

surveillance data must be used in the consistency check when it is a heat-specific match for one or more of the materials for which the reference temperature is being calculated and three or more different neutron fluences exist for a specific material; LBP-15-17, 81 NRC 753 (2015)

surveillance data need not be obtained from the same reactor pressure vessel that is the subject of the license amendment; LBP-15-17, 81 NRC 753 (2015)

SUBJECT INDEX

three or more samples are required to conduct a consistency check; LBP-15-17, 81 NRC 753 (2015)

SURVEYS

Class III archeological survey involves a professionally conducted, pedestrian survey of an entire target area to identify properties that may be eligible for inclusion on the National Register of Historic Places; LBP-15-16, 81 NRC 618 (2015)

SUSPENSION

NRC approvals of plant restart and lifting suspensions did not trigger AEA § 189a hearing rights; CLI-15-14, 81 NRC 729 (2015)

SUSPENSION OF LICENSE

request that NRC order the immediate suspension of the operating licenses of all General Electric boiling-water reactors that use the Mark I primary containment system citing the Fukushima Dai-ichi accident in Japan as its rationale basis is resolved; DD-15-1, 81 NRC 193 (2015)

request under 10 C.F.R. 50.54(f) is to enable the Commission to determine whether or not the license should be modified, suspended, or revoked; CLI-15-14, 81 NRC 729 (2015)

SUSPENSION OF PROCEEDING

all final decisions for licenses that relied on the Waste Confidence Decision and Temporary Storage Rule were suspended; CLI-15-4, 81 NRC 221 (2015)

Commission denied suspension petitions and intervenors' motion to admit the new continued storage safety findings contentions; LBP-15-9, 81 NRC 396 (2015)

decision to suspend final licensing decisions is highly dependent upon the facts and requires a judgment that the significance of the matter raised is so substantial as to warrant suspension; CLI-15-14, 81 NRC 729 (2015)

NRC is not required to conduct a rulemaking proceeding or to withhold action on pending or future applications for nuclear power reactor operating licenses until it makes a determination that high-level radioactive wastes can be permanently disposed of safely; CLI-15-4, 81 NRC 221 (2015)

request for suspension of proceedings and other relief after the Fukushima Dai-ichi accident was denied; CLI-15-13, 81 NRC 555 (2015)

suspension request that would have halted final licensing decisions pending action on a petition for rulemaking regarding NRC Staff's review of the potential expedited transfer of spent fuel from pools to dry casks was denied; CLI-15-13, 81 NRC 555 (2015)

SYNERGISTIC EFFECTS

"synergistic" refers to the joint action of different parts or sites which, acting together, enhance the effects of one or more individual sites; LBP-15-5, 81 NRC 249 (2015)

TECHNICAL SPECIFICATIONS

"exigent circumstances" determination seems compelled by the fact that violation of the technical specifications limit for the plant, whatever the cause of the temperature increase, requires a dual-unit shutdown; LBP-15-13, 81 NRC 456 (2015)

proximity presumption applied where petitioners' contention concerned a license amendment to move the schedule for the withdrawal of reactor vessel material specimens from the technical specifications to the updated safety analysis report; LBP-15-17, 81 NRC 753 (2015)

TEMPERATURE

alternate pressurized thermal shock rule changes how licensees derive projected reference temperatures for the components of their reactor pressure vessels; LBP-15-17, 81 NRC 753 (2015)

application to use alternate pressurized thermal shock rule must contain the projected embrittlement reference temperatures along various portions of the reactor pressure vessel, from the present to a future point, compared to the alternate screening criteria; LBP-15-17, 81 NRC 753 (2015)

embrittlement model projects the reference temperatures for various parts of the reactor pressure vessel at the end of life of the plant; LBP-15-17, 81 NRC 753 (2015)

in calculating embrittlement reference temperatures, licensee must calculate neutron flux through the reactor pressure vessel using a methodology that has been benchmarked to experimental measurements and with quantified uncertainties and possible biases; LBP-15-17, 81 NRC 753 (2015)

licensee can use a set of generic mean nil-ductility reference temperature values if measured values are not available; LBP-15-17, 81 NRC 753 (2015)

SUBJECT INDEX

licensee must establish the nil-ductility reference temperature for the reactor pressure vessel material in the annealed state, before the reactor was operational for various key points along the RPV; LBP-15-17, 81 NRC 753 (2015)

licensees have to verify that their reference temperature calculations at the time of the application match up with surveillance data; LBP-15-17, 81 NRC 753 (2015)

reference temperature shift is the difference in reference temperature from the unirradiated to the post-irradiated states; LBP-15-17, 81 NRC 753 (2015)

reference temperature values are compared to the alternate screening criteria to determine whether the reactor pressure vessel is safe to operate; LBP-15-17, 81 NRC 753 (2015)

surveillance data must be used in the consistency check when it is a heat-specific match for one or more of the materials for which the reference temperature is being calculated and three or more different neutron fluences exist for a specific material; LBP-15-17, 81 NRC 753 (2015)

TEMPERATURE LIMITS

alternate screening criteria consist of eighteen different reference temperature limits that depend on reactor pressure vessel wall thickness and the part of the RPV under consideration; LBP-15-17, 81 NRC 753 (2015)

“exigent circumstances” determination seems compelled by the fact that violation of the technical specifications limit for the plant, whatever the cause of the temperature increase, requires a dual-unit shutdown; LBP-15-13, 81 NRC 456 (2015)

if the reference values projected at specific areas of the reactor pressure vessel for the end of life of the plant surpass the current screening criteria, licensee must submit a safety analysis and obtain NRC approval to continue to operate; LBP-15-17, 81 NRC 753 (2015)

when the reference temperature of a reactor pressure vessel is above the screening limit, the RPV is considered to have an unreasonably high risk of fracture from a pressurized thermal shock event; LBP-15-17, 81 NRC 753 (2015)

TEMPORARY STORAGE RULE

all final decisions for licenses that relied on the Waste Confidence Decision and Temporary Storage Rule were suspended; CLI-15-4, 81 NRC 221 (2015)

TERMINATION OF PROCEEDING

NRC’s transfer of regulatory authority to the State of New Jersey is now final and the licensing board no longer has the jurisdiction it had retained over the proceeding, and the board terminates the proceeding; LBP-15-10, 81 NRC 399 (2015)

once all contentions have been decided, the contested proceeding is terminated; LBP-15-9, 81 NRC 396 (2015)

TERRORISM

petitioners asserted that NRC actions following the events of September 11, 2001, and the accident at Fukushima Dai-ichi were insufficient to satisfy NRC’s general obligation under the Atomic Energy Act to protect public health and safety; CLI-15-4, 81 NRC 221 (2015)

TESTING

inservice testing and inspection program for squib valves in combined license applications is discussed; CLI-15-13, 81 NRC 555 (2015)

intervenors opposed renewal of the nuclear power plant license, and proposed new contentions for increased ultrasonic testing of sand bed epoxy coating integrity; LBP-15-1, 81 NRC 15 (2015)

intervenors’ requests for more testing, more methods of testing, and more information, without an explanation of why the current program is inadequate, do not create a genuine dispute with a license renewal application; LBP-15-1, 81 NRC 15 (2015)

purpose of the testing program for squib valves is to ensure that the valves operate as intended under design conditions; CLI-15-13, 81 NRC 555 (2015)

THEFT

contention that applicant’s revised material control and accounting plan fails to show how confirmation and verification of theft of plutonium will be carried out in the specified timelines is inadmissible; CLI-15-9, 81 NRC 512 (2015)

licensee must be able to rapidly assess the validity of alleged thefts; CLI-15-9, 81 NRC 512 (2015)

SUBJECT INDEX

“power of detection” means the probability that the critical value of a statistical test will be exceeded when there is an actual loss of a specific quantity of strategic special nuclear material; CLI-15-9, 81 NRC 512 (2015)

TIME LIMITED AGING ANALYSES

aging management review is required only for equipment that performs its intended function without moving parts or without a change in configuration or property; LBP-15-6, 81 NRC 314 (2015)

applicants must reassess any TLAAAs to show either that the analyses will remain valid throughout the period of extended operation or that the effects of aging on the subject component will be managed during that time period; CLI-15-6, 81 NRC 340 (2015)

contention that does not actually challenge any specific part of the integrated plant assessment or TLAAAs fails to demonstrate the existence of a genuine dispute with applicant; LBP-15-6, 81 NRC 314 (2015)

license renewal safety review is limited to licensee’s management of aging for certain systems, structures, and components, and review of TLAAAs; LBP-15-5, 81 NRC 249 (2015)

relay switches and snubbers are not subject to an aging management review; LBP-15-6, 81 NRC 314 (2015)

to evaluate a power reactor license renewal application, NRC reviews management of aging effects and TLAAAs of particular safety-related functions of the plant’s systems, structures, and components and environmental impacts and alternatives to the proposed action in accordance; LBP-15-5, 81 NRC 249 (2015)

TRANSFER OF CONTROL

NRC’s transfer of regulatory authority to the State of New Jersey is now final and the licensing board no longer has the jurisdiction it had retained over the proceeding, and the board terminates the proceeding; LBP-15-10, 81 NRC 399 (2015)

TRANSFORMERS

board compared transformers with other types of components listed in 10 C.F.R. 54.21(a)(1)(i) as expressly subject to or excluded from aging management review; CLI-15-6, 81 NRC 340 (2015)

board examined how a transformer performs its intended function to determine whether it undergoes a change in configuration or properties; CLI-15-6, 81 NRC 340 (2015)

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-15-6, 81 NRC 340 (2015)

TRANSMISSION LINES

adequacy of NRC Staff’s review of transmission-corridor impacts might be appropriate for the board’s consideration sua sponte; CLI-15-1, 81 NRC 1 (2015)

Limited Work Authorization Rule expressly excludes transmission lines from the delineated construction activities that would require NRC approval before being undertaken; CLI-15-1, 81 NRC 1 (2015)

proposed transmission-line corridor is discussed; CLI-15-13, 81 NRC 555 (2015)

shared transmission corridor is an offsite transmission line excluded from environmental impact analysis; LBP-15-5, 81 NRC 249 (2015)

TREATIES

Indian tribe’s treaty-based claims of ownership of mining site and international treaty-based claims cannot support the admission of environmental assessment contention; LBP-15-11, 81 NRC 401 (2015)

UNCERTAINTIES

Commission requests briefing from NRC Staff on the level of uncertainty that NRC Staff considers acceptable for the implementation cost portion of the cost-benefit analysis, and why; CLI-15-3, 81 NRC 217 (2015)

decisionmakers must weigh the cost of uncertainty; LBP-15-3, 81 NRC 65 (2015)

UNCONTESTED LICENSE APPLICATIONS

NRC has a duty to ensure, among other things, that it has adhered to its obligations under the National Environmental Policy Act; CLI-15-1, 81 NRC 1 (2015)

URANIUM MILL TAILINGS

“byproduct material” refers to the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed for its source material content; LBP-15-16, 81 NRC 618 (2015)

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URANIUM MINING AND MILLING

admissibility of contention that final environmental assessment failed to conduct the required hard look at impacts of the proposed mine associated with restoration standards and difficulty and cost in achieving them and the use of the alternative standards permitted under the proposed rules is decided; LBP-15-15, 81 NRC 598 (2015)

although 10 C.F.R. Part 40 applies to ISL mining, some of the specific requirements in Part 40, such as many of those in Appendix A, address hazards posed only by conventional uranium milling operations; LBP-15-16, 81 NRC 618 (2015)

although the Part 40, Appendix A criteria were developed for conventional uranium milling facilities, they have since been applied in limited fashion to ISR facilities; LBP-15-3, 81 NRC 65 (2015)

applicant must establish a preoperational monitoring program that must be conducted to provide complete baseline data on a milling site and its environs; LBP-15-16, 81 NRC 618 (2015)

applicant must provide complete baseline data on a milling site and its environs; LBP-15-16, 81 NRC 618 (2015)

“byproduct material” is categorized as tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content; LBP-15-11, 81 NRC 401 (2015)

See also In Situ Leach Mining

VALIDATION

agency’s failure to adequately validate a quantitative model on which it relies may lead the reviewing court to conclude that the agency’s decision is arbitrary, capricious, or contrary to law; LBP-15-20, 81 NRC 829 (2015)

VALVES

after the rulemaking is completed, licensees for new reactors will be required to comply with the ASME code preservice and inservice surveillance provisions for squib valves; CLI-15-13, 81 NRC 555 (2015)

although the Commission found NRC Staff’s review of combined license applications rigorous, it imposed a condition requiring implementation of a squib-valve surveillance program prior to fuel load; CLI-15-13, 81 NRC 555 (2015)

in the event of a severe accident in an AP1000, squib valves, which are explosively activated, reduce pressure and inject water as needed into the reactor vessel; CLI-15-13, 81 NRC 555 (2015)

inservice testing and inspection program for squib valves in combined license applications is discussed; CLI-15-13, 81 NRC 555 (2015)

purpose of the testing program for squib valves is to ensure that the valves operate as intended under design conditions; CLI-15-13, 81 NRC 555 (2015)

VENTILATION SYSTEMS

request that NRC immediately revoke prior preapproval of the hardened vent system or direct torus vent system at GE BWR Mark I units has been addressed by an order modifying licenses; DD-15-1, 81 NRC 193 (2015)

VENTING

existing containment vent systems at BWRs with Mark I containments provide a capability to vent the containment under design-basis conditions; DD-15-1, 81 NRC 193 (2015)

licensees of boiling water reactors with Mark I and II containments are required to design and install a venting system that provides venting capability from the wetwell during severe accident conditions; DD-15-1, 81 NRC 193 (2015)

VERIFICATION

accuracy is an integral component of the regulatory requirement that addresses item presence verification; CLI-15-9, 81 NRC 512 (2015)

any statistical sampling plan for verifying the presence and integrity of strategic special nuclear material items must have at least 99 percent power of detecting item losses that total 5 formula kg or more, plantwide, within 30 calendar days for Category IA items and 60 calendar days for Category IB items contained in a vault or in a permanently controlled access area isolated from the rest of the material access area; CLI-15-9, 81 NRC 512 (2015)

consistency check compares mean and slope of the embrittlement model curve against surveillance data and checks to confirm that outliers fall within acceptable residual values provided in the regulation; LBP-15-17, 81 NRC 753 (2015)

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consistency check is required if three or more surveillance data points measured at three or more different neutron fluences exist for a specific material; LBP-15-17, 81 NRC 753 (2015)

consistency check seeks to compare, for a specific material type, the model's projected embrittlement with the actual embrittlement values at the same fluence provided by material samples; LBP-15-17, 81 NRC 753 (2015)

contention that applicant's revised material control and accounting plan fails to show how confirmation and verification of theft of plutonium will be carried out in the specified timelines is inadmissible; CLI-15-9, 81 NRC 512 (2015)

if fewer than three surveillance data points exist for a specific material, then the embrittlement model must be used without performing the consistency check; LBP-15-17, 81 NRC 753 (2015)

licensees have to verify that their reference temperature calculations at the time of the application match up with surveillance data; LBP-15-17, 81 NRC 753 (2015)

licensees must verify on a statistical sampling basis, the presence and integrity of strategic special nuclear material items; CLI-15-9, 81 NRC 512 (2015)

meaning of "verify" in the context of strategic special nuclear material item presence verification is discussed; CLI-15-9, 81 NRC 512 (2015)

purpose of the consistency check is to determine if the surveillance data show a significantly different trend than the embrittlement model predicts; LBP-15-17, 81 NRC 753 (2015)

three or more samples are required to conduct a consistency check; LBP-15-17, 81 NRC 753 (2015)

VIOLATIONS

licensee's operation of primary coolant pumps contrary to plant licensing and the FSAR is a violation of 10 C.F.R. Part 50, Appendix B, Criterion III; DD-15-3, 81 NRC 713 (2015)

See also Notice of Violation

WAIVER

arguments not raised before the board or not clearly articulated in the petition for review are deemed waived; LBP-15-5, 81 NRC 249 (2015)

WAIVER OF OBJECTION

objection not timely made is considered to be waived; LBP-15-20, 81 NRC 829 (2015)

WAIVER OF RULE

absent a rule waiver, NRC Staff is not expected to revisit the impact determinations made in the Continued Storage GEIS as part of its site-specific NEPA reviews; CLI-15-10, 81 NRC 535 (2015)

absent a waiver, contentions that raise a direct or indirect challenge to a Commission regulation must be rejected; LBP-15-4, 81 NRC 156 (2015); LBP-15-20, 81 NRC 829 (2015)

Category 1 issues are not subject to challenge in a relicensing proceeding, absent a waiver under 10 C.F.R. 2.335, because they involve environmental effects that are essentially similar for all plants and need not be assessed repeatedly on a site-specific basis; LBP-15-5, 81 NRC 249 (2015)

Commission approval of a rule waiver could allow a contention on a Category 1 issue to proceed where special circumstances exist; CLI-15-6, 81 NRC 340 (2015)

conditions necessary for grant of a rule waiver are outlined; LBP-15-6, 81 NRC 314 (2015)

generic environmental analysis is incorporated into NRC regulations, and thus Category 1 generic findings may not be challenged in individual licensing proceedings unless accompanied by a petition for rule waiver; CLI-15-6, 81 NRC 340 (2015)

party can petition for waiver of a specific NRC regulation, based on a showing of special circumstances such that application of the rule would not serve the purposes for which it was adopted; CLI-15-6, 81 NRC 340 (2015); LBP-15-3, 81 NRC 65 (2015); LBP-15-5, 81 NRC 249 (2015); LBP-15-17, 81 NRC 753 (2015)

petition for waiver of a specific NRC regulation must satisfy a four-factor test; LBP-15-17, 81 NRC 753 (2015)

petitioner cannot use one regulation to challenge another without first obtaining a waiver by showing special circumstances; LBP-15-4, 81 NRC 156 (2015)

to challenge a Category 1 issue such as public health, petitioner must request a waiver and show that unique circumstances warrant a site-specific determination; LBP-15-5, 81 NRC 249 (2015)

to obtain waiver of a rule, the allegation of special circumstances must be set forth with particularity and supported by an affidavit or other proof; LBP-15-5, 81 NRC 249 (2015)

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WASTE CONFIDENCE RULE

- all final decisions for licenses that relied on the Waste Confidence Decision and Temporary Storage Rule were suspended; CLI-15-4, 81 NRC 221 (2015)
- Commission directed licensing boards to reject pending waste confidence contentions after adopting a generic environmental impact statement to identify and analyze environmental impacts of continued storage of spent nuclear fuel beyond the licensed life of nuclear reactors; LBP-15-5, 81 NRC 249 (2015)
- in its Waste Confidence Decision, NRC failed to consider environmental impacts of a repository never becoming available, its analysis of spent fuel pool leaks was not forward-looking, and it had not sufficiently considered the consequences of spent fuel pool fires; CLI-15-4, 81 NRC 221 (2015)

WASTE DISPOSAL

- Commission chose to review intervenors' motion along with similar motions in other proceedings and associated petitions to suspend reactor licensing pending issuance of waste confidence safety findings; CLI-15-6, 81 NRC 340 (2015)
- contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 401 (2015)
- environmental waste confidence contentions are dismissed; CLI-15-6, 81 NRC 340 (2015)
- See also Radioactive Waste Disposal

WASTEWATER

- contention that draft EIS is deficient because its evaluation of the operation of the radial collector wells does not preclude the possibility that they will change the plume dynamics of the industrial wastewater facility/cooling canal contaminant plume is inadmissible; LBP-15-19, 81 NRC 815 (2015)
- contention that final environmental assessment fails to conduct the required hard look at impacts of the proposed mine associated with air emissions and liquid waste disposal is admissible in part; LBP-15-11, 81 NRC 401 (2015)

WATER QUALITY

- admissibility of contention that environmental assessment fails to adequately describe and analyze aquifer restoration goals in light of new standards for determining alternative control limits is decided; LBP-15-15, 81 NRC 598 (2015)
- admissibility of contention that environmental documents and associated monitoring values and restoration goals rely on baseline data calculations that are inadequate and unacceptable is decided; LBP-15-15, 81 NRC 598 (2015)
- admissibility of contention that NRC Staff must conduct a new baseline groundwater characterization study of the license renewal area rather than relying on the baseline study conducted during the original license application is decided; LBP-15-11, 81 NRC 401 (2015)
- applicant for a uranium ISR license is required to provide data from a groundwater monitoring program that are sufficient to establish a precertification site characterization baseline for assessing the potential effects of facility operations on local groundwater quality; LBP-15-3, 81 NRC 65 (2015)
- applicant's monitoring program for establishing existing site characterization baseline values for certain site groundwater constituents need not be conducted so as to also provide background information needed to set Appendix A, Criterion 5B groundwater protection standards; LBP-15-3, 81 NRC 65 (2015)
- background water quality data are used to establish existing hazardous constituent concentrations in an aquifer, which can then be used to set post-operational concentration limits; LBP-15-16, 81 NRC 618 (2015)
- "baseline" data describe results of applicant's preoperational or baseline groundwater quality sampling program providing data on project-wide groundwater conditions; LBP-15-16, 81 NRC 618 (2015)
- Commission-approved background cannot be established until after an ISR license has been issued; LBP-15-3, 81 NRC 65 (2015)
- compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act is not a substitute for, and does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality; LBP-15-11, 81 NRC 401 (2015)

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contention that final supplemental environmental impact statement fails to comply with NRC regulations and NEPA because it lacks an adequate description of the present baseline groundwater quality and fails to demonstrate that groundwater samples were collected in a scientifically defensible manner is decided; LBP-15-3, 81 NRC 65 (2015)

determination of background groundwater quality to include sampling of wells that are hydraulically upgradient of the waste management area is not required if non-upgradient well sampling will provide an indication of background groundwater quality that is representative, or more representative, than that provided by upgradient wells; LBP-15-3, 81 NRC 65 (2015)

EPA drinking water maximum contaminant levels continue to be an accepted groundwater restoration standard; LBP-15-3, 81 NRC 65 (2015)

in exempting an aquifer from MCLs, EPA has to find that the aquifer cannot and will not serve as a source of drinking water because it is mineral producing and can be demonstrated to contain minerals that, considering their quantity and location, are expected to be commercially producible; LBP-15-3, 81 NRC 65 (2015)

intervenors fail to establish the validity of their various challenges to the adequacy of the FSEIS description of the baseline water quality at the ISR site; LBP-15-3, 81 NRC 65 (2015)

samples taken from one well located hydrologically upgradient are part of the groundwater sampling protocol; LBP-15-3, 81 NRC 65 (2015)

waiting until after licensing, although before mining operations begin, to definitively establish the groundwater quality baselines and upper control limits is consistent with industry practice and NRC methodology, given the sequential development of in situ leach wellfields; LBP-15-16, 81 NRC 618 (2015)

WATER SUPPLY

contention that environmental assessment has not adequately addressed environmental impacts associated with saltwater intrusion arising from saline water migration from the plant into surrounding waters, and applicant's use of aquifer withdrawals to lower salinity and temperature is admissible; LBP-15-13, 81 NRC 456 (2015)

contention that environmental assessment violates the National Environmental Policy Act in its failure to analyze groundwater quantity impacts of the project is decided; LBP-15-11, 81 NRC 401 (2015)

NRC imposed requirements to provide makeup water independent of offsite power and the normal emergency alternating current power sources to maintain or restore spent fuel pool cooling capability in the event of an accident; DD-15-1, 81 NRC 193 (2015)

WEB SITE

nonstatic nature of a website, in the absence of a stand-alone compact disc/digital video disc that would allow the board or parties to run a locked-down version of the website application, prevents consideration as evidence; LBP-15-3, 81 NRC 65 (2015)

WELDS

pressurized thermal shock screening criterion is given for plates, forgings, and axial and circumferential weld materials; LBP-15-17, 81 NRC 753 (2015)

WETWELL

licensees of boiling water reactors with Mark I and Mark II containments are required to design and install a venting system that provides venting capability from the wetwell during severe accident conditions; DD-15-1, 81 NRC 193 (2015)

WIND ENERGY

failure to provide a direct critique of the environmental report analysis of the potential for offshore power and interconnected wind farms is a failure to identify a genuine dispute with applicant; LBP-15-5, 81 NRC 249 (2015)

petitioners must show concretely that wind could be a reliable, commercially viable source of baseload power during the license renewal period; LBP-15-5, 81 NRC 249 (2015)

WITNESSES, EXPERT

contention admission stage is not the appropriate point at which to evaluate witness credibility or to weigh competing evidence, but an expert must provide a reasoned basis or explanation for opinions in support of a contention; LBP-15-17, 81 NRC 753 (2015)

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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-15-1, 81 NRC 15 (2015)
witness must have enough knowledge in the subject area to allow him to proffer an expert opinion for the purposes of determining contention admissibility; LBP-15-20, 81 NRC 829 (2015)

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