NUCLEAR REGULATORY COMMISSION ISSUANCES

OPINIONS AND DECISIONS OF THE NUCLEAR REGULATORY COMMISSION WITH SELECTED ORDERS

July 1, 2009 – August 20, 2009

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PREFACE

This is Book I of the seventieth volume of issuances (1–564) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from July 1, 2009, to August 20, 2009. Book II covers the period from August 21, 2009, to December 31, 2009.

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

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

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

The Commission also may appoint Administrative Law Judges pursuant to the Administrative Procedure Act, who preside over proceedings as directed by the Commission.

The hardbound edition of the Nuclear Regulatory Commission Issuances is a final compilation of the monthly issuances. It includes all of the legal precedents for the agency within a six-month period. Any opinions, decisions, denials, memoranda and orders of the Commission inadvertently omitted from the monthly softbounds and any corrections submitted by the NRC legal staff to the printed softbound issuances are contained in the hardbound edition. Cross references in the text and indexes are to the NRCI page numbers which are the same as the page numbers in this publication.

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

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

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CONTENTS

Issuances of the Nuclear Regulatory Commission

AREVA ENRICHMENT SERVICES, LLC
(Eagle Rock Enrichment Facility)
Docket 70-7015
Order, CLI-09-15, July 23, 2009 1
PA'INA HAWAII, LLC
Docket 30-36974-ML
Order, CLI-09-17, August 13, 2009 309
SOUTHERN NUCLEAR OPERATING COMPANY
(Vogtle Electric Generating Plant, Units 3 and 4)
Dockets 52-025-COL, 52-026-COL
Memorandum and Order, CLI-09-16, July 31, 2009 33

Issuances of the Atomic Safety and Licensing Boards

ANDREW J. SIEMASZKO
Docket IA-05-021-EA
Order, LBP-09-11, July 16, 2009 151
CALVERT CLIFFS 3 NUCLEAR PROJECT, LLC
(Calvert Cliffs Nuclear Power Plant, Unit 3)
Docket 52-016-COL
Memorandum and Order, LBP-09-15, July 30, 2009 198
COGEMA MINING, INC.
(Irigaray and Christensen Ranch Facilities)
Docket 40-08502-MLR
Memorandum and Order, LBP-09-13, July 23, 2009 168
DAVID B. KUHL, II
(Denial of Senior Reactor Operator License)
Docket 55-62335-SP
Memorandum and Order, LBP-09-14, July 28, 2009 193
DETROIT EDISON COMPANY
(Fermi Nuclear Power Plant, Unit 3)
Docket 52-033-COL
Memorandum and Order, LBP-09-16, July 31, 2009 227
DHIRAJ SONI
Dockets IA-08-023, IA-08-022
Order, LBP-09-12, July 16, 2009 159

EASTERN TESTING AND INSPECTION, INC.
Dockets IA-08-023, IA-08-022
Order, LBP-09-12, July 16, 2009 159
ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)
Docket 50-271-LR
Full Initial Decision, LBP-09-9, July 8, 2009 41
ENTERGY NUCLEAR VERMONT YANKEE, LLC
(Vermont Yankee Nuclear Power Station)
Docket 50-271-LR
Full Initial Decision, LBP-09-9, July 8, 2009 41
HIMAT SONI
Dockets IA-08-023, IA-08-022
Order, LBP-09-12, July 16, 2009 159
LUMINANT GENERATION COMPANY, LLC
(Comanche Peak Nuclear Power Plant, Units 3 and 4)
Dockets 52-034-COL, 52-035-COL
Memorandum and Order, LBP-09-17, August 6, 2009 311
PPL BELL BEND, LLC
(Bell Bend Nuclear Power Plant)
Docket 52-039-COL
Memorandum and Order, LBP-09-18, August 10, 2009 385
PROGRESS ENERGY FLORIDA, INC.
(Levy County Nuclear Power Plant, Units 1 and 2)
Dockets 52-029-COL, 52-030-COL
Memorandum and Order, LBP-09-10, July 8, 2009 51
SOUTHERN NUCLEAR OPERATING COMPANY
(Early Site Permit for Vogtle ESP Site)
Docket 52-011-ESP
Second and Final Partial Initial Decision,
LBP-09-19, August 17, 2009 433
UNISTAR NUCLEAR OPERATING SERVICES, LLC
(Calvert Cliffs Nuclear Power Plant, Unit 3)
Docket 52-016-COL
Memorandum and Order, LBP-09-15, July 30, 2009 198

Indexes

Case Name Index I-1
Legal Citations Index I-5
Cases I-5

Regulations I-63
Statutes I-99
Others I-103
Subject Index I-105
Facility Index I-227

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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Dale E. Klein
Kristine L. Svinicki

In the Matter of **Docket No. 70-7015**

AREVA ENRICHMENT SERVICES, LLC
(Eagle Rock Enrichment Facility) **July 23, 2009**

The Commission provides notice of its docketing and consideration of the 10 C.F.R. Part 70 license application submitted by AREVA Enrichment Services, LLC (AES), for authorization to possess and use source, byproduct, and special nuclear material to enrich natural uranium by the gas centrifuge process at its planned Eagle Rock Enrichment Facility (EREF) to be built in Bonneville County, Idaho. In addition to providing notice of the application, the Commission also gives notice of hearing, Commission guidance on the conduct of the proceeding, and procedures for access to sensitive unclassified nonsafeguards information and safeguards information for contention preparation.

ATOMIC ENERGY ACT: SECTION 193(b) (URANIUM ENRICHMENT FACILITY)

Section 193(b)(1) of the Atomic Energy Act of 1954, as amended (AEA), requires that for license applications for uranium enrichment facilities, "the [Nuclear Regulatory] Commission shall conduct a single adjudicatory hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment facility." 42 U.S.C. § 2243(b) (2000). Sections 70.23a and 70.31(e) of 10 C.F.R. implement this mandate, declaring that before a uranium enrichment facility can be licensed, a hearing is required to be held on that license application.

MANDATORY HEARING: MATTERS FOR CONSIDERATION (URANIUM ENRICHMENT FACILITY)

The matters of fact and law to be considered in a proceeding on an application for a license to construct and operate a uranium enrichment facility are whether the application satisfies the applicable standards in 10 C.F.R. Parts 30, 40, and 70, and whether the requirements of the National Environmental Policy Act of 1969 (NEPA) and the NRC's implementing regulations in 10 C.F.R. Part 51 have been met. *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-3, 59 NRC 10, 13 (2004).

MANDATORY HEARING: SCOPE OF REVIEW (UNCONTESTED MATTERS)

When a proceeding involving an application for a uranium enrichment facility is uncontested, the Licensing Board will determine without conducting a *de novo* evaluation of the application: whether the application and record of the proceeding contain sufficient information to support license issuance; whether the NRC Staff's review of the application has been adequate to support the finding to be made by the Director of the Office of Nuclear Materials Safety and Safeguards; and whether the review conducted by the NRC Staff pursuant to 10 C.F.R. Part 51 has been adequate.

MANDATORY HEARING: SCOPE OF REVIEW (ENVIRONMENT)

Regardless of whether a proceeding on an application for a uranium enrichment facility is contested or uncontested, the Licensing Board will, in its initial decision, in accordance with Subpart A of 10 C.F.R. Part 51: (1) determine whether the requirements of section 102(2)(A), (C), and (E) of NEPA and Subpart A of Part 51 have been complied with in the proceeding; (2) independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; and (3) determine, after weighing the environmental, economic, technical, and other benefits against the environmental and other costs, and considering reasonable alternative, whether a license should be issued, denied, or conditioned to protect environmental values. *See National Enrichment Facility,* CLI-04-3, 59 NRC at 13; *see also* 10 C.F.R. § 2.104(b)(2)(ii).

RULES OF PRACTICE: SCOPE AND TYPE OF PROCEEDING (CONTESTED PROCEEDING; MANDATORY HEARING)

If the proceeding on an application for a uranium enrichment facility becomes

a contested proceeding, the Licensing Board shall make findings of fact and conclusions of law on admitted contentions. Moreover, with respect to matters relating to the applicable standards of 10 C.F.R. Parts 30, 40, and 70, and the adequacy of the Staff's review pursuant to Part 51, but not covered by admitted contentions, the Board will determine, without conducting a *de novo* evaluation of the application: whether the application and record of the proceeding contain sufficient information to support license issuance; whether the NRC Staff's review of the application has been adequate to support the finding to be made by the Director of the Office of Nuclear Materials Safety and Safeguards; and whether the review conducted by the NRC Staff pursuant to 10 C.F.R. Part 51 has been adequate. *See National Enrichment Facility,* CLI-04-3, 59 NRC at 13; *see also* 10 C.F.R. § 2.104(b)(1)(i)-(iv) and (b)(2)(i).

RULES OF PRACTICE: INTERVENTION

To intervene in an NRC proceeding, a petitioner must file a written petition for leave to intervene in accordance with the requirements of 10 C.F.R. § 2.309. In addition to setting forth with particularity the interest of the petitioner in the proceeding and how that interest may be affected by the results of the proceeding, the petitioner must also include at least one contention meeting the requirements of 10 C.F.R. § 2.309(f)(1). Failure of a contention to meet any of the requirements of 10 C.F.R. § 2.309(f)(1) is grounds for its dismissal.

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

For each contention, the petitioner must assert an issue of law or fact that is within the scope of the proceeding and is material to the outcome of the licensing proceeding, meaning that the subject matter of the contention must impact the grant or denial of a pending license application. *See* 10 C.F.R. § 2.309(f)(1)(iv).

NATIONAL ENVIRONMENTAL POLICY ACT: TERRORISM CONTENTIONS

For licensing decisions involving facilities located within the jurisdictional boundaries of the United States Court of Appeals for the Ninth Circuit, the NRC Staff will consider, as part of its NEPA analysis, the potential environmental consequences, if any, were a terrorist attack on the proposed facility to occur. *See Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509 (2008).

ORDER

(Notice of Receipt of Application for License; Notice of Consideration of Issuance of License; Notice of Hearing and Commission Order; and Order Imposing Procedures for Access to Sensitive Unclassified Nonsafeguards Information and Safeguards Information for Contention Preparation)

I. RECEIPT OF APPLICATION AND AVAILABILITY OF DOCUMENTS

Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC or the Commission) received on December 30, 2008, an application, safety analysis report, and environmental report from AREVA Enrichment Services, LLC (AES), for a license to possess and use source, byproduct, and special nuclear material and to enrich natural uranium to a maximum of 5% U-235 by the gas centrifuge process. The plant, to be known as the Eagle Rock Enrichment Facility (EREF), would be located in Bonneville County, Idaho. AES is a Delaware limited liability corporation and is a wholly owned subsidiary of AREVA NC Inc., which is a wholly owned subsidiary of AREVA NC SA, a part of AREVA SA, a corporation formed under the laws of France. On March 12, 2009, the NRC Staff notified AES, by letter, that Staff had completed its acceptance review and had determined that the application was acceptable for formal review. On March 31, 2009, AES notified the NRC of its intent to revise the license application for the EREF to expand the capacity of the facility from 3.3 million separative work units (SWU) per year to 6.6 million SWU per year. Thereafter, on April 23, 2009, AES filed a revised license application. On April 30, 2009, the NRC Staff notified AES that its revised license application was accepted for review. On May 4, 2009, the NRC published notice of its intent to prepare an Environmental Impact Statement (EIS) on the proposed action and the opportunity for public comment on the appropriate scope of issues to be considered in the EIS. *See* 74 Fed. Reg. 20,508 (May 4, 2009).

Copies of AES's application, safety analysis report, and environmental report (except for portions thereof subject to withholding from public inspection in accordance with 10 C.F.R. § 2.390, Availability of Public Records) are available for public inspection at the Commission's Public Document Room (PDR) at One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. These documents are also available for review and copying using any of the following methods: (1) enter the NRC's Gas Centrifuge Enrichment Facility Licensing Web site at http://www.nrc.gov/materials/fuel-cycle-fac/gas-centrifuge.html#correspondence; (2) enter the NRC's Agencywide Documents

Access and Management System (ADAMS) at http://www.nrc.gov/reading-rm/adams.html, where the accession number for AES's application (including AES's safety analysis report and AES's environmental report) is ML090300658, and the accession number for the revised application is ML091210558; (3) contact the PDR by calling (800) 397-4209, faxing a request to (301) 415-3548, or sending a request by electronic mail to pdr@nrc.gov. Hard copies of the documents are available from the PDR for a fee.

As indicated above, the AES's initial and revised applications have been accepted for docketing and formal review (ADAMS Accession Nos. ML090540516 and ML091210040) and, accordingly, the Commission is providing this notice of hearing and notice of opportunity to intervene on AES's application for a license to construct and operate a centrifuge enrichment facility. Pursuant to the Atomic Energy Act of 1954, as amended (Act), the NRC Staff will prepare a safety evaluation report (SER) after reviewing the application and make findings concerning the public health and safety and common defense and security. In addition, pursuant to the National Environmental Policy Act of 1969 (NEPA) and the Commission's regulations in 10 C.F.R. Part 51, the NRC Staff will complete an environmental evaluation and prepare an environmental impact statement (EIS) before the hearing on the issuance of a license is completed. *See* Notice of Intent and Opportunity to Provide Written Comments AREVA Enrichment Services LLC Eagle Rock Enrichment Facility, Idaho Falls, ID, 74 Fed. Reg. 20,508 (May 4, 2009).

In *San Luis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016, 1028 (9th Cir. 2006), *cert. denied,* 127 S. Ct. 1124 (2007), the United States Court of Appeals for the Ninth Circuit held that the NRC NEPA analysis performed as a result of an NRC licensing decision should consider the potential environmental consequences, if any, were a terrorist attack on the facility under review to occur. The Ninth Circuit's holding is in sharp contrast to the position the NRC has consistently taken with respect to this issue, i.e., that NEPA does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks on NRC-licensed facilities. *See AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 129 (2007). The Third Circuit recently upheld the NRC's approach. *See New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132 (3d Cir. 2009) (upholding the NRC's *Oyster Creek* decision). Nonetheless, as of this writing, the Commission remains bound by Ninth Circuit law when, as here, the agency is considering facilities located within the Ninth Circuit's jurisdiction. As the proposed location for the EREF is within the jurisdictional boundaries of the Ninth Circuit, the Commission is obligated to ensure that the EIS prepared by the NRC Staff considers the NEPA-terrorism issue as mandated in *San Luis Obispo Mothers for Peace, supra.*

Accordingly, in keeping with the Commission's directive in *Pacific Gas and*

Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-07-11, 65 NRC 148 (2007),[1] the Commission directs the NRC Staff to address in the EIS the environmental impacts of a terrorist attack at the EREF. To the extent practicable, the NRC Staff should base its environmental analysis on information available in agency records and other information on the EREF design, mitigative, and security arrangements bearing on likely environmental consequences, consistent with the requirements of NEPA, the Ninth Circuit's decision, and the regulations for the protection of sensitive and safeguards information.

The NRC Staff may rely, where appropriate, on qualitative rather than quantitative considerations. In addition, the NRC should rely on as much public information as practicable and make public as much of its environmental analysis as feasible recognizing, however, that it may prove necessary to withhold some facts underlying the Staff's findings and conclusions as "safeguards" information, classified Restricted Data or National Security Information, or sensitive unclassified nonsafeguards information. Further guidance on how the NRC treats NEPA-terrorism contentions is available in the *Diablo Canyon* docket. *See, e.g., Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509 (2008); CLI-08-8, 67 NRC 193 (2008); CLI-08-1, 67 NRC 1 (2008). The *Diablo Canyon* proceeding is again before the Ninth Circuit. *See San Luis Obispo Mothers for Peace v. NRC,* No. 08-75058 (9th Cir.).

When available, the NRC Staff's SER and EIS (except for portions thereof subject to withholding from public inspection in accordance with 10 C.F.R. § 2.390) will also be placed in the PDR and in ADAMS. Copies of correspondence between the NRC and AES, and transcripts of prehearing conferences and hearings (except for portions thereof subject to withholding from public inspection in accordance with 10 C.F.R. § 2.390) similarly will be made available to the public.

If, following the hearing, the Commission is satisfied that AES has complied with the Commission's regulations and the requirements of this Notice and Commission Order and the Commission finds that the application satisfies the applicable standards set forth in 10 C.F.R. Parts 30, 40, and 70, a single license will be issued authorizing: (1) the construction and operation of the Eagle Rock Enrichment Facility; and (2) the receipt, possession, use, delivery, and transfer of byproduct (e.g., calibration sources), source and special nuclear material at the Eagle Rock Enrichment Facility. Prior to commencement of operations of the Eagle Rock Enrichment Facility, if it is licensed, in accordance with section 193(c) of the Act and 10 C.F.R. § 70.32(k), the NRC will verify through inspection

[1] In *San Luis Obispo Mothers for Peace,* the Ninth Circuit explicitly left to the Commission's discretion the manner in which the NRC reviews the NEPA-terrorism issues with respect to the NRC's consideration of the merits and procedural approach.

that the facility has been constructed in accordance with the requirements of the license for such construction and operation. The inspection findings will be published in the *Federal Register.*

II. NOTICE OF HEARING

A. Pursuant to 10 C.F.R. § 70.23a and section 193 of the Act, as amended by the Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990, Pub. L. No. 101-575, § 5, 104 Stat. 2834, 2835-36 (codified as amended at 42 U.S.C. § 2243), a hearing will be conducted according to the rules of practice in 10 C.F.R. Part 2, Subparts A, C, G, and to the extent that classified information becomes involved, Subpart I. The hearing will be held under the authority of sections 53, 63, 189, 191, and 193 of the Act. The Applicant and the NRC Staff shall be parties to the proceeding.

B. Pursuant to 10 C.F.R. Part 2, Subparts C and G, a contested hearing shall be conducted by an Atomic Safety and Licensing Board (Licensing Board) appointed by the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel. Notice as to the membership of the Licensing Board will be published in the *Federal Register* at a later date.

C. The matters of fact and law to be considered are whether the application satisfies the standards set forth in this Notice and Commission Order and the applicable standards in 10 C.F.R. Parts 30, 40, and 70, and whether the requirements of NEPA and the NRC's implementing regulations in 10 C.F.R. Part 51 have been met.

D. If this proceeding is not a contested proceeding, as defined by 10 C.F.R. § 2.4, the Licensing Board will determine the following without conducting a *de novo* evaluation of the application: (1) whether the application and record of the proceeding contain sufficient information to support license issuance and whether the NRC Staff's review of the application has been adequate to support findings to be made by the Director of the Office of Nuclear Materials Safety and Safeguards, with respect to the matters set forth in paragraph C of this section; and (2) whether the review conducted by the NRC Staff pursuant to 10 C.F.R. Part 51 has been adequate.

E. Regardless of whether the proceeding is contested or uncontested, the Licensing Board will, in the initial decision, in accordance with Subpart A of 10 C.F.R. Part 51: determine whether the requirements of section 102(2)(A), (C), and (E) of NEPA and Subpart A of 10 C.F.R. Part 51 have been complied with

in the proceeding; independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; and determine, after weighing the environmental, economic, technical, and other benefits against the environmental and other costs, and considering reasonable alternatives, whether a license should be issued, denied, or appropriately conditioned to protect environmental values.

F. If the proceeding becomes a contested proceeding, the Licensing Board shall make findings of fact and conclusions of law on admitted contentions. With respect to matters set forth in paragraph C of this section, but not covered by admitted contentions, the Licensing Board will make the determinations set forth in paragraph D without conducting a *de novo* evaluation of the application.

III. INTERVENTION

A. By September 28, 2009, any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written petition for leave to intervene. Petitions for leave to intervene shall be filed in accordance with the provisions of 10 C.F.R. 2.309. Interested persons should consult 10 C.F.R. Part 2, section 2.309, which is available at the NRC's PDR, located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, MD (or call the PDR at (800) 397-4209 or (301) 415-4737). NRC regulations are also accessible electronically from the NRC's Electronic Reading Room on the NRC Web site at http://www.nrc.gov.

As required by 10 C.F.R. § 2.309, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding and how that interest may be affected by the results of the proceeding. The petition must provide the name, address, and telephone number of the petitioner and specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) The nature of the petitioner's right under the 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 order that may be entered in the proceeding on the petitioner's interest.

A petition for leave to intervene must also include a specification of the contentions that the petitioner seeks to have litigated in the hearing. For each contention, the petitioner must provide a specific statement of the issue of law or fact to be raised or controverted, as well as a brief explanation of the basis for the contention. Additionally, the petitioner must demonstrate that the issue raised by each contention is within the scope of the proceeding and is material to the findings the NRC must make to support the granting of a license in response to AES's application. The petition must also include a concise statement of the

alleged facts or expert opinions which support the position of the petitioner and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely. Finally, the petition must provide sufficient information to show that a genuine dispute exists with the Applicant on a material issue of law or fact, including references to specific portions of the application that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief. Each contention must be one that, if proven, would entitle the petitioner to relief.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing with respect to resolution of that person's admitted contentions, including the opportunity to present evidence and to submit a cross-examination plan for cross-examination of witnesses, consistent with NRC regulations, policies, and procedures. The Licensing Board will set the time and place for any prehearing conferences and evidentiary hearings, and the appropriate notices will be provided.

Nontimely petitions for leave to intervene and contentions, amended petitions, and supplemental petitions will not be entertained absent a determination by the Commission, the Licensing Board, or a Presiding Officer that the petition should be granted and/or the contentions should be admitted based upon a balancing of the factors specified in 10 C.F.R. § 2.309(c)(1)(i)-(viii).

B. A State, county, municipality, federally recognized Indian Tribe, or agencies thereof, may submit a petition to the Commission to participate as a party under 10 C.F.R. § 2.309(d)(2). The petition should state the nature and extent of the petitioner's interest in the proceeding. The petition should be submitted to the Commission by September 28, 2009. The petition must be filed in accordance with the filing instructions in Section IV, and should meet the requirements for petitions for leave to intervene set forth in Section III.A, except that state and federally recognized Indian tribes do not need to address the standing requirements in 10 C.F.R. § 2.309(d)(1) if the facility is located within its boundaries. The entities listed above could also seek to participate in a hearing as a nonparty pursuant to 10 C.F.R. § 2.315(c).

C. Any person who does not wish, or is not qualified, to become a party to this proceeding may request permission to make a limited appearance pursuant to the provisions of 10 C.F.R. § 2.315(a). A person making a limited appearance may make an oral or written statement of position on the issues, but may not otherwise participate in the proceeding. A limited appearance may be made at any session of the hearing or at any prehearing conference, subject to such limits and

conditions as may be imposed by the Licensing Board. Persons desiring to make a limited appearance are requested to inform the Secretary of the Commission by September 28, 2009.

IV. ELECTRONIC SUBMISSIONS (E-FILING)

All documents filed in NRC adjudicatory proceedings, including a petition for leave to intervene and proffered contentions, any motion or other document filed in the proceeding prior to the submission of a petition to intervene, and documents filed by interested governmental entities participating under 10 C.F.R. § 2.315(c), must be filed in accordance with the NRC E-Filing rule, which the NRC promulgated on August 28, 2007 (72 Fed. Reg. 49,139). The E-Filing process requires participants to submit and serve all adjudicatory documents over the Internet or, in some cases, to mail copies on electronic storage media. Participants may not submit paper copies of their filings unless they seek a waiver in accordance with the procedures described below.

To comply with the procedural requirements of E-Filing, at least ten (10) days prior to the filing deadline, the petitioner must contact the Office of the Secretary by e-mail at Hearing.Docket@nrc.gov, or by calling (301) 415-1677, to request: (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any proceeding in which it is participating; and/or (2) creation of an electronic docket for the proceeding (even in instances in which the petitioner (or its counsel or representative) already holds an NRC-issued digital ID certificate). Each petitioner will need to download the Workplace Forms Viewer™ to access the Electronic Information Exchange (EIE), a component of the E-Filing system. The Workplace Forms Viewer™ is free and is available at http://www.nrc.gov/sitehelp/e-submittals/install-viewer.html. Information about applying for a digital ID certificate is available on NRC's public Web site at http://www.nrc.gov/site-help/e-submittals/apply-certificates.html.

Once a petitioner has obtained a digital ID certificate, had a docket created, and downloaded the EIE viewer, it can then submit a petition for leave to intervene including proffered contentions. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public Web site at http://www.nrc.gov/site-help/e-submittals.html. A filing is considered complete at the time the filer submits its documents through EIE. To be timely, an electronic filing must be submitted to the EIE system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The EIE system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel

and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the documents on those participants separately. Therefore, applicants and other participants (or their counsel or representative) must apply for and receive a digital ID certificate before a petition to intervene is filed so that they can obtain access to the document via the E-Filing system.

A person filing electronically using the agency's adjudicatory E-filing system may seek assistance through the ''Contact Us'' link located on the NRC Web site at http://www.nrc.gov/site-help/e-submittals.html or by calling the NRC electronic filing Help Desk, which is available between 8 a.m. and 8 p.m., Eastern Time, Monday through Friday, excluding government holidays. The toll-free helpline number is (866) 672-7640. A person filing electronically may also seek assistance by sending an e-mail to the NRC electronic filing Help Desk at MSHD.Resource@nrc.gov.

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket which is available to the public at http://ehd.nrc.gov/EHD_Proceeding/home.asp, unless excluded pursuant to an order of the Commission, the Licensing Board, or a Presiding Officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings. With respect to copyrighted works, except for limited excerpts that serve the purpose of the adjudicatory filings and would constitute a Fair Use application, participants are requested not to include copyrighted materials in their submission.

V. COMMISSION GUIDANCE

A. Licensing Board Determination of Contentions

The Licensing Board shall issue a decision on the admissibility of contentions no later than December 28, 2009.

B. Novel Legal Issues

If rulings on petitions, on admissibility of contentions, or the admitted contentions themselves raise novel legal or policy questions, the Commission will provide early guidance and direction on the treatment and resolution of such issues. Accordingly, the Commission directs the Licensing Board to promptly certify to the Commission in accordance with 10 C.F.R. § 2.319(*l*) and 2.323(f) all novel legal or policy issues that would benefit from early Commission consideration should such issues arise in this proceeding.

C. Discovery Management

1. All parties, except the NRC Staff, shall make the mandatory disclosures required by 10 C.F.R. § 2.704(a) and (b) within forty-five (45) days of the issuance of the Licensing Board order admitting contentions.

2. The Licensing Board, consistent with fairness to all parties, should narrow the issues requiring discovery and limit discovery to no more than one round for admitted contentions.

3. All discovery against the NRC Staff shall be governed by 10 C.F.R. § 2.336(b) and 2.709. The NRC Staff shall comply with 10 C.F.R. § 2.336(b) no later than 30 days after the Licensing Board order admitting contentions and shall update the information at the same time as the issuance of the SER or the Final Environmental Impact Statement (FEIS), and, subsequent to the publication of the SER and FEIS, as otherwise required by the Commission's regulations. Discovery under 10 C.F.R. § 2.709 shall not commence until the issuance of the particular document, i.e., SER or EIS, unless the Licensing Board, in its discretion, finds that commencing discovery against the NRC Staff on safety issues before the SER is issued, or on environmental issues before the FEIS is issued will expedite the hearing without adversely affecting the Staff's ability to complete its evaluation in a timely manner.

4. No later than 30 days before the commencement of the hearing at which an issue is to be presented, all parties other than the NRC Staff shall make the pretrial disclosures required by 10 C.F.R. § 2.704(c).

D. Hearing Schedule

In the interest of providing a fair hearing, avoiding unnecessary delays in NRC's review and hearing process, and producing an informed adjudicatory record that supports the licensing determination to be made in this proceeding, the Commission expects that both the Licensing Board and NRC Staff, as well as the Applicant and other parties to this proceeding, will follow the applicable requirements contained in 10 C.F.R. Part 2 and guidance in the Commission's *Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18 (1998) [63 Fed. Reg. 41,872 (Aug. 5, 1998)] to the extent that such guidance is not inconsistent with specific guidance in this Order. The guidance in the *Statement of Policy on Conduct of Adjudicatory Proceedings* is intended to improve the management and the timely completion of the proceeding and addresses hearing schedules, parties' obligations, contentions, and discovery management. In addition, the Commission is providing the following direction for this proceeding:

1. The Commission directs the Licensing Board to set a schedule for the hearing in this proceeding consistent with this Order that establishes, as a goal,

the issuance of a final Commission decision on the pending application within 2 1/2 years (30 months) from the date of this Order. Accordingly, the Licensing Board should issue its decision on either the contested or mandatory hearing, or both, held in this matter no later than 28 1/2 months (855 days) from the date of this Order. Formal discovery against the Staff shall be suspended until after the Staff completes its final SER and EIS in accordance with the direction provided in paragraph C.3, above.

2. The evidentiary hearing with respect to issues should commence promptly after completion of the final Staff documents (SER or EIS) unless the Licensing Board, in its discretion, finds that starting the hearing with respect to one or more safety issues prior to issuance of the final SER[2] (or one or more environmental contentions directed to the Applicant's Environmental Report) will expedite the proceeding without adversely impacting the Staff's ability to complete its evaluations in a timely manner.

3. The Commission also believes that issuing a decision on the pending application within about 2 1/2 years may be reasonably achieved under the rules of practice contained in 10 C.F.R. Part 2 and the enhancements directed by this Order. We do not expect the Licensing Board to sacrifice fairness and sound decisionmaking to expedite any hearing granted on this application. We do expect the Licensing Board to use the applicable techniques specified in: this Order; 10 C.F.R. §§ 2.332, 2.333, and 2.334; and the Commission's *Statement of Policy on the Conduct of Adjudicatory Proceedings* (CLI-98-12, *supra*) to ensure prompt and efficient resolution of contested issues. *See also Statement of Policy on Conduct of Licensing Proceedings,* CLI-81-8, 13 NRC 452 (1981).

4. If this is a contested proceeding, the Licensing Board should adopt the following milestones, in developing a schedule, for conclusion of significant steps in the adjudicatory proceeding.[3]

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[2] The Commission believes that, in the appropriate circumstances, allowing discovery or an evidentiary hearing with respect to safety-related issues to proceed before the final SER is issued will serve to further the Commission's objective, as reflected in the *Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, *supra,* to ensure a fair, prompt, and efficient resolution of contested issues. For example, it may be appropriate for the Board to permit discovery against the Staff and/or the commencement of an evidentiary hearing with respect to safety issues prior to the issuance of the final SER in cases where the Applicant has responded to the Staff's "open items'' and there is an appreciable lag time until the issuance of the final SER, or in cases where the initial SER identifies only a few open items.

[3] This schedule assumes that the SER and FEIS are issued essentially at the same time. If these documents are not to be issued very close in time, the Board should adopt separate schedules but concurrently running for the safety and environmental reviews consistent with the time frames herein for each document.

Within September 28, 2009	Deadline for Requests for Hearing; Petitions to Intervene and Contentions; and Requests for Limited Participation.
Within October 28, 2009	Answers to Requests for Hearing; Petitions to Intervene and Request for Limited Participation.
Within November 9, 2009	Replies to Answers regarding Requests for Hearing; Petitions to Intervene and Request for Limited Participation.
Within November 27, 2009	Licensing Board holds Prehearing Conference to hear arguments on petitions to intervene and contention admissibility.
Within *30 days* of prehearing conference	Licensing Board issues order determining intervention.
	Discovery commences, except against the Staff.
Within *10 days* of the Licensing Board order determining intervention:	Persons admitted or entities participating under 10 C.F.R. § 2.309(d) may submit a motion for reconsideration (see below, in Section VI.B).*
Within *20 days* of the Licensing Board order determining intervention:	Persons admitted or entities participating under 10 C.F.R. § 2.309(d) may respond to any motion for reconsideration.
Within *30 days* of the Licensing Board decision determining intervention:	Staff prepares hearing file.
Date of issuance of final SER/EIS	Staff updates hearing file.
	Discovery commences against the Staff.
Within *20 days* of the issuance of the final SER/EIS:	Motions to amend contentions; motions for late-filed contentions.

Within *40 days* of the issuance of final SER/EIS:	Completion of answers and replies to motions for amended and late-filed contentions.
	Completion of discovery on original contentions.
	Deadline for summary disposition motions on original contentions.**
Within *50 days* of the issuance of the final SER/EIS:	Licensing Board decision on admissibility of late-filed contentions.**
Within *55 days* of the issuance of the final SER/EIS:	Licensing Board determination as to whether resolution of any motion for summary disposition will serve to expedite the proceedings.
Within *65 days* of the issuance of the final SER/EIS:	Answers to motions for summary disposition identified by Licensing Board.
Within *75 days* of the issuance of the final SER/EIS:	Replies to answers to motions for summary disposition.
Within *80 days* of the issuance of final SER/EIS:	Completion of discovery on late-filed contentions.
Within *105 days* of the issuance of the final SER/EIS:	Licensing Board decision on summary disposition motions on original contentions.
Within *115 days* of the issuance of final SER/EIS:	Direct testimony filed on original contentions and any amended or admitted late-filed contentions.
Within *125 days* of the issuance of final SER/EIS:	Cross-examination plans filed on original contentions and any amended or admitted late-filed contentions.
Within *135 days* of the issuance of final SER/EIS:	Evidentiary hearing begins on original contentions and any amended or admitted late-filed contentions.
Within *160 days* of the issuance of final SER/EIS:	Completion of evidentiary hearing on remaining contentions and any amended or admitted late-filed contentions.

Within *205 days* of the issuance of final SER/EIS:	Completion of findings and replies.
Within *245 days* of the issuance of final SER/EIS:	Licensing Board's initial decision.***

*Motions for reconsideration do not stay this schedule.

**No summary disposition motions on late-filed contentions are contemplated.

***The Licensing Board's initial decision with respect to either a contested adjudicatory hearing or an uncontested, mandatory hearing should be issued no later than 28 1/2 months from the date of this Order.

To avoid unnecessary delays in the proceeding, the Licensing Board should not routinely grant requests for extensions of time and should manage the schedule such that the overall hearing process is completed within 28 1/2 months. Although summary disposition motions are included in the schedule above, the Licensing Board shall not entertain motions for summary disposition under 10 C.F.R. § 2.710, unless the Licensing Board finds that such motions, if granted, are likely to expedite the proceeding. Unless otherwise justified, the Licensing Board shall provide for the simultaneous filing of answers to proposed contentions, responsive pleadings, proposed findings of fact, and other similar submittals.

5. Parties are obligated to comply with applicable requirements in 10 C.F.R. Part 2, unless directed otherwise by this Order or the Licensing Board. They are also obligated in their filings before the Licensing Board and the Commission to ensure that their arguments and assertions are supported by appropriate and accurate references to legal authority and factual basis, including, as appropriate, citation to the record. Failure to do so may result in material being stricken from the record or, in extreme circumstances, in a party being dismissed from the proceeding.

6. The Commission directs the Licensing Board to inform the Commission promptly, in writing, if the Licensing Board determines that any single milestone could be missed by more than 30 days. The Licensing Board must include an explanation of why the milestone cannot be met and the measures the Licensing Board will take to mitigate the failure to achieve the milestone and restore the proceeding to the overall schedule.

E. Commission Oversight

As in any proceeding, the Commission retains its inherent supervisory authority over the proceeding to provide additional guidance to the Licensing Board and participants and to resolve any matter in controversy itself.

VI. APPLICABLE REQUIREMENTS

A. Licensing

The Commission will license and regulate byproduct, source, and special nuclear material at the Eagle Rock Enrichment Facility in accordance with the Atomic Energy Act of 1954, as amended. Section 274c(1) of the Act was amended by Public Law 102-486 (October 24, 1992) to require the Commission to retain authority and responsibility for the regulation of uranium enrichment facilities. Therefore, in compliance with law, the Commission will be the sole licensing and regulatory authority with respect to byproduct, source, and special nuclear material for the Eagle Rock Enrichment Facility and with respect to the control and use of any equipment or device in connection therewith.

Many rules and regulations in 10 C.F.R. Chapter I are applicable to the licensing of a person to receive, possess, use, transfer, deliver, and process byproduct, source, and special nuclear material in the quantities that would be possessed at the Eagle Rock Enrichment Facility. These include 10 C.F.R. Parts 19, 20, 21, 25, 30, 40, 51, 70, 71, 73, 74, 95, 140, 170, and 171 for the licensing and regulation of byproduct, source, and special nuclear material, including requirements for notices to workers, reporting of defects, radiation protection, waste disposal, decommissioning funding, and insurance.

With respect to these regulations, the Commission notes that this is the fourth proceeding involving the licensing of an enrichment facility. The Commission issued a number of decisions in earlier proceedings regarding proposed sites in Homer, Louisiana (Claiborne Enrichment Center), Eunice, New Mexico (National Enrichment Facility), and Piketon, Ohio (American Centrifuge Plant). These final decisions, *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-92-7, 35 NRC 93 (1992); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-5, 61 NRC 22, 36 (2005); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-17, 62 NRC 5 (2005); *USEC Inc.* (American Centrifuge Plant), CLI-07-5, 65 NRC 109 (2007); resolve a number of issues concerning uranium enrichment licensing and may be relied upon as precedent.

Consistent with the Act, and the Commission's regulations, the Commission is providing the following direction for licensing uranium enrichment facilities.

1. Environmental Issues

a. General

Part 51 of 10 C.F.R. governs the preparation of an environmental report and

an EIS for a materials license. AES's environmental report and the NRC Staff's associated EIS are to include a statement on the alternatives to the proposed action, including a discussion of the no-action alternative.

b. Treatment of Depleted Uranium Hexafluoride Tails

As to the treatment of the disposition of depleted uranium hexafluoride tails (depleted tails) in these environmental documents, unless AES demonstrates a use for uranium in the depleted tails as a potential resource, the depleted tails will be considered waste. The Commission has previously concluded that depleted uranium from an enrichment facility is appropriately classified as a low-level radioactive waste. *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-5, 61 NRC 22, 36 (2005). An approach for disposition of tails that is consistent with the USEC Privatization Act, such as transfer to DOE for disposal, constitutes a "plausible strategy" for disposition of the AES depleted tails. *Id.* The NRC Staff may consider the Department of Energy's Final Programmatic Environmental Impact Statement for Alternative Strategies for the Long-Term Management and Use of Depleted Uranium Hexaflouride (DOE/EIS-0269), 64 Fed. Reg. 43,358 (Aug. 10, 1999), in preparing the Staff's EIS. Alternatives for the disposition of depleted uranium tails will need to be addressed in these documents. As part of the licensing process, AES must also address the health, safety, and security issues associated with the storage of depleted uranium tails onsite pending removal of the tails from the site for disposal or DOE dispositioning.

2. Financial Qualifications

Review of financial qualifications for enrichment facility license applications is governed by 10 C.F.R. Part 70. In *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 309 (1997) the Commission held that the 10 C.F.R. Part 70 financial criteria, 10 C.F.R. §§ 70.22(a)(8) and 70.23(a)(5), could be met by conditioning the LES license to require funding commitments to be in place prior to construction and operation. The specific license condition approved in that proceeding, which addressed a minimum equity contribution of 30% from the parents and affiliates of LES partners prior to construction of the associated capacity and having in place long-term enrichment contracts with prices sufficient to cover both construction and operating costs, including a return on investment, for the entire term of the contracts prior to constructing or operating the facility, is one way to satisfy the requirements of 10 C.F.R. Part 70.

3. Antitrust Review

Section 105 of the Act conferred on the NRC certain antitrust responsibilities with respect to applications for section 103 or 104b licenses to construct or operate utilization or production facilities filed prior to August 8, 2005. The AES enrichment facility, the application for which was filed after August 8, 2005, is subject to sections 53 and 63 of the Act, and is not a production or utilization facility within the meaning of section 105. Consequently, the NRC does not have antitrust responsibilities for AES. The NRC will not entertain or consider antitrust issues in connection with the AES application in this proceeding.

4. Foreign Ownership

The AES application is governed by sections 53 and 63 of the Act, and consequently issues of foreign involvement shall be determined pursuant to sections 57 and 69, not sections 103, 104, or 193(f). Sections 57 and 69 of the Act require, among other things, an affirmative finding by the Commission that issuance of a license for the Eagle Rock Enrichment Facility will not be "inimical to the common defense and security." The requirements of sections 57 and 69 are incorporated in 10 C.F.R. § 70.31 and 10 C.F.R. § 40.32, respectively.

5. Creditor Requirements

Pursuant to section 184 of the Act, the creditor regulations in 10 C.F.R. § 50.81 shall apply to the creation of creditor interests in equipment, devices, or important parts thereof, capable of separating the isotopes of uranium or enriching uranium in the isotope U-235. In addition, the creditor regulations in 10 C.F.R. § 70.44 shall apply to the creation of creditor interests in special nuclear material. These creditor regulations may be augmented by license conditions as necessary to allow ownership arrangements (such as sale and leaseback) not covered by 10 C.F.R. § 50.81, provided it can be found that such arrangements are not inimical to the common defense and security of the United States.

6. Classified Information

All matters of classification of information related to the design, construction, operation, and safeguarding of the Eagle Rock Enrichment Facility shall be governed by classification guidance in "DOE Classification Guide for Isotope Separation by the Gas Centrifuge Process" (June 2002); Change 1 (Sept. 2005); Change 2 (May 2007) (CG-ICG-1); "Joint NRC/DOE Classification Guide for Louisiana Energy Services Gas Centrifuge Plant (U)," Confidential RD (Jan. 2008) (CG-LCP-3A); and "Joint NRC/DOE Class. Guide for Louisiana Energy

Services Gas Centrifuge Plant Safeguards & Security (U)," OUO (Jan. 2008) (CG-LCP-3B), and any later versions thereof. Any person producing such information must adhere to the criteria in CG-IGC-1, CG-LCP-3A, and CG-LCP-3B. All decisions on questions of classification or declassification of information shall be made by appropriate classification officials in the NRC and are not subject to *de novo* review in this proceeding.

7. Access to Classified Information

Portions of AES's application for a license are classified Restricted Data or National Security Information. Persons needing access to those portions of the application will be required to have the appropriate security clearance for the level of classified information to which access is required. Access requirements apply equally to intervenors, their witnesses and counsel, employees of the Applicant, its witnesses and counsel, NRC personnel, and others. Any person who believes that he or she will have a need for access to classified information for the purpose of this licensing proceeding, including the hearing, should immediately contact the NRC, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555, for information on the clearance process. Telephone calls may be made to Breeda Reilly, Senior Project Manager, Advanced Fuel Cycle, Enrichment, and Uranium Conversion Branch. Telephone: (301) 492-3110.

8. Obtaining NRC Security Facility Approval for Safeguarding Classified Information Received or Developed Pursuant to 10 C.F.R. Part 95

Any person who requires possession of classified information in connection with the licensing proceeding may process, store, reproduce, transmit, or handle classified information only in a location for which facility security approval has been obtained from the NRC's Division of Security Operations (NSIR), Washington, DC 20555. Telephone calls may be made to A. Lynn Silvious, Chief, Information Security Branch. Telephone: (301) 415-2214.

B. Reconsideration

The above guidance does not foreclose the Applicant, any person admitted as a party to the hearing, or an entity participating under 10 C.F.R. § 2.315(c) from litigating material factual issues necessary for resolution of contentions in this proceeding. Persons permitted to intervene and entities participating under 10 C.F.R. § 2.315(c) as of the date of the order on intervention may also move the Commission to reconsider any portion of Section VI of this Notice and Commission Order where there is no clear Commission precedent or

unambiguously governing statutes or regulations. Any motion to reconsider must be filed within 10 days after the order on intervention. The motion must contain all technical or other arguments to support the motion. Other persons granted intervention and entities participating under 10 C.F.R. § 2.315(c), including the Applicant and the NRC Staff, may respond to motions for reconsideration within 20 days of the order on intervention. Motions will be ruled upon by the Commission. A motion for reconsideration does not stay the schedule set out above in Section III.D.4. However, if the Commission grants a motion for reconsideration, it will, as necessary, provide direction on adjusting the hearing schedule.

VII. NOTICE OF INTENT REGARDING CLASSIFIED INFORMATION

As noted above, a hearing on this application will be governed by 10 C.F.R. Part 2, Subparts A, C, G, and to the extent classified material becomes involved, Subpart I. Subpart I requires in accordance with 10 C.F.R. § 2.907 that the NRC Staff file a notice of intent if, at the time of publication of Notice of Hearing, it appears that it will be impracticable for the Staff to avoid the introduction of Restricted Data or National Security Information into a proceeding. The Applicant has submitted portions of its application that are classified. The Commission notes that, since the entire application may become part of the record of the proceeding, the NRC Staff has found it impracticable for it to avoid the introduction of Restricted Data or National Security Information into the proceeding.

VIII. ORDER IMPOSING PROCEDURES FOR ACCESS TO SENSITIVE UNCLASSIFIED NONSAFEGUARDS INFORMATION AND SAFEGUARDS INFORMATION FOR CONTENTION PREPARATION

A. This Order contains instructions regarding how potential parties to this proceeding may request access to documents containing sensitive unclassified information (including Sensitive Unclassified Nonsafeguards Information (SUNSI) and Safeguards Information (SGI)). Requirements for access to SGI are primarily set forth in 10 C.F.R. Parts 2 and 73. The intent of this Order is to make those requirements more specific to this proceeding; however, nothing in this Order is intended to conflict with the SGI regulations.

B. Within 10 days after publication of this notice of hearing and opportunity to petition for leave to intervene, any potential party as defined in 10 C.F.R. § 2.4

who believes access to SUNSI or SGI is necessary for a response to the notice may request access to SUNSI or SGI. A "potential party" is any person who intends or may intend to participate as a party by demonstrating standing and filing an admissible contention under 10 C.F.R. § 2.309. Requests for access to SUNSI or SGI submitted later than 10 days after publication will not be considered absent a showing of good cause for the late filing, addressing why the request could not have been filed earlier.

C. The requester shall submit a letter requesting permission to access SUNSI and/or SGI to the Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff, and provide a copy to the Associate General Counsel for Hearings, Enforcement and Administration, Office of the General Counsel, Washington, DC 20555-0001. The expedited delivery or courier mail address for both offices is: U.S. Nuclear Regulatory Commission, 11555 Rockville Pike, Rockville, MD 20852. The e-mail address for the Office of the Secretary and the Office of the General Counsel are HearingDocket@nrc.gov and OGCmailcenter@nrc.gov, respectively.[4] The request must include the following information:

1. A description of the licensing action with a citation to the *Federal Register* notice of hearing and opportunity to petition for leave to intervene;

2. The name and address of the potential party and a description of the potential party's particularized interest that could be harmed by the action identified in C.1;

3. If the request is for SUNSI, the identity of the individual or entity requesting access to SUNSI and the requester's basis for the need for the information in order to meaningfully participate in this adjudicatory proceeding. In particular, the request must explain why publicly available versions of the information requested would not be sufficient to provide the basis and specificity for a proffered contention;

4. If the request is for SGI, the identity of each individual who would have access to SGI if the request is granted, including the identity of any expert, consultant, or assistant who will aid the requester in evaluating the SGI. In addition, the request must contain the following information:

a. A statement that explains each individual's "need to know" the SGI, as required by 10 C.F.R. § 73.2 and 10 C.F.R. § 73.22(b)(1). Consistent

[4] While a request for hearing or petition to intervene in this proceeding must comply with the filing requirements of the NRC's "E-Filing Rule,'' the initial request to access SUNSI and/or SGI under these procedures should be submitted as described in this paragraph.

with the definition of "need to know" as stated in 10 C.F.R. § 73.2, the statement must explain:

(i) Specifically why the requestor believes that the information is necessary to enable the requestor to proffer and/or adjudicate a specific contention in this proceeding;[5] and

(ii) The technical competence (demonstrable knowledge, skill, training, or education) of the requester to effectively utilize the requested SGI to provide the basis and specificity for a proffered contention. The technical competence of a potential party or its counsel may be shown by reliance on a qualified expert, consultant, or assistant who satisfies these criteria.

b. A completed Form SF-85, "Questionnaire for Non-Sensitive Positions" for each individual who would have access to SGI. The completed Form SF-85 will be used by the Office of Administration to conduct the background check required for access to SGI, as required by 10 C.F.R. Part 2, Subpart G, and 10 C.F.R. § 73.22(b)(2), to determine the requestor's trustworthiness and reliability. For security reasons, Form SF-85 can only be submitted electronically through the electronic questionnaire for investigations processing (e-QIP) website, a secure website that is owned and operated by the Office of Personnel Management. To obtain online access to the form, the requester should contact the NRC's Office of Administration at 301-492-3524.[6]

c. A completed Form FD-258 (fingerprint card), signed in original ink, and submitted in accordance with 10 C.F.R. § 73.57(d). Copies of Form FD-258 may be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-001, by calling (301) 415-7232 or (301) 492-7311, or by e-mail to Forms.Resource@nrc.gov. The fingerprint card will be used to satisfy the requirements of 10 C.F.R. Part 2, 10 C.F.R. § 73.22(b)(1), and section 149 of the Atomic Energy Act of 1954, as amended, which mandates that all persons

[5] Broad SGI requests under these procedures are unlikely to meet the standard for need to know; furthermore, Staff redaction of information from requested documents before their release may be appropriate to comport with this requirement. These procedures do not authorize unrestricted disclosure or less scrutiny of a requester's need to know than ordinarily would be applied in connection with an already-admitted contention or nonadjudicatory access to SGI.

[6] The requester will be asked to provide his or her full name, social security number, date and place of birth, telephone number, and e-mail address. After providing this information, the requester usually should be able to obtain access to the online form within 1 business day.

with access to SGI must be fingerprinted for an FBI identification and criminal history records check;

d. A check or money order payable in the amount of $200.00[7] to the U.S. Nuclear Regulatory Commission for each individual for whom the request for access has been submitted, and

e. If the requester or any individual who will have access to SGI believes they belong to one or more of the categories of individuals that are exempt from the criminal history records check and background check requirements, as stated in 10 C.F.R. § 73.59, the requestor should also provide a statement specifically stating which exemption the requestor is invoking, and explaining the requestor's basis for believing that the exemption is applicable. While processing the request, the Office of Administration, Personnel Security Branch, will make a final determination whether the stated exemption applies. Alternatively, the requestor may contact the Office of Administration for an evaluation of their exemption status prior to submitting their request. Persons who are exempt from the background check are not required to complete the SF-85 or Form FD-258; however, all other requirements for access to SGI, including the need to know, are still applicable.

Note: Copies of documents and materials required by paragraphs C.4.b, 4.c, and 4.d of this Order must be sent to the following address:

Office of Administration
U.S. Nuclear Regulatory Commission
Personnel Security Branch
Mail Stop TWB-05-B32M
Washington, DC 20555-0012.

These documents and materials should not be included with the request letter to the Office of the Secretary, but the request letter should state that the forms and fees have been submitted as required above.

D. To avoid delays in processing requests for access to SGI, the requestor should review all submitted materials for completeness and accuracy (including legibility) before submitting them to the NRC. The NRC will return incomplete packages to the sender without processing.

E. Based on an evaluation of the information submitted under paragraphs

[7] This fee is subject to change pursuant to the Office of Personnel Management's adjustable billing rates.

C.3 or C.4, above, as applicable, the NRC Staff will determine within 10 days of receipt of the written access request whether:

1. There is a reasonable basis to believe the petitioner is likely to establish standing to participate in this NRC proceeding; and

2. The requestor has established a legitimate need for access to SUNSI or need to know the SGI requested.

F. For requests for access to SUNSI, if the NRC Staff determines that the requestor satisfies both E.1 and E.2, above, the NRC Staff will notify the requestor in writing that access to SUNSI has been granted. The written notification will contain instructions on how the requestor may obtain copies of the requested documents, and any other conditions that may apply to access to those documents. These conditions may include, but not be limited to, the signing of a Nondisclosure Agreement or Affidavit, or Protective Order[8] setting forth terms and conditions to prevent the unauthorized or inadvertent disclosure of SUNSI by each individual who will be granted access to SUNSI.

G. For requests for access to SGI, if the NRC Staff determines that the requestor has satisfied both E.1 and E.2, above, the Office of Administration will then determine, based upon completion of the background check, whether the proposed recipient is trustworthy and reliable, as required for access to SGI by 10 C.F.R. § 73.22(b). If the Office of Administration determines that the individual or individuals are trustworthy and reliable, the NRC will promptly notify the requestor in writing. The notification will provide the names of approved individuals as well as the conditions under which the SGI will be provided. Those conditions may include, but not be limited to, the signing of a Nondisclosure Agreement or Affidavit, or Protective Order[9] by each individual who will be granted access to SGI.

H. Release and Storage of SGI

Prior to providing SGI to the requestor, the NRC Staff will conduct (as necessary) an inspection to confirm that the recipient's information protection system is sufficient to satisfy the requirements of 10 C.F.R. § 73.22. Alternatively,

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[8] Any motion for Protective Order or draft Nondisclosure Affidavit or Agreement for SUNSI must be filed with the presiding officer or the Chief Administrative Judge if the presiding officer has not yet been designated, within 30 days of the deadline for the receipt of the written access request.

[9] Any motion for Protective Order or draft Nondisclosure Affidavit or Agreement for SGI must be filed with the presiding officer or the Chief Administrative Judge if the presiding officer has not yet been designated, within 180 days of the deadline for the receipt of the written access request.

recipients may opt to view SGI at an approved SGI storage location rather than establish their own SGI protection program to meet SGI protection requirements.

I. Filing of Contentions

Any contentions in these proceedings that are based upon the information received as a result of the request made for SUNSI or SGI must be filed by the requestor no later than 25 days after receipt of (or access to) that information. However, if more than 25 days remain between the petitioner's receipt of (or access to) the information and the deadline for filing all other contentions (as established in the notice of hearing or opportunity for hearing), the petitioner may file its SUNSI or SGI contentions by that later deadline.

J. Review of Denials of Access

1. If the request for access to SUNSI or SGI is denied by the NRC Staff either after a determination on standing and need to know, or after a determination on trustworthiness and reliability, the NRC Staff shall immediately notify the requestor in writing, briefly stating the reason or reasons for the denial.

2. Before the Office of Administration makes an adverse determination regarding the proposed recipient(s) trustworthiness and reliability for access to SGI, the Office of Administration, in accordance with 10 C.F.R. § 2.705(c)(3)(iii), must provide the proposed recipient(s) any records that were considered in the trustworthiness and reliability determination, including those required to be provided under 10 C.F.R. § 73.57(e)(1), so that the proposed recipient is provided an opportunity to correct or explain information.

3. The requester may challenge the NRC Staff's adverse determination with respect to access to SUNSI by filing a challenge within 5 days of receipt of that determination with: (a) the presiding officer designated in this proceeding; (b) if no presiding officer has been appointed, the Chief Administrative Judge, or if he or she is unavailable, another administrative judge, or an administrative law judge with jurisdiction pursuant to 10 C.F.R. § 2.318(a); or (c) if another officer has been designated to rule on information access issues, with that officer.

4. The requester may challenge the NRC Staff's or Office of Administration's adverse determination with respect to access to SGI by filing a request for review in accordance with 10 C.F.R. § 2.705(c)(3)(iv). Further appeals of decisions under this paragraph must be made pursuant to 10 C.F.R. § 2.311.

K. Review of Grants of Access

A party other than the requester may challenge an NRC Staff determination

granting access to SUNSI or SGI whose release would harm that party's interest independent of the proceeding. Such a challenge must be filed with the Chief Administrative Judge within 5 days of the notification by the NRC Staff of its grant of access.

If challenges to the NRC Staff determinations are filed, these procedures give way to the normal process for litigating disputes concerning access to information. The availability of interlocutory review by the Commission of orders ruling on such NRC Staff determinations (whether granting or denying access) is governed by 10 C.F.R. § 2.311.[10]

L. The Commission expects that the NRC Staff and presiding officers (and any other reviewing officers) will consider and resolve requests for access to SUNSI or SGI, and motions for protective orders, in a timely fashion in order to minimize any unnecessary delays in identifying those Petitioners who have standing and who have propounded contentions meeting the specificity and basis requirements in 10 C.F.R. Part 2. Attachment 1 to this Order summarizes the general target schedule for processing and resolving requests under these procedures.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK
Secretary of the Commission

Dated at Rockville, Maryland,
this 23d day of July 2009.

[10] As of October 15, 2007, the NRC's final "E-Filing Rule'' became effective. *See* Use of Electronic Submissions in Agency Hearings (72 Fed. Reg. 49,139 (Aug. 28, 2007)). Requesters should note that the filing requirements of that rule apply to appeals of NRC Staff determinations (because they must be served on a presiding officer or the Commission, as applicable), but not to the initial SUNSI/SGI requests submitted to the NRC Staff under these procedures.

Chairman Gregory B. Jaczko, Offering a Separate Statement

I support issuance of this Order in large part. I welcome the important and statutorily protected opportunity for interested members of the public to participate in our hearing process and to have their concerns heard. This notice begins that public process and is, therefore, an important milestone in that respect.

I am, however, troubled by the tight schedule outlined in the Order. The time frames outlined in the schedule are dependent upon reduced time frames for the Applicant to respond to Staff's requests for additional information. While that may appear advantageous to the Applicant, it actually disadvantages everyone — the Applicant, the Staff and the public — because we lose predictability. The agency has no control over either the timeliness or quality of the Applicant's responses to requests for additional information. Moreover, I believe the numerous specific time frames provided in the order are also unnecessary. With the milestones and specific time frames already provided in Part 2 of our regulations, the agency currently has the structure in place to ensure an efficient and effective hearing process, while still providing flexibility to adapt to the dynamic environment of adjudicatory hearings.

Finally, I believe the Order should be revised to reflect that the Commission, rather than the licensing board, should preside over the mandatory hearing. Gaining experience through this mandatory proceeding will aid the Commission in handling the mandatory hearings on new reactor proceedings required for licensing decisions which are on the horizon.

**Commissioners Dale E. Klein and Kristine L. Svinicki,
Offering a Further Statement**

We support issuance of this Order, in its entirety. As noted in the U.S. NRC Strategic Plan, initiatives such as the Government Performance and Results Act challenge federal agencies to become more effective and efficient and to justify their budget requests with demonstrated program results. The drive to improve performance in government, coupled with increasing licensing workload, clearly indicates a need for the agency to become more effective and efficient in light of these demands. With this in mind, the NRC has formally adopted strategic goals in the area of organizational excellence, including the following: "NRC actions are high quality, efficient, timely, and realistic, to enable the safe and beneficial use of radioactive materials."

The NRC has recognized, in setting its strategic goals and through its performance and accountability reporting, that the efficiency of the agency's regulatory processes is important to the regulated community and other stakeholders, including federal, state, local, and tribal authorities and the public. The NRC has committed itself to improving the timeliness of its application reviews without compromising safety and security, and acknowledges that this is possible provided industry submits complete, high-quality applications. Quoting again from the NRC Strategic Plan: "While the NRC will never compromise safety and security for increased efficiency, the agency works to improve the efficiency of its regulatory processes wherever possible."

High quality — on both the agency's and the applicant's parts — should be, and is, the NRC's goal. The proceeding at issue here is no exception. We believe that the schedule laid out in the Order — while demanding the requisite quality in licensee submittals — has been demonstrated for similar applications, is achievable with no compromise to the agency's safety and security missions, and is representative of the performance expectations the NRC should set for itself.

ATTACHMENT 1

General Target Schedule for Processing and Resolving Requests for Access to Sensitive Unclassified Nonsafeguards Information and Safeguards Information in This Proceeding

Day	Event/Activity
0	Publication of *Federal Register* notice of hearing and opportunity to petition for leave to intervene, including order with instructions for access requests.
10	Deadline for submitting requests for access to Sensitive Unclassified Nonsafeguards Information (SUNSI) and/or Safeguards Information (SGI) with information: supporting the standing of a potential party identified by name and address; describing the need for the information in order for the potential party to participate meaningfully in an adjudicatory proceeding; demonstrating that access should be granted (e.g., showing technical competence for access to SGI); and, for SGI, including application fee for fingerprint/background check.
60	Deadline for submitting petition for intervention containing: (i) Demonstration of standing; (ii) all contentions whose formulation does not require access to SUNSI and/or SGI (+25 Answers to petition for intervention; +7 petitioner/requestor reply).
20	Nuclear Regulatory Commission (NRC) Staff informs the requester of the Staff's determination whether the request for access provides a reasonable basis to believe standing can be established and shows (1) need for SUNSI or (2) need to know for SGI. (For SUNSI, NRC Staff also informs any party to the proceeding whose interest independent of the proceeding would be harmed by the release of the information.) If NRC Staff makes the finding of need for SUNSI and likelihood of standing, NRC Staff begins document processing (preparation of redactions or review of redacted documents). If NRC Staff makes the finding of need to know for SGI and likelihood of standing, NRC Staff begins background check (including fingerprinting for a criminal history records check), information processing (preparation of redactions or review of redacted documents), and readiness inspections.

25	If NRC Staff finds no "need," no "need to know," or no likelihood of standing, the deadline for petitioner/requester to file a motion seeking a ruling to reverse the NRC Staff's denial of access; NRC Staff files copy of access determination with the presiding officer (or Chief Administrative Judge or other designated officer, as appropriate). If NRC Staff finds "need" for SUNSI, the deadline for any party to the proceeding whose interest independent of the proceeding would be harmed by the release of the information to file a motion seeking a ruling to reverse the NRC Staff's grant of access.
30	Deadline for NRC Staff reply to motions to reverse NRC Staff determination(s).
40	(Receipt +30) If NRC Staff finds standing and need for SUNSI, deadline for NRC Staff to complete information processing and file motion for Protective Order and draft Nondisclosure Affidavit. Deadline for applicant/licensee to file Nondisclosure Agreement for SUNSI.
190	(Receipt +180) If NRC Staff finds standing, need to know for SGI, and trustworthiness and reliability, deadline for NRC Staff to file motion for Protective Order and draft Nondisclosure Affidavit (or to make a determination that the proposed recipient of SGI is not trustworthy or reliable). Note: Before the Office of Administration makes an adverse determination regarding access to SGI, the proposed recipient must be provided an opportunity to correct or explain information.
205	Deadline for petitioner to seek reversal of a final adverse NRC Staff determination either before the presiding officer or another designated officer.
A	If access granted: Issuance of presiding officer or other designated officer decision on motion for protective order for access to sensitive information (including schedule for providing access and submission of contentions) or decision reversing a final adverse determination by the NRC Staff.
A + 3	Deadline for filing executed Nondisclosure Affidavits. Access provided to SUNSI and/or SGI consistent with decision issuing the protective order.

A + 28	Deadline for submission of contentions whose development depends upon access to SUNSI and/or SGI. However, if more than 25 days remain between the petitioner's receipt of (or access to) the information and the deadline for filing all other contentions (as established in the notice of hearing or opportunity for hearing), the petitioner may file its SUNSI or SGI contentions by that later deadline.
A + 53	(Contention receipt +25) Answers to contentions whose development depends upon access to SUNSI and/or SGI.
A + 60	(Answer receipt +7) Petitioner/Intervenor reply to answers.
>A + 60	Decision on contention admission.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Dale E. Klein
Kristine L. Svinicki

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

SOUTHERN NUCLEAR OPERATING COMPANY
(Vogtle Electric Generating Plant, Units 3 and 4)

July 31, 2009

STANDARD OF REVIEW

The Commission will give substantial deference to a board's rulings on contention admissibility in the absence of clear error or abuse of discretion.

MEMORANDUM AND ORDER

This proceeding concerns the application of Southern Nuclear Operating Company (SNC) for a combined license (COL) under 10 C.F.R. Part 52 to construct and operate two new nuclear reactor units (proposed Units 3 and 4) at the Vogtle Electric Generating Plant (Vogtle) site in Georgia. The NRC Staff (Staff) and SNC have appealed LBP-09-3, an Atomic Safety and Licensing Board decision granting the intervention petition filed by five organizations — the Center for a Sustainable Coast, Savannah Riverkeeper, the Southern Alliance for Clean Energy, Atlanta Women's Action for New Directions, and the Blue Ridge

Environmental Defense League (collectively, Intervenors).[1] Intervenors oppose the appeals filed by SNC and the Staff.[2] We decline to disturb the Board's decision to admit Contention SAFETY-1.

I. BACKGROUND

On March 5, 2009, the Board issued LBP-09-3, which found that Intervenors had demonstrated standing and had submitted one admissible contention, Contention SAFETY-1.[3] Based on these findings, the Board granted the intervention petition.

In proposed Contention SAFETY-1, Intervenors argued that SNC's COL application was insufficient because it failed to address long-term storage of low-level radioactive waste (LLRW) at the Vogtle site. The contention is founded on the premise that, following closure of the Barnwell, South Carolina disposal site to waste generated outside the Atlantic Compact, there currently is no licensed facility in the United States that is available to accept and dispose of certain LLRW that would be generated by the operation of Vogtle Units 3 and 4. As originally proffered, the contention stated:

> SNC's [COL application] is incomplete because the FSAR [Final Safety Analysis Report] fails to consider how SNC will comply with NRC regulations governing storage and disposal of LLRW in the event an off-site waste disposal facility remains unavailable when [Vogtle] Units 3 and 4 begin operations.[4]

The Board rejected the portion of the contention relating to disposal of LLRW, reiterating that issues governing disposal pursuant to 10 C.F.R. Part 61 are not within the scope of COL proceedings,[5] but otherwise admitted a virtually identical version of the contention:

> SNC's [COL application] is incomplete because the FSAR fails to provide any detail as to how SNC will comply with NRC regulations governing storage of LLRW in

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[1] *See* Southern Nuclear Operating Company's Brief in Support of Appeal of LBP-09-03 (Mar. 14, 2009) (SNC Appeal); NRC Staff Notice of Appeal of LBP-09-03, Memorandum and Order (Ruling on Standing and Contention Admissibility), and Accompanying Brief (Mar. 16, 2009) (Staff Appeal).

[2] *See* Joint Intervenors' Brief in Opposition of Appeal (Mar. 24, 2009).

[3] LBP-09-3, 69 NRC 139 (2009). In addition, the Board referred to us its ruling declining to admit Contentions MISC-1 and MISC-2. We recently declined to review the referred rulings. CLI-09-13, 69 NRC 575 (2009).

[4] Petition for Intervention at 14 (Nov. 17, 2008).

[5] LBP-09-3, 69 NRC at 163.

> the event an off-site waste disposal facility remains unavailable when [Vogtle] Units 3 and 4 begin operations.[6]

As reformulated, the Board admitted this contention as one of omission, finding that the contention and its foundation were "sufficient to establish a genuine material dispute adequate to warrant further inquiry."[7] The Board distinguished the contention before it from a similar contention in the *Bellefonte* COL proceeding, which we recently rejected.[8]

II. DISCUSSION

We will give substantial deference to a Board's rulings on contention admissibility in the absence of clear error or abuse of discretion.[9]

At issue here are the requirements of 10 C.F.R. § 52.79(a)(3), which states as follows:

> (a) The [COL] application must contain a final safety analysis report that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components of the facility as a whole. The final safety analysis report shall include the following information, at a level of information sufficient to enable the Commission to reach a final conclusion on all safety matters that must be resolved by the Commission before issuance of a combined license:
>
> . . . .
>
> (3) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in part 20 of this chapter.

The Board agreed with Intervenors' assertion, raised in their reply filing, that this regulation requires COL applicants to consider long-term onsite LLRW

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[6] *Id.* at 169 (App. A).

[7] *Id.* at 160.

[8] *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 413-15 (2008), *rev'd,* CLI-09-3, 69 NRC 68, 78 (2009). In particular, the Board observed that the contention admitted in the *Bellefonte* proceeding focused exclusively on the regulations governing waste disposal, whereas Contention SAFETY-1 also was grounded in 10 C.F.R. Parts 20 and 52. LBP-09-3, 69 NRC at 161-62.

[9] *See Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 336 (2009); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 121 (2006); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-855, 24 NRC 792, 795 (1986).

storage, and reasoned, "we do not see how, if offsite disposal for LLRW remains unavailable, a COL applicant could address compliance with 10 C.F.R. Part 20 limits in accordance with section 52.79(a)(3) without addressing what it intends to do with the LLRW . . . expected to be produced in the operation of the proposed units."[10]

On appeal, SNC argues that several factors compel reversal of the Board's decision. First, SNC relies on our recent decision in *Bellefonte,* and, particularly, argues that the contention rejected in that COL proceeding is substantively identical to the contention at issue here.[11] Second, SNC argues that our regulations do not require COL applicants to address long-term LLRW storage.[12] Third, SNC claims that the COL application does, in fact, address the potential availability of long-term LLRW storage at the Vogtle site.[13]

The arguments submitted by the Staff overlap those made by SNC. First, the Staff argues that the Board erred in admitting SAFETY-1 as a contention of omission, because the asserted missing information is available in the COL application.[14] Second, the Staff claims that Petitioners failed to demonstrate that the contention is legally or factually material to the proceeding, because 10 C.F.R. § 52.79(a)(3) contains no requirement for a detailed discussion of long-term, onsite storage, and Petitioners cited no other regulatory provision.[15] Finally, the Staff argues that the contention lacks an adequate basis, because Petitioners confuse the issues of onsite storage and long-term disposal of LLRW and provide no legal basis for the contention in the Petition.[16]

We agree that the plain language of section 52.79(a)(3) does not explicitly require a description of LLRW storage for a specified duration.[17] On its face, therefore, section 52.79(a)(3) sets no quantity or time restrictions relative to onsite storage of such waste. Rather, it requires that a COL application contain information of first, the "kinds and quantities of materials expected to be produced" during plant operation, and second, the "means for controlling and

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[10] LBP-09-3, 69 NRC at 162.

[11] SNC Appeal at 8.

[12] *Id.* at 10.

[13] *Id.* at 12-13.

[14] Staff Appeal at 7.

[15] *Id.* at 11.

[16] *Id.* at 13-14.

[17] This is also true of relevant agency guidance. In particular, the Standard Review Plan (SRP) provides two separate sets of review guidelines: one set for areas designed to accommodate approximately 6 months of waste generation, and one set for longer term onsite storage (several years, but within the operational life of the plant). *See* NUREG-0800, "U.S. Nuclear Regulatory Commission Standard Review Plan," Section 11.4, Solid Waste Management System (Rev. 3 Mar. 2007), subsection III.4 (citing Branch Technical Position 11-3 for 6 months' storage, and SRP Appendix 11.4-A to the SRP for longer storage terms).

limiting radioactive effluents and radiation exposures" to comply with Part 20 limits. In short, the rule pertains to how the COL applicant intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20. This includes, but is not limited to, low-level radioactive waste handling and storage. Part 20 outlines a number of radiation protection requirements with which licensees must comply. For example, a licensee must use procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable.[18] Part 20 also sets forth upper limitations on occupational doses[19] as well as dose limits for individual members of the public.[20] Ultimately, the combined license holder must comply with these requirements regardless of the amount of LLRW stored on the site — be it 1 cubic foot or 1000.

As such, the required information is tied to the COL applicant's particular plans for compliance through design, operational organization, and procedures. However, the scope and extent of that required information on specific plans or contingency planning is not clear.

Moreover, we observe that the Staff appears to have taken a potentially inconsistent position on this issue in another of the COL proceedings in which it has been raised.[21] In the ongoing *North Anna* COL proceeding, the Board admitted, in part, Contention One, a low-level waste contention substantively identical to Contention SAFETY-1.[22] Subsequently in the *North Anna* matter, the NRC Staff posed a Request for Additional Information (RAI) in which it requested that the applicant "describe the facilities planned for long-term storage of low-level radioactive wastes projected to be generated during the operation of North Anna Unit 3, and the operational program addressing the long-term management and storage of such wastes . . . .[23] Thereafter, the applicant provided

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[18] *See* 10 C.F.R. § 20.1101(b).

[19] *See id.* §§ 20.1201-20.1208.

[20] *See id.* §§ 20.1301-20.1302. *See generally* NRC Regulatory Issue Summary 2008-32, "Interim Low Level Radioactive Waste Storage at Reactor Sites" (Dec. 30, 2008) (ADAMS Accession No. ML082190768), at 3-4 (stating among other things, that a licensee's onsite LLRW storage facility must comply with, among other provisions, 10 C.F.R. § 20.1801 (security of stored material), occupational and public dose limits, and the Part 20 requirements for surveys and monitoring, labeling, and reports and record retention).

[21] To be sure, contested issues in this proceeding must be decided *solely* on the basis of information in the adjudicatory record of *this* proceeding. However, we monitor parallel proceedings to ensure the consistency of our decisions.

[22] *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294 (2008).

[23] Letter from T.A. Kevern, NRC, to E.S. Grecheck, Dominion, "Request for Additional Information Letter No. 020 (SRP Sections: 09.05.01, 11.04) Related to the North Anna Unit 3 Combined License

(Continued)

a revision to the COL application that included its response to the Staff's RAI, providing (among other things) for storage to accommodate "at least 10 years of packaged Class B and C waste."[24]

The NRC Staff maintains the position in *North Anna,* as it does here, that the contention is not material to a decision the NRC must make regarding public health or safety, because the intervenor "does not point to any NRC regulation that requires any specific duration for planning for long-term storage."[25] The Staff's issuance of an RAI on the very subject of long-term LLRW disposal, in a proceeding with a substantively identical admitted contention, appears to conflict with its argument that the issue is immaterial to the findings that must be made on the application.[26]

In light of the above, we cannot say with confidence that the Board committed clear error in admitting Contention SAFETY-1. We find that the adjudicatory record on Contention SAFETY-1 would benefit from further development by the Board and the parties, particularly with respect to the information a COL applicant should supply in order to satisfy our regulations regarding the safety of long-term storage of low-level radioactive waste.[27]

Application" (July 27, 2008) (ADAMS Accession No. ML082100346), NRC RAI 11.04-3. In the case of the *North Anna* COL application, the Staff observed that Final Safety Analysis Report (FSAR) stated that the proposed plant *would not* utilize temporary LLRW storage facilities to support plant operation, whereas the Economic Simplified Boiling Water Reactor Design Control Document provides for the capacity to store the amount of LLRW that could be generated in 6 months of operation.

[24] Letter from E.S. Grecheck, Dominion, to U.S. NRC Document Control Desk, "Dominion Virginia Power — North Anna Power Station Unit 3 — Combined License Application — Submission 4" (May 21, 2009) (ADAMS Accession No. ML091540526). The intervenor offered late-filed Contention Ten based on this revision to the COL application.

[25] *See* NRC Staff's Answer to Intervenor's Amended Contention Ten (July 21, 2009) at 12 (citing 10 C.F.R. § 2.309(f)(1)(iv)). The *North Anna* Board has not yet ruled on the admissibility of Contention Ten, or on the applicant's related motion to dismiss the originally admitted Contention One. We do not comment on the resolution of those motions here, and the fact that we take notice of the RAI here should not be construed as an opinion on the admissibility of Contention Ten. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-39 (1999) (finding that issuance of an RAI does not alone establish deficiencies in an application, and that a petitioner must do more than merely quote an RAI to justify admission of a contention into the proceeding).

[26] *Cf.* Office Instruction NRO-REG-101, "Processing Requests for Additional Information" (Rev. 0), at 2 ("RAIs should be directly related to the applicable requirements related to the submittal. . . . *It is expected that before the staff determines that an RAI is needed, . . . the need for additional information in order to reach a regulatory determination is clear and unambiguous*") (emphasis added) (ADAMS Accession No. ML080600394).

[27] As we observed in *Bellefonte,* contentions of this sort are application-specific. CLI-09-3, 69 NRC at 77 n.42. We do not opine here on the scope of the requirements of 10 C.F.R. § 52.79(a)(3), including any specific time frame for which a COL applicant should address LLRW storage.

III. CONCLUSION

We *deny* SNC's and the Staff's appeals, and *decline to disturb* the Board's admission of Contention SAFETY-1.

IT IS SO ORDERED.

For the Commission

ANDREW L. BATES
Acting Secretary of the Commission

Dated at Rockville, Maryland,
this 31st day of July 2009.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Richard E. Wardwell
Dr. William H. Reed

In the Matter of **Docket No. 50-271-LR**
(ASLBP No. 06-849-03-LR)

ENTERGY NUCLEAR VERMONT YANKEE, LLC, and ENTERGY NUCLEAR OPERATIONS, INC.
(Vermont Yankee Nuclear Power Station)

July 8, 2009

In this Full Initial Decision concerning an application submitted by Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (collectively, Entergy) to renew the operating license for the Vermont Yankee Nuclear Power Station (VYNPS) in Windham County, Vermont, the Board denied New England Coalition Inc.'s (NEC) motion to file a new contention concerning Entergy's recent metal fatigue time-limited aging analyses, pursuant to 10 C.F.R. § 54.21(c)(1)(ii), for the core spray (CS) and reactor recirculation outlet (RO) nozzles. The Board found that NEC's motion satisfied neither the requirements specified in the Board's partial initial decision (LBP-08-25, 68 NRC 763, 831-32 (2008)) nor the new contention pleading requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii).

LICENSE RENEWAL: NEW CONTENTIONS UNDER LBP-08-25 (ADMISSIBILITY)

The Board's partial initial decision, LBP-08-25, stated that Entergy's new metal

fatigue cumulative usage factor environmentally adjusted (CUFen) analyses (1) must be done in accordance with the approach previously used in CUFen analyses for the feedwater nozzle, (2) must not use scientific or technical judgments significantly different from the prior CUFen analyses, and (3) must demonstrate values of less than unity. The Board ruled that new contentions could only be filed if the new CUFen analyses failed to conform to these requirements and ruled that any new contention could not rehash or renew technical challenges that had already been raised and resolved in this proceeding. The proposed new contention raises old arguments, such as the adequacy of consideration of the dissolved oxygen factor in the CUFen analysis and the use of inappropriate heat transfer equations, which were previously litigated and resolved, and thus is not admissible.

LICENSE RENEWAL: NEW OR AMENDED CONTENTIONS UNDER 10 C.F.R. § 2.309(f)(2) (ADMISSIBILITY)

NEC's proposed new contention also fails to meet the new contention requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii). NEC's new contention focuses on technical assumptions made in the recent CUFen analyses. However, these same technical assumptions were made in the 2007 and 2008 CUFen analyses for the same nozzles. Thus, the new contention is based on information that cannot be considered "not previously available" or "materially different than information previously available," and therefore the proposed new contention does not meet the requirements of 10 C.F.R. § 2.309(f)(2)(i) or (ii).

FULL INITIAL DECISION
(Denying NEC's Motion to File a New Contention)

Before this Atomic Safety and Licensing Board is a motion by the New England Coalition, Inc. (NEC) to file and admit a new contention relating to the application submitted by Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (collectively, Entergy) to renew their operating license for the Vermont Yankee Nuclear Power Station (VYNPS) in Windham County, Vermont.[1] The motion propounds a single new contention challenging the adequacy of Entergy's recent calculations concerning the environmentally adjusted cumulative usage factor (CUFen) analyses for metal fatigue for the core

[1] Vermont Yankee Nuclear Power Station License Renewal Application (Jan. 25, 2006), ADAMS Accession No. ML060300085 [Application]. Entergy has since supplemented and amended its application several times.

spray (CS) and reactor recirculation outlet (RO) nozzles. For the reasons stated below, the motion is denied.

I. BACKGROUND

During the week of July 21, 2008, the Board held an evidentiary hearing in Newfane, Vermont, on NEC's three challenges to the renewal of the VYNPS operating license, and on November 24, 2008, we issued our Partial Initial Decision.[2] In that decision, we rejected Contentions 3 and 4, finding that Entergy's aging management programs (AMPs) for the steam dryer and flow accelerated corrosion in plant piping, respectively, complied with relevant regulations and provided a reasonable assurance of safety.[3] With regard to NEC Contentions 2A and 2B, we found *inter alia* that the metal fatigue CUFen analyses submitted by Entergy complied with U.S. Nuclear Regulatory Commission (NRC) regulations "in all respects, except one." LBP-08-25, 68 NRC at 831. The exception involved Entergy's CUFen reanalysis for the CS and RO nozzles. We concluded that these CUFen reanalyses were deficient because of their inappropriate use of a simplified Green's function methodology. *Id.*

In light of this deficiency, our Partial Initial Decision instructed Entergy either (1) to recalculate the CUFen analyses "in accordance with the [American Society of Mechanical Engineers (ASME)] Code, NUREG-6583 and -5704, and all other regulatory guidance" so as to demonstrate that the time-limited aging analyses are less than unity,[4] and submit these results to the NRC Staff and NEC, or (2) to submit an adequate AMP for these components. *Id.* We ruled that, if these analyses were "(1) done in accordance with the above-stated guidance and the basic approach used in the Confirmatory CUFen Analysis for the [feedwater (FW)] nozzle, (2) contain no significantly different scientific or technical judgments, and (3) demonstrate values less than unity, then [the Board's portion of] this adjudicatory proceeding" would terminate. *Id.* at 831-32. If the analyses failed to meet these criteria, then NEC could file new or amended contentions challenging the CUFen analyses. *Id.* at 832. We further required that any new or amended contention "must specifically state how the new analyses are not consistent with

[2] LBP-08-25, 68 NRC 763 (2008).

[3] Our decision with respect to Contention 3 was conditioned on the requirement that Entergy continue to monitor and inspect the steam dryer during the period of extended operation at the intervals specified in GE-SIL-644 Revision 2. *Id.* at 780-81.

[4] As we discussed in an earlier decision in this case, if the CUFen metal fatigue analysis produces a value of greater than *unity,* then the analysis indicates that the component "would be likely to develop metal fatigue cracks that might affect their function" during the 20-year license renewal period of extended operation (and thus requires an AMP). *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 264 (2007).

the legal requirement and the calculations performed for the feedwater nozzle." *Id.* at 832 n.95. We cautioned NEC, however, that this was not an opportunity to "rehash or renew technical challenges that have already been raised and resolved in this proceeding." *Id.*

Subsequently, Entergy performed confirmatory CUFen analyses of the CS and RO nozzles, removing the problematic use of the simplified Green's function methodology, and provided copies of these CUFen calculations to the parties on January 8, 2009.[5] These revised CUFen analyses showed values less than unity for each nozzle. The NRC Staff audited these calculations,[6] and, as a consequence, on March 10, 2009, Entergy issued its revised final analyses of record for the Confirmatory CUFen Analyses of the CS and RO nozzles (Final CUFen Analyses).[7] The Final CUFen Analyses concluded that the CUFen values for the CS and RO nozzles are less than unity.

On April 24, 2009, NEC filed the current motion for leave to file a new contention challenging the adequacy of the Final CUFen Analyses.[8] Entergy and the NRC Staff submitted answers in opposition to the admission of the new contention.[9] NEC filed a combined reply thereto.[10]

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[5] Letter from Matias F. Travieso-Diaz, Esq., counsel for Entergy, to the Board and the parties (Jan. 8, 2009). Calculation 0801038.301, Revision 0, "Design Inputs and Methodology for ASME Code Fatigue Usage Analysis of Reactor Core Spray Nozzle"; Calculation No. 0801038.302, Revision 0, "Stress Analysis of Reactor Core Spray Nozzle"; Calculation No. 0801038.303, Revision 0, "Fatigue Analysis of Core Spray Nozzle"; Calculation No. 0801038.304, Revision 0, "Design Inputs and Methodology for ASME Code Fatigue Usage Analysis of Reactor Recirculation Outlet Nozzle"; Calculation No. 0801038.305, Revision 0, "Stress Analysis of Reactor Recirculation Outlet Nozzle"; and Calculation No. 0801038.306, Revision 0, "Fatigue Analysis of Recirculation Outlet Nozzle."

[6] Letter from Matias F. Travieso-Diaz, Esq., counsel for Entergy, to the Board and the parties (Feb. 26, 2009).

[7] Letter from Matias F. Travieso-Diaz, Esq., counsel for Entergy, to the Board and the parties (Mar. 10, 2009). Calculation No. 0801038.302, Revision 1, "Stress Analysis of Reactor Core Spray Nozzle"; Calculation No. 0801038.303, Revision 1, "Fatigue Analysis of Reactor Core Spray Nozzle"; Calculation No. 0801038.304, Revision 1, "Design Inputs and Methodology for ASME Code Fatigue Usage Analysis of Reactor Recirculation Outlet Nozzle"; Calculation No. 0801038.305, Revision 1, "Stress Analysis of Reactor Recirculation Outlet Nozzle"; and Calculation No. 0801038.306, Revision 1, "Fatigue Analysis of Reactor Recirculation Outlet Nozzle." Calculation 0801038.301, Revision 0, "Design Inputs and Methodology for ASME Code Fatigue Usage Analysis of Reactor Core Spray Nozzle" was not revised.

[8] New England Coalition, Inc.'s Motion for Leave to File a Timely New Contention and Motion to Hold in Abeyance Action on this Proposed Contention Until Issuance of NRC Staff Supplemental Safety Evaluation Report (Apr. 24, 2009) [NEC Motion].

[9] Entergy's Opposition to NEC's Motion to File a Timely New Contention (May 18, 2009) [Entergy Answer]; NRC Staff's Answer in Opposition to NEC's Motion for Leave to File a New Contention (May 19, 2009) [NRC Staff Answer].

[10] New England Coalition's Reply to NRC Staff and Entergy Oppositions to NEC's Motion to File a Timely New Contention (May 26, 2009) [NEC Reply].

II. LEGAL STANDARDS GOVERNING THE ADMISSION OF NEW CONTENTIONS

In order to be admitted in a proceeding, a new contention must meet the new or amended contention requirements of 10 C.F.R. § 2.309(f)(2), as well as the general contention admissibility requirements of 10 C.F.R. § 2.309(f)(1). Under the regulations, a new safety contention can be filed, with leave of the Board, upon a showing that (1) the information upon which the new contention is based was not previously available, (2) that information is materially different from previously available information, and (3) the new contention "has been submitted in a timely fashion based on the availability of the subsequent information."[11] In addition, the new contention must meet the general admissibility requirements of 10 C.F.R. § 2.309(f)(1).[12]

III. POSITIONS OF THE PARTIES

In its current motion, NEC contends that Entergy's Final CUFen Analyses for the CS and RO nozzles are "technically and factually flawed and do not conform to ASME, NRC, or National Laboratory guidance, nor do they fully conform to established engineering practice, or the rules of applied physics." NEC Motion at 1-2. NEC correctly points out that performing a CUFen analysis requires the use of "engineering discretion in selecting various input values," which involves complex scientific and technical judgment.[13] In NEC's view, and that of its expert, Dr. Joram Hopenfeld,[14] the Final CUFen Analyses were "flawed and not conservative," Hopenfeld Decl. at A4, and were not performed "in accordance with the ASME Code, NUREG 6583 and 5704, and all other regulatory guidance." NEC Motion at 5. Dr. Hopenfeld details the various objections that he has to the CUFen analyses, focusing specifically on two issues: the alleged improper consideration of dissolved oxygen levels and alleged miscalculation of the heat transfer coefficients. *See* Hopenfeld Decl. at A7-A23. While NEC acknowledges that it raised these concerns (and Dr. Hopenfeld testified on them) in the July 21,

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[11] 10 C.F.R. § 2.309(f)(2)(i)-(iii). For a more detailed analysis of the legal standards governing the admission of new contentions, *see Vermont Yankee,* LBP-07-15, 66 NRC at 266-67.

[12] For a short discussion of the general admissibility criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi), *see Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 146-52 (2006).

[13] NEC Motion at 2. *See also* LBP-08-25, 68 NRC at 831 (concluding that CUFens involve complex scientific and technical judgment).

[14] NEC Motion, Exh. A, Declaration of Dr. Joram Hopenfeld in Support of New England Coalition's Motion to File a Timely New or Amended Contention on Entergy's Fatigue Reanalysis (Apr. 22, 2009) [Hopenfeld Decl.].

2008, evidentiary hearing, it asserts that the 2008 hearing focused on the FW nozzle. According to NEC, however, the "geometries of the RO and CS nozzles are quite different" and require consideration of these "component specific" concerns again. NEC Motion at 6-7.

As part of its motion, NEC asked the Board to hold in abeyance any action on the proposed contention until the NRC Staff issued its Supplemental Safety Evaluation Report (SSER), contending that the SSER would be helpful in "building a record" and "evaluating the merits of NEC's proposed contention." *Id.* at 7. Entergy and the NRC Staff opposed this request.[15] On May 21, 2009, the NRC Staff issued the SSER,[16] rendering the request moot.

Both Entergy and the NRC Staff oppose the admission of NEC's new contention. Entergy asserts that the contention contravenes the requirements laid out by the Board for new contentions and does not meet the general admissibility requirements of 10 C.F.R. § 2.309(f)(1). Entergy Answer at 1-2. Entergy maintains that NEC acknowledges that the Final CUFen Analyses use the same methodology as that employed in the CUFen analysis of the FW nozzle. *Id.* at 9-10. Entergy also asserts that NEC failed to explain or support its claim that the Final CUFen Analyses were not performed in accordance with the ASME Code and regulatory guidance. *Id.* at 10. Further, in Entergy's view, the new contention is a "rehash" of previously litigated issues as two of Dr. Hopenfeld's main claims — "the appropriateness of the heat transfer coefficients used to compute stresses" and the "dissolved oxygen level in the reactor water during plant transients" — were discussed at the evidentiary hearing and resolved by the Board in Entergy's favor. *Id.* at 8, 10-12.

In addition, Entergy observes that NEC's motion only discusses the Final CUFen Analyses for the RO nozzle and makes but a few vague references to the CS nozzle. *Id.* at 12. Therefore, Entergy argues, the proposed contention, as it relates to the CS nozzle analysis, "must be dismissed outright because it fails to state what factual issues are being controverted with respect to that analysis." *Id.* at 12-13. In terms of the CUFen analysis for the RO nozzle, Entergy asserts that the contention does not meet the requirements of 10 C.F.R. § 2.309(f)(1)(i), (iv), (v), and (vi).

Entergy also argues that the contention does not meet the admissibility standards for new contentions in 10 C.F.R. § 2.309(f)(2). First, Entergy asserts that

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[15] Entergy and the NRC Staff filed separate motions opposing NEC's motion to hold action on the proposed contention in abeyance until the SSER is issued. Entergy's Opposition to New England Coalition's Motion to Hold Action on Proposed Contention in Abeyance Until Issuance of NRC Staff Supplemental Safety Evaluation Report (May 1, 2009); NRC Staff's Answer in Opposition to NEC Motion to Hold in Abeyance Action on Proposed Contention Until Issuance of NRC Staff Supplemental Safety Evaluation Report (Apr. 30, 2009).

[16] Letter from Lloyd B. Subin, counsel for NRC Staff, to the Board and the parties (May 21, 2009).

NEC failed to address these requirements in its motion. Second, the new information upon which NEC relies, according to Entergy, has been available for nearly 2 years and was not challenged before. *Id.* at 25. Entergy maintains that it used the same technical assumptions and judgments in the Final CUFen Analyses of the CS and RO nozzles as it used in its 2007 CUFen analyses of these nozzles. *Id.* at 26. NEC failed to challenge these assumptions and judgments at that time so, in Entergy's view, NEC cannot now say that these alleged deficiencies are based on new or materially different information, as required by 10 C.F.R. § 2.309(f)(2)(i) and (ii). *Id.* at 27.

The NRC Staff faults the contention for failing to comply with 10 C.F.R. § 2.309(f)(1)(ii) and (v) by being vague and failing to explain the basis for the contention or to provide a statement of supporting facts. NRC Staff Answer at 6-7. The Staff asserts that the three challenges that NEC raises in support of the new contention (i.e., Entergy's assumption of no cracks in the RO nozzle, the heat transfer coefficient during forced convection flow, and the heat transfer coefficient during natural convection flow) fail to demonstrate the existence of a genuine dispute on a material issue of law or fact as required by 10 C.F.R. § 2.309(f)(1)(vi). *Id.* at 7-10. The Staff makes arguments similar to those of Entergy with regard to NEC's failure to demonstrate that the new contention meets the requirements of 10 C.F.R. § 2.309(f)(2) and NEC's alleged attempt to rehash issues that have already been raised and addressed by the Board. *Id.* at 10-23.

NEC submitted a combined reply to Entergy and the NRC Staff.[17] It denies that the new contention is an attempt to "rehash" any of the technical issues raised with respect to the FW nozzle. NEC Reply at 2. NEC maintains that the issues it raises in the new contention are not untimely because they are being raised in response to the Final CUFen Analyses, a document that was only recently submitted by Entergy. *Id.* at 4. NEC asserts that the issues it raises deal with judgments used in

[17] Entergy sought to strike NEC's reply for being untimely, served without an electronic copy sent to Entergy, and exceeding the scope of a reply. Entergy's Motion to Strike New England Coalition's Reply to NRC Staff and Entergy Oppositions to NEC's Motion to File a Timely New Contention (June 2, 2009). NEC responded with various explanations for untimely filing and the failure to send an electronic copy to Entergy. NEC also argued that the reply did not add any amendments to the original petition but simply responded directly to the answers submitted by Entergy and the NRC Staff. New England Coalition's Opposition to Entergy's Motion to Strike New England Coalition's Reply to NRC Staff and Entergy Oppositions to NEC's Motion to File a Timely New Contention (June 8, 2009). In addition, NEC submitted a "post-facto"motion for an extension of time to file its reply. Request for Extension of Time in Which to File New England Coalition's Reply to NRC Staff and Entergy Oppositions to NEC's Motion to File a Timely New Contention (June 8, 2009). Because the Board rejects the new contention in this order, we find it unnecessary to address Entergy's motion to strike and NEC's subsequent filings.

the Final CUFen Analyses that are significantly different than those used in the FW nozzle analysis and material to the final decision of the Board.[18]

IV. BOARD RULING

The Board denies NEC's motion to file a new contention. We find that NEC failed to satisfy either the requirements specified in our Partial Initial Decision or the new contention pleading requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii).

In our Partial Initial Decision, the Board laid out three specific requirements for the Final CUFen Analyses. LBP-08-25, 68 NRC at 831-32. First, they must be done in accordance with the approach used in the confirmatory CUFen analysis for the FW nozzle. Second, they should not use significantly different scientific or technical judgments. Finally, the CUFen analyses should demonstrate values less than unity. We ruled that new contentions could be filed only if the Final CUFen Analyses did not meet these requirements. *Id.* at 832. As previously mentioned, we warned that any new contention could not "rehash or renew any technical challenges that have already been raised and resolved in this proceeding (e.g., dissolved oxygen, outdated equations, etc.), but rather must specifically state how the new analyses are not consistent with the legal requirement and the calculations performed for the feedwater nozzle." *Id.* at 832 n.95.

NEC did not follow the foregoing requirements, and its motion fails to show that the Final CUFen Analyses were not performed in accordance with the approaches used by Entergy in its analysis of the FW nozzle. Instead, Dr. Hopenfeld stresses that the Final CUFen Analyses "methodology was the same" as the prior analyses, and that fact represents a major thrust of his opposition to the Final CUFen Analyses. Hopenfeld Decl. at A6-A7. NEC has both rehashed old arguments (e.g., adequacy of consideration of dissolved oxygen in CUFen analyses and the appropriateness of the heat transfer coefficients) and has, for the first time, raised new arguments concerning technical assumptions and judgments that have not changed since 2007. We will not allow these issues to be reopened or newly raised at this late date. NEC's motion, and its proposed new contention, do not meet the requirements of the Partial Initial Decision.

For similar reasons, NEC also fails to meet the requirements for new contentions under 10 C.F.R. § 2.309(f)(2)(i)-(iii). Entergy performed refined CUFen analyses for the CS and RO nozzles on August 2, 2007, and a confirmatory CUFen analysis for the FW nozzle on February 15, 2008. The 2007 and 2008

[18] *Id.* at 4-5; Declaration of Dr. Joram Hopenfeld in Support of New England Coalition's Reply to NRC Staff and Entergy Oppositions to NEC's Motion to File a Timely New Contention (May 22, 2009). Dr. Hopenfeld submits detailed responses to various assertions made by Entergy and the NRC Staff.

CUFen analyses used the same assumptions and approach that NEC now seeks to challenge in the 2009 confirmatory CUFen analyses for the CS and RO nozzles. NEC had the opportunity to litigate the 2007/2008 analyses in the 2008 evidentiary hearing, and the Board rejected each of NEC's challenges (with the exception of the challenge to the use of the simplified Green's function methodology). LBP-08-25, 68 NRC at 803-32. During the evidentiary hearing, numerous exhibits and voluminous testimony on these issues were submitted by the parties, and considered by this Board. It is now apparent to us that, despite NEC's current motion, the assumptions used in Entergy's 2008 refined CUFen analyses for the CS and RO nozzles were the same ones used in its 2009 Final CUFen Analyses.

Thus, NEC's challenges to the assumptions made by Entergy are, in essence, challenges that either were made previously and already rejected by the Board, or were not made before and are now not timely. The new contention is based on assumptions that cannot be considered information that was "not previously available" or "materially different than information previously available" and therefore does not meet the requirements of 10 C.F.R. § 2.309(f)(2)(i) or (ii).

V. ORDER

The Board denies NEC's motion to file and admit a new contention relating to Entergy's application to renew the VYNPS operating license, thus terminating our portion of this adjudicatory proceeding. This Full Initial Decision shall constitute the final decision of the Commission forty (40) days from the date of its issuance, unless, within fifteen (15) days of its service, a petition for review is filed in accordance with 10 C.F.R. §§ 2.1212 and 2.341(b).[19] Filing of a petition for review is mandatory for a party to exhaust its administrative remedies before seeking judicial review. 10 C.F.R. § 2.341(b)(1).

[19] We note, however, that there is still a pending appeal by the NRC Staff of our Partial Initial Decision before the Commission. NRC Staff's Petition for Review of the Licensing Board's Partial Initial Decision, LBP-08-25 (Dec. 9, 2008). The Commission previously denied a petition for review submitted by the Commonwealth of Massachusetts. *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-09-10, 69 NRC 521 (2009).

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[20]

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

Dr. Richard E. Wardwell
ADMINISTRATIVE JUDGE

Dr. William H. Reed
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 8, 2009

[20] Copies of this order were sent this date by Internet e-mail transmission to counsel for (1) Licensee Entergy; (2) Intervenors Vermont Department of Public Service and New England Coalition of Brattleboro, Vermont; (3) the NRC Staff; (4) the State of New Hampshire; and (5) the Commonwealth of Massachusetts.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Anthony J. Baratta
Dr. William M. Murphy

In the Matter of **Docket Nos. 52-029-COL**
52-030-COL
(ASLBP No. 09-879-04-COL-BD01)
(Combined License Application)

PROGRESS ENERGY FLORIDA, INC.
(Levy County Nuclear Power Plant, Units 1 and 2)

July 8, 2009

COMBINED LICENSE APPLICATIONS: STANDING AND ADMISSIBILITY OF CONTENTIONS

In this combined license application proceeding under 10 C.F.R. Part 52, Subpart C, the Petitioners have shown standing and have proffered twelve contentions. Nine of the contentions do not satisfy the admissibility criteria of 10 C.F.R. § 2.309(f)(1). Portions of three of the contentions satisfy these criteria. Therefore the Board grants the Petition to Intervene and admits portions of these three contentions.

COMBINED LICENSE APPLICATIONS: COMPLETENESS; REFERENCE TO DESIGN CERTIFICATION

Contention 1, which asserts that the Part 52 combined license application is incomplete because it incorporates by reference a standard design certification and a pending application for a revision to that certified design, failed to identify any

specific omissions in these components of the application and thus is inadmissible for failure to comply with 10 C.F.R. § 2.309(f)(1)(vi).

COMBINED LICENSE APPLICATIONS: REFERENCE TO PENDING DESIGN CERTIFICATION APPLICATION

An applicant is legally entitled to reference a pending application for a design certification, but it does so "at its own risk," i.e., subject to otherwise admissible contentions. 10 C.F.R. § 52.55(c).

COMBINED LICENSE APPLICATIONS: LICENSING PROCESS

The fact that the combined license application is subject to, or even expected to, change does not make it legally deficient. The NRC follows a "dynamic licensing process." *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-8, 41 NRC 386, 395 (1995).

COMBINED LICENSE APPLICATIONS: LICENSING PROCESS

A contention must focus on the combined license application as it exists when the contention is filed and must point out an omission or deficiency with regard to the application as of that moment in time. 10 C.F.R. §§ 2.309(f)(1)(vi), 2.309(f)(2).

RULES OF PRACTICE: CONTENTIONS; NEW OR AMENDED CONTENTIONS

The necessary corollary to NRC's dynamic licensing process is that, if the combined license application is amended or material new information subsequently becomes available, petitioners must be given a fair opportunity to file new or amended contentions challenging these changes. 10 C.F.R. § 2.309(f)(2).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; RAIs

The fact that the NRC Staff issues a request for additional information (RAI) does not, per se, demonstrate that the combined license application is incomplete or ensure the admission of a new contention. The contention must still meet the criteria of 10 C.F.R. §§ 2.309(f)(1)(i)-(vi) and 2.309(f)(2) or (c).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; RAIs

The fact that the NRC Staff issues a request for additional information (RAI) does not immunize the COLA from challenge or bar the admission of a new contention on the same subject, provided the contention satisfies the criteria of 10 C.F.R. §§ 2.309(f)(1)(i)-(vi) and 2.309(f)(2) or (c).

FINANCIAL QUALIFICATIONS: APPLICABLE STANDARD

To demonstrate financial qualification, an applicant for a combined license must show that it possesses funds or has "reasonable assurance of obtaining funds necessary to cover estimated" construction and fuel cycle costs. 10 C.F.R. § 50.33(f)(1).

FINANCIAL QUALIFICATIONS: REQUIREMENTS

A combined license is, in part, an operating license. Thus, 10 C.F.R. § 50.33(f), which states that an electric utility need not include operating and maintenance costs in its demonstration of financial qualification in an application for an operating license, also applies to an application for a combined license.

FINANCIAL QUALIFICATIONS: PURPOSE

The purpose of the financial qualification requirements of 10 C.F.R. § 50.33(f) is to ensure the protection of public health and safety and the common defense and security, not to evaluate the financial wisdom of the proposed project. *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 303 (1997) (citing Financial Qualifications, 33 Fed. Reg. 9704 (July 4, 1968)).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; MERITS THRESHOLD FOR NEPA CONTENTIONS

The National Environmental Policy Act (NEPA) requires the consideration of all significant environmental impacts and all reasonable alternatives and is governed by the rule of reason. Thus, the decision as to whether an alleged environmental impact or alternative is significant or reasonable is the *merits* of a NEPA contention and should not be adjudicated at the contention admissibility stage under the guise of "materiality" or "scope."

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; NEPA REALM OF REASON

Avoidance of the NEPA merits does not require the admission of every allegation that an environmental impact must be considered or an alternative analyzed. If a NEPA contention alleges that impacts or alternatives that are patently outside the realm of reason must be considered, then the contention should be denied for failure to demonstrate that the issue raised is within the legitimate scope of NEPA as required by 10 C.F.R. § 2.309(f)(1)(iii).

COMBINED LICENSE APPLICATIONS: NEPA AND PART 51 REQUIREMENTS

NEPA applies only to NRC and not to the applicant. Thus, the primary criterion of the adequacy of the applicant's Environmental Report is found in 10 C.F.R. Part 51, not NEPA.

COMBINED LICENSE APPLICATIONS: NEPA AND PART 51 REQUIREMENTS

While our construction of the provisions of 10 C.F.R. Part 51 mandating the contents of the applicant's Environmental Report may be informed by consideration of general NEPA principles, we must look to the wording of the Part 51 regulations to determine if an ER is satisfactory or deficient.

COMBINED LICENSE APPLICATIONS: NEPA AND PART 51 REQUIREMENTS; ENVIRONMENTAL REPORT

The applicant's Environmental Report is not the same as the NRC's Environmental Impact Statement. While 10 C.F.R. § 51.45(b)(3) specifies that the ER impact analysis must include "sufficient data to aid" the Commission, and 10 C.F.R. § 51.45(c) specifies that the alternatives analysis must be "sufficiently complete to aid the Commission" in preparing the EIS, the regulations do not repeat the NEPA mandate that the ER be a "detailed statement" and do not mandate that the ER must be equivalent to the EIS.

COMBINED LICENSE APPLICATIONS: NEPA AND PART 51 REQUIREMENTS; ENVIRONMENTAL REPORT

Section 2.309(f)(2) of 10 C.F.R. specifically recognizes that a challenge to the applicant's Environmental Report is different from a challenge to the NRC's Environmental Impact Statement or Environmental Assessment. Because the ER

is the only environmental document available when NRC issues its notice of opportunity to request a hearing, all initial contentions necessarily focus on the adequacy of the applicant's ER under Part 51. But 10 C.F.R. § 2.309(f)(2) specifies that the public will have a new opportunity to file environmental contentions when the NRC Staff issues the EIS or EA. Such new contentions focus on the adequacy of the NRC Staff's EIS or EA under NEPA.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; INAPPROPRIATE ATOMIZATION OF A SINGLE CONTENTION

Although Contention 4 has multiple subparts, it presents a single major theme and was intended to be viewed as a whole. The criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi) apply to Contention 4 as a whole, with each subpart providing specific illustrations, examples or bases supporting the alleged omissions or deficiencies in the Environmental Report. While the Board will deny certain portions of Contention 4 as outside of the scope or too attenuated, applying all six criteria of 10 C.F.R. § 2.309(f)(1) to each subpart of the contention would inappropriately atomize it.

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS; OFFSITE ENVIRONMENTAL IMPACTS

The requirement of Part 51 that the Environmental Report cover all significant environmental impacts associated with a project includes *offsite* impacts and is not limited to onsite environmental impacts. For example, Table S-3 to 10 C.F.R. § 51.51 covers numerous offsite environmental impacts associated with the licensing of nuclear power plants.

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS; ENVIRONMENTAL IMPACTS

The fact that the Environmental Report is silent about the location of the offsite mining activities necessitated by the proposed project does not render a contention concerning such offsite environmental impacts inadmissible. If the environmental impact of such mining activities is potentially significant, then the failure of the ER to disclose the location of the offsite mine does not immunize it from being the subject of a legitimate contention.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; ALLEGED FACTS OR EXPERT OPINION

Nothing in the NRC case law or regulations requires, at the contention admissibility stage, that a contention be supported by an expert opinion, substantive affidavits, or evidence. The regulations require that a petitioner provide a concise statement of the "alleged facts or expert opinion" that support the petitioner's position. 10 C.F.R. § 2.309(f)(1)(v). This disjunctive statement — alleged facts *or* expert opinion — makes clear that there is no requirement to have an expert or to provide an expert opinion. And it simply requires *alleged* facts, not proven facts or evidence.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; ALLEGED FACTS OR EXPERT OPINION

The second half of 10 C.F.R. § 2.309(f)(1)(v) does not require that, to be admissible, a contention must be accompanied by facts, experts, affidavits, or evidence. It merely specifies that the contention include "references" to specific sources and documents, if any, that the petitioner "intends to rely on" to support its position.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; SUFFICIENT INFORMATION TO SHOW A GENUINE DISPUTE

The provision of 10 C.F.R. § 2.309(f)(vi) that requires the petition to include "sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of fact" does not require the submission of expert affidavits or evidence in order for a contention to be admissible.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; BRIEF EXPLANATION OF THE 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 requires an explanation of the rationale or theory of the contention. It does not require the submission of evidence, expert opinions, or substantive affidavits. To the extent there are any requirements to provide "alleged facts or expert opinion," or "sufficient information," they are found in 10 C.F.R. § 2.309(f)(1)(v) and (vi).

COMBINED LICENSE APPLICATIONS: NEPA AND PART 51 REQUIREMENTS; JURISDICTION

Environmental Reports and Environmental Impact Statements must include an assessment of all environmental impacts, even though they are regulated by another federal or state agency. This is supported by NRC regulations (10 C.F.R. § 51.71(d) n.3 and Part 51, Appendix A, § 5), the CEQ regulations (10 C.F.R. § 1502.14(c)), and the case law (*Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 834-36 (D.C. Cir. 1972)).

COMBINED LICENSE APPLICATIONS: NEPA AND PART 51 REQUIREMENTS; JURISDICTION

Environmental Reports and Environmental Impact Statements must include an assessment of all environmental impacts and alternatives, even though NRC has no jurisdiction to regulate such impacts or jurisdiction to impose such alternatives. This is supported by NRC regulations (10 C.F.R. § 51.71(d) n.3 and Part 51, Appendix A, § 5), the CEQ regulations (10 C.F.R. § 1502.14(c)), and the case law (*NRDC v. Morton,* 458 F.2d at 834-36).

RULES OF PRACTICE: BURDEN OF PROOF

While Petitioners need to explain how or why they disagree with statements in the application or Environmental Report, there is no presumption, at the contention admissibility stage or otherwise, that statements and assessments in the application or ER are correct or accurate. To the contrary, the applicant, as the proponent of the license, bears the burden of proof. 10 C.F.R. § 2.325.

RULES OF PRACTICE: AUTHORITY OF NRC GUIDELINES

NRC guidelines and regulatory guides are not legally binding on the Staff, the Board, or the Commission.

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS; NRC REGULATION

While Part 51 requires that the Environmental Report consider all significant environmental impacts, it does not authorize NRC to regulate or enforce compliance with all other environmental laws and regulations. Part 51 and NEPA focus on assessment, not regulation.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; OMISSION VS. INADEQUACY

The fact that Contention 4 alleges that the Environmental Report "failed to address" a certain topic does not mean that it can only be a "contention of omission" and thus that any mention of the topic in the ER mandates the denial of the contention. Here, the contention acknowledges that the ER covered certain aspects of the topic, but goes on to allege that the ER failed to cover certain other aspects of the topic or covered them inadequately. In context, it is clear that Contention 4 is not just a "contention of omission" but is also a "contention of inadequacy" because it alleges that the ER is insufficient because it fails to discuss all aspects of the topic adequately.

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS; PLAUSIBLY SIGNIFICANT IMPACTS

The portions of Contention 4 that concern the environmental impacts of offsite mining are rejected, not because the impacts occur offsite, but because the petitioner has failed to support these allegations with information indicating that such impacts (including indirect or cumulative) are even plausibly significant.

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS

The portions of Contention 4 that concern onsite and offsite impacts of active and passive dewatering associated with the proposed project satisfy the admissibility criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi).

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS

The portion of Contention 4 that alleges that the Environmental Report failed to address the alleged greenhouse gas and global climate disruption impacts resulting from "prematurely killing trees" is not admissible because the Petitioners have failed to support the proposition that the number of trees involved could, even arguably, be potentially significant or reasonably affect global warming. This is too remote and attenuated.

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS

The portions of Contention 4 that allege that, as a consequence of the failure to adequately address the environmental impacts described earlier in the contention, the Environmental Report also failed to adequately address the zone of environmental impact, impact on listed species, and appropriate mitigation are a fair

and logical corollary and, to the extent the earlier portions of Contention 4 were admitted, these consequential portions of the contention are also admitted.

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS

The applicant's Environmental Report and the NRC's Environmental Impact Statement are required to cover all significant environmental impacts of the proposed project, even if the regulation of such impacts falls outside of the NRC's jurisdiction and lies with another agency. Thus, the fact the disposal of dredged or fill material in wetlands is regulated by USEPA and the U.S. Army Corps of Engineers does not render this portion of Contention 4 inadmissible.

COMBINED LICENSE APPLICATIONS: PART 51 REQUIREMENTS

The portions of Contention 4 that allege that the Environmental Report fails to address the "Guidelines for Specification of Disposal Sites for Dredged or Fill Material" stated in 40 C.F.R. Part 230 are not admissible because Petitioners fail to allege or explain how these guidelines relate to any alleged deficiency in the ER.

DESIGN BASIS ACCIDENTS

NRC regulations require that nuclear reactors be designed to withstand certain postulated events or accidents, called "design basis accidents" or "DBAs." By definition, a DBA results in negligible offsite consequences because the reactor is designed to handle such an event.

SEVERE ACCIDENTS

NRC defines the term "severe accident" as a reactor accident more severe than a design basis accident where substantial damage is done to the reactor core, whether or not there are serious offsite consequences. Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants, 50 Fed. Reg. 32,138 (Aug. 8, 1985).

SEVERE ACCIDENT MITIGATION: SAFETY REQUIREMENTS

NRC safety regulations require that the combined license application address the mitigation and potential consequences of a "severe accident," i.e., an accident that is beyond a "design basis accident." 10 C.F.R. §§ 50.33(g), 50.34, 52.79(a)(1)(a)(vi).

SEVERE ACCIDENT MITIGATION: PART 51 REQUIREMENTS

NEPA § 102(2)(C) requires that the NRC consider measures to mitigate the environmental impacts of the project and 10 C.F.R. § 51.45(c) requires that the Environmental Report analyze the "alternatives available for reducing or avoiding adverse environmental effects."

SEVERE ACCIDENT MITIGATION ANALYSIS (SAMA): REQUIREMENTS

NRC requires that applicants examine and evaluate the consequences of severe accidents in both the AEA (safety) and NEPA (environmental) context. SAMA analyses must be site specific and given careful consideration in order to comply with NEPA and the AEA. *See Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 741 (3d Cir. 1989).

SEVERE ACCIDENT MITIGATION DESIGN ANALYSIS (SAMDA)

A severe accident mitigation design analysis (SAMDA) is a subpart or element of a severe accident mitigation analysis (SAMA) that focuses on severe accident mitigation dealing with reactor design and hardware issues. Licenses, Certifications and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,426 (Aug. 28, 2007).

SEVERE ACCIDENT MITIGATION ANALYSIS (SAMA): REQUIREMENTS

The existence of another independent nuclear power plant within the 10-mile-radius emergency planning zone (EPZ) (*see* 10 C.F.R. § 50.33(g)) of a proposed new nuclear power plant is a significant factor for purposes of emergency planning for the new reactor.

REGULATIONS: WASTE CONFIDENCE RULE (10 C.F.R. § 51.23); APPLICABILITY

The Board rejects the argument that the Waste Confidence Rule only applies to existing reactors and does not cover new or proposed reactors. The regulation specifically refers to "any reactor." 10 C.F.R. § 51.23(a). When it was originally promulgated, the Commission explained that 10 C.F.R. § 51.23 was intended to cover "the storage of spent fuel in *new or existing* facilities." Requirements for Licensee Actions Regarding the Disposition of Spent Nuclear Fuel upon Expiration of Reactor Operating Licenses, 49 Fed. Reg. 34,688, 34,689 (1984)

(emphasis added). And, the regulation specifically refers to reactors to be covered by "combined licenses," 10 C.F.R. § 51.23(b), none of which exist yet.

NATIONAL ENVIRONMENTAL POLICY ACT: TERRORIST THREATS CONSIDERED IN AGENCY REVIEW

Despite the Ninth Circuit's holding in *San Luis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016 (9th Cir. 2005), the Commission declined to require the agency (outside of the Ninth Circuit) to consider terrorist threats as part of the NEPA review process. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 126 (2007). The Third Circuit recently affirmed the Commission's *Oyster Creek* decision in *New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132 (3d Cir. 2009).

REGULATIONS: PART 61, APPLICABILITY

Part 61 of 10 C.F.R. only applies to the "land disposal of radioactive waste . . . *received from other persons,*" 10 C.F.R. § 61.1(a) (emphasis added), and is therefore inapplicable to the issue of Applicant's management of low-level waste (LLW) generated and managed at the same site, i.e., Levy Units 1 and 2.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; ONSITE STORAGE OF LLW

In *Bellefonte,* the Commission stated, "we do not rule out that, in a future COL proceeding, a petitioner could proffer an application-specific contention suitable for litigation on the subject of onsite storage of low-level radioactive waste." *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 77 n.42 (2009). The Commission further concluded that "[t]he questions of the safety and environmental impacts of onsite low-level waste *storage* are, in our view, largely site- and design-specific, and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions." *Id.* at 76-77. Thus, based on *Bellefonte,* it is clear that there are elements of C7 and C8 that are specific to the PEF COLA, dealing with the environmental and safety consequences of the potential need for extended storage of LLW on the Levy site, and that satisfy the requirements of 10 C.F.R. § 2.309(f)(1).

NATIONAL ENVIRONMENTAL POLICY ACT: ALTERNATIVES ANALYSIS

The duty to consider alternatives originates with two provisions of NEPA: (1) 42 U.S.C. § 4322(2)(C)(iii), which requires that an agency's environmental impact statement (EIS) include "a detailed statement [of the] alternatives to the proposed action," and (2) 42 U.S.C. § 4322(2)(E), which requires that an agency "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources."

NATIONAL ENVIRONMENTAL POLICY ACT: ALTERNATIVES ANALYSIS; RULE OF REASON; GOALS OF PROJECT SPONSOR

The goals of the project sponsor are given substantial weight in determining whether an alternative is reasonable. *City of New York v. U.S. Department of Transportation,* 715 F.2d 732, 742 (2d Cir. 1983). In this regard, "[a]n agency cannot redefine the [applicant's] goals," *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 199 (D.C. Cir.), *cert. denied,* 501 U.S. 994 (1991), and the EIS alternatives analysis should be based around the applicant's goals, including its economic goals. *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (internal citations omitted).

NATIONAL ENVIRONMENTAL POLICY ACT: ALTERNATIVES ANALYSIS; RULE OF REASON; JURISDICTION OF NRC

The NRC regulations state that "[a]n otherwise reasonable alternative will not be excluded from discussion solely on the ground that it is not within the jurisdiction of the NRC." 10 C.F.R. Part 51, Subpart A, App. A, § 5.

NATIONAL ENVIRONMENTAL POLICY ACT: ALTERNATIVES ANALYSIS; RULE OF REASON; GOALS OF PROJECT SPONSOR

NEPA does not allow the applicant to define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered under 42 U.S.C. § 4322(2)(C)(iii) and (E).

NATIONAL ENVIRONMENTAL POLICY ACT: ALTERNATIVES ANALYSIS; RULE OF REASON; GOALS OF PROJECT SPONSOR

Furthermore, "NEPA requires an agency to 'exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of the project'

and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals." *Environmental Law and Policy Center v. NRC,* 470 F.3d 676, 683 (7th Cir. 2006). An applicant "may not define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the [applicant's] goals" because this would make the agency's EIS alternatives analysis a "foreordained formality." *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 199 (D.C. Cir. 1991).

RULES OF PRACTICE: DEFERENCE TO CEQ REGULATIONS

While NRC does not consider CEQ pronouncements to be binding, they are entitled to substantial deference. *See Limerick,* 869 F.2d at 741.

RULES OF PRACTICE: CONTENTIONS; NEW OR AMENDED CONTENTIONS

The first step in assessing the admissibility of a new contention is to determine if it is timely under 10 C.F.R. § 2.309(f)(2)(iii) or nontimely under 10 C.F.R. § 2.309(c). If timely, then its admissibility is evaluated under the three-factor test of 10 C.F.R. § 2.309(f)(2)(i)-(iii). If nontimely, then its admissibility is evaluated under the eight-factor balancing test of 10 C.F.R. § 2.309(c)(i)-(viii).

RULES OF PRACTICE: CONTENTIONS; NEW OR AMENDED CONTENTIONS

By definition, contentions admitted under 10 C.F.R. § 2.309(f)(2)(i)-(iii) are timely because they are founded on material new information that was not available at the time when the petition was initially due. Contentions that meet the three criteria of this regulation are in no sense late, dilatory, or untimely.

RULES OF PRACTICE: CONTENTIONS; NEW OR AMENDED CONTENTIONS; PREVIOUSLY NOT AVAILABLE INFORMATION

The fact that a party integrates, consolidates, restates, or collects previously available information into a new document does not convert it into information that "was not previously available" within the meaning of 10 C.F.R. § 2.309(f)(2)(i).

RULES OF PRACTICE: CONTENTIONS; NEW OR AMENDED CONTENTIONS; PREVIOUSLY NOT AVAILABLE INFORMATION

A party cannot satisfy the "not previously available" standard of 10 C.F.R.

§ 2.309(f)(2)(i) by showing that, as a subjective matter, he or she only recently became aware of, or realized the significance of, public information that was previously available to all. The "not previously available" standard is an objective standard, not a subjective one.

RULES OF PRACTICE: CONTENTIONS; NEW OR AMENDED CONTENTIONS; PREVIOUSLY NOT AVAILABLE INFORMATION

In cases where information becomes available piecemeal over time, and the foundation for a new contention does not become reasonably apparent until the last piece of information becomes available and falls into place, the test of 10 C.F.R. § 2.309(f)(2)(i) may be met. In such "mosaic" cases, the admissibility decision turns on a determination about when, as a cumulative matter, the separate pieces of the information puzzle were sufficiently in place to make the particular concerns reasonably apparent. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-15, 44 NRC 8, 26 (1996). This is an objective standard.

RULES OF PRACTICE: CONTENTIONS; NEW OR AMENDED CONTENTIONS; PREVIOUSLY NOT AVAILABLE INFORMATION

The fact that NRC issues a proposed rulemaking and requests comments does not, in itself, constitute information "not previously available" that entitles a party to file a new contention under 10 C.F.R. § 2.309(f)(i).

RULES OF PRACTICE: SELECTION OF HEARING PROCEDURES; CROSS-EXAMINATION

The substantive standard for allowing parties to conduct cross-examination is the same under 10 C.F.R. Part 2, Subparts G and L. It is the standard set by 5 U.S.C. § 556(d) of the Administrative Procedure Act, whereby a party is "entitled to conduct such cross-examination as may be required for a full and true disclosure of the facts." *See Citizens Awareness Network, Inc. v. NRC,* 391 F.3d 338, 351 (1st Cir. 2004).

RULES OF PRACTICE: SELECTION OF HEARING PROCEDURES; CROSS-EXAMINATION

The procedure for allowing parties to conduct cross-examination differs under 10 C.F.R. Part 2, Subparts G and L. Cross-examination occurs virtually automatically in Subpart G hearings, subject to normal judicial management and the requirement to file a cross-examination plan. *See* 10 C.F.R. §§ 2.319 and 2.711(c).

In contrast, under Subpart L, a party seeking to conduct cross-examination must file a written motion and obtain leave from the Board. 10 C.F.R. § 2.1204(b).

RULES OF PRACTICE: SELECTION OF HEARING PROCEDURES

Under 10 C.F.R. §§ 2.309(g) and 2.310, the Board determines which hearing procedure will be used (Subpart G or L) on a contention-by-contention basis.

RULES OF PRACTICE: SELECTION OF HEARING PROCEDURES

Section 2.310(b)-(k) of 10 C.F.R. specifies circumstances where a particular hearing procedure is required. If no particular procedure is required, then, under 10 C.F.R. § 2.310(a) the Board *may* conduct the proceeding for that contention under Subpart L. But, even then, the Board must exercise its discretion and select the hearing procedure most appropriate for the newly admitted contentions.

RULES OF PRACTICE: SELECTION OF HEARING PROCEDURES

The selection of hearing procedures for contentions at the outset of a proceeding is not immutable, because, *inter alia,* the availability of Subpart G procedures under 10 C.F.R. § 2.310(d) depends critically on the credibility of eyewitnesses, and the identity of such witnesses may not be known until after the contentions are admitted.

TABLE OF CONTENTS

I. BACKGROUND 67

II. STANDING 69
- A. Standards Governing Standing 69
- B. Ruling on Standing 70
  - 1. GPF 70
  - 2. EPF 71
  - 3. NIRS 71

III. STANDARDS GOVERNING CONTENTION ADMISSIBILITY 71

IV. RULING ON CONTENTIONS 73
- A. Contention 1 (C1) 73
  - 1. Statement of Contention 1 73
  - 2. Arguments Regarding Contention 1 73
  - 3. Analysis and Ruling Regarding Contention 1 76

B. Contention 2 (C2) 78
1. Statement of Contention 2 78
2. Arguments Regarding Contention 2 78
3. Analysis and Ruling Regarding Contention 2 78
C. Contention 3 (C3) 79
1. Statement of Contention 3 79
2. Arguments Regarding Contention 3 79
3. Analysis and Ruling Regarding Contention 3 82
D. Contention 4 (C4) 83
1. Statement of Contention 4 83
2. Standards Governing NEPA Contentions 86
3. Arguments Regarding Contention 4 88
4. Analysis and Ruling Regarding Contention 4 99
E. Contention 5 (C5) 106
1. Statement of Contention 5 106
2. Introduction Regarding SAMA and SAMDA 106
3. Arguments Regarding Contention 5 108
4. Analysis and Ruling Regarding Contention 5 110
F. Contentions 6A and 6B (C6A, C6B) 112
1. Statement of Contention 6A 112
2. Arguments Regarding Contention 6A 112
3. Analysis and Ruling Regarding Contention 6A 114
4. Statement of Contention 6B 115
5. Arguments Regarding Contention 6B 115
6. Analysis and Ruling Regarding Contention 6B 116
G. Contentions 7 and 8 (C7, C8) 116
1. Statement of Contentions 7 and 8 116
2. Arguments Regarding Contention 7 118
3. Arguments Regarding Contention 8 120
4. Analysis and Ruling Regarding Contentions 7 and 8 121
H. Multiple Contentions Related to NEPA Alternatives Analysis 125
1. Overview of NEPA Alternatives Contentions 125
2. Standards Governing NEPA Alternatives Analysis 126
3. Contention 9 (C9) 128
4. Contention 10 (C10) 131
5. Contention 11 (C11) 133
6. Contention 4O (C4O) 136

V. MOTION FOR ADMISSION OF NEW CONTENTION 12 138
A. Standards Governing the Admissibility of New or Amended Contentions 138

B. Arguments Regarding Motion to File New Contention 12 140
C. Ruling on Motion C12 and Proposed New Contention 12 141
VI. SELECTION OF HEARING PROCEDURES 145
A. Legal Standards 145
B. Ruling 146
VII. CONCLUSION AND ORDER 147
ATTACHMENT A 149

MEMORANDUM AND ORDER

(Rulings on Standing, Contention Admissibility, Motion to File New Contention, and Selection of Hearing Procedure)

This case arises from an application by Progress Energy Florida, Inc. (PEF) to the United States Nuclear Regulatory Commission (NRC) for two licenses to construct and operate two nuclear power reactors to be located in Levy County, Florida.[1] Three entities, the Nuclear Information and Resource Service (NIRS), the Ecology Party of Florida (EPF), and the Green Party of Florida (GPF) (collectively, Petitioners) have challenged the application by filing a petition to intervene and request for a hearing.[2]

In this Memorandum and Order, we rule that Petitioners have standing and have submitted three contentions that are admissible, at least in part, under the criteria established in 10 C.F.R. § 2.309(f). We deny Petitioners' motion to file a new contention. The Board also concludes that, for the time being, each of the admitted contentions will be heard under the procedures set forth in the NRC regulations in 10 C.F.R. Part 2, Subpart L.

I. BACKGROUND

On July 28, 2008, PEF submitted an application to the NRC for permission to construct and operate proposed Levy Nuclear Plant (LNP) Unit 1 and LNP Unit 2, in Levy County, Florida. 73 Fed. Reg. at 74,532. The application states that LNP Unit 1 and Unit 2 would be of the "AP1000" design. *Id.* The AP1000 was designed by Westinghouse Electric Company, LLC, and has been formally

[1] Progress Energy Florida, Inc.; Application for the Levy County Nuclear Power Plant Units 1 and 2; Notice of Order, Hearing and Opportunity to Petition for Leave to Intervene, 73 Fed. Reg. 74,532 (Dec. 8, 2008).

[2] Petition to Intervene and Request for Hearing by the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service (Feb. 6, 2009) (Petition).

approved by NRC. *See* Design Certification Rule for the AP1000 Design, 10 C.F.R. Part 52, Appendix D.

PEF's application was submitted pursuant to NRC's "combined license" regulations in 10 C.F.R. Part 52, Subpart C. 73 Fed. Reg. at 74,532. A combined license (COL) is defined as a "combined construction permit and operating license," 10 C.F.R. § 52.1, and, if issued, would authorize PEF to construct and operate the LNP Units 1 and 2. The general requirements for the contents of a COL application (COLA) are set forth in 10 C.F.R. §§ 52.79-52.80.

On December 8, 2008, the NRC published a "Notice of Hearing and Opportunity to Petition for Leave to Intervene" in the PEF COLA proceeding in the *Federal Register.* On February 6, 2009, three entities — NIRS, EPF, and GPF — jointly filed their Petition herein. *See supra* note 2. The Petition contained eleven separate contentions, some with several subparts. On March 3, 2009, PEF and the NRC Staff, respectively, filed answers to the Petition,[3] and on March 17, 2009, Petitioners filed their Reply.[4]

Meanwhile, on March 9, 2009, Petitioners filed a proposed twelfth contention, in a pleading we will treat as a motion.[5] NRC Staff filed its answer to Motion C12 on March 27, 2009,[6] and PEF filed its answer on March 30, 2009.[7] Petitioners filed their Reply on April 6, 2009.[8]

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[3] NRC Staff Answer to "Petition to Intervene and Request for Hearing by the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service" (Mar. 3, 2009) (Staff Answer); Progress Energy's Answer Opposing Petition for Intervention and Request for Hearing by the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service (Mar. 3, 2009) (PEF Answer).

[4] Response of the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service to Answers to our Petition to Intervene from NRC Staff Attorneys and Progress Energy Florida Attorneys (Mar. 17, 2009) (Reply). Petitioners filed an unopposed motion for an extension of time, which was granted by the Board. Request for Extension of Time on Reply to Answers by the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service (Mar. 9, 2009); Licensing Board Order (Granting Motion for Extension of Time) (Mar. 10, 2009) (unpublished).

[5] New Contention by the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service Based on Information Not Previously Available; Requesting This Generic Issue to Be Admitted and Held in Abeyance (Mar. 9, 2009) (Motion C12).

[6] NRC Staff Answer to "New Contention by the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service Based on Information Not Previously Available; Requesting This Generic Issue to Be Admitted and Held in Abeyance" (Mar. 27, 2009) (Staff New Answer).

[7] Progress Energy's Answer Opposing the Motion by the Green Party of Florida, the Ecology Party of Florida, and Nuclear Information and Resource Service for Leave to File a New Contention (Mar. 30, 2009) (PEF New Answer).

[8] Response to NRC Staff and Progress Energy Florida Answers to New Contention (12) from the Green Party of Florida, the Ecology Party of Florida and Nuclear Information and Resource Service (Apr. 6, 2009) (New Reply).

On February 23, 2009, the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel appointed this Board to preside over the adjudicatory proceeding concerning the PEF COLA for LNP Units 1 and 2.[9] On April 20 and 21, 2009, the Board convened an oral argument in Bronson, Florida, where we heard arguments related to the admissibility of the proposed contentions from Petitioners, PEF, and NRC Staff (the Parties).

In order for a request for hearing and petition to intervene to be granted, a petitioner must (1) establish that it has standing and (2) propose at least one "admissible" contention. 10 C.F.R. § 2.309(a). We address each of these two requirements in turn and find that Petitioners have standing and that three of their contentions are, at least in part, admissible.

II. STANDING

A. Standards Governing Standing

Under NRC regulations, a petitioner must demonstrate that it has standing to intervene in the licensing process. 10 C.F.R. § 2.309(a). The information required to show standing includes (1) the nature of the petitioner's right under a relevant statute 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 might be issued in the proceeding on the petitioner's interest. 10 C.F.R. § 2.309(d)(1)(ii)-(iv). Judicial concepts of standing are generally followed in NRC proceedings. *Nuclear Management Co., LLC* (Monticello Nuclear Generating Plant), CLI-06-6, 63 NRC 161, 163 (2006). These require that a petitioner establish "that (1) it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute; (2) that the injury can fairly be traced to the challenged action; and (3) that the injury is likely to be redressed by a favorable decision." *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996). In the case of a COLA, the Atomic Energy Act of 1954 (42 U.S.C. §§ 2011-2213 (1954)) (AEA) and the National Environmental Policy Act of 1969 (42 U.S.C. §§ 4321-4335 (1969)) (NEPA) are the primary statutes establishing the appropriate "zone of interests" that the petitioners may assert. Once parties demonstrate that they have standing, the parties "will then be free to assert any contention, which, if proved, will afford them the relief they seek." *Yankee Atomic,* CLI-96-1, 43 NRC at 6. Thus, for example, if a petitioner is

[9] Progress Energy Florida, Inc., Levy Units 1 & 2, Establishment of Atomic Safety and Licensing Board (Feb. 23, 2009) (unpublished); *see also* Progress Energy Florida, Inc.; Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 9113 (Mar. 2, 2009).

seeking the denial of the proposed license, then once it has standing, it can pursue any other issue that, unless corrected, would prevent the issuance of the COLA.

In determining whether a petitioner has established standing, the Commission has directed us to "construe the petition in favor of the petitioner." *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995). In addition, in proceedings involving nuclear power reactors, the Commission has recognized a proximity presumption, whereby a petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if the petitioner lives within 50 miles of the proposed facility.[10]

If the petitioner is an organization seeking to intervene in an NRC proceeding in its own right, it must allege that the challenged action will cause a cognizable injury to its interests or to the interests of its members. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 102 n.10 (1994). Alternatively, when seeking to intervene in a representational capacity, as is the case here, an organization must identify (by name and address) at least one member who is affected by the licensing action and who qualifies for standing in his or her own right, and show that the member has authorized the organization to intervene on his or her behalf. *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000).

B. Ruling on Standing

PEF and the NRC Staff do not challenge Petitioners' claim for standing. In fact, the NRC Staff concedes that Petitioners have demonstrated that they have standing. Staff Answer at 9. The Board agrees and, for the reasons set forth below, we conclude that GPF, EPF, and NIRS each have standing.

1. GPF

GPF identified eight members who live within 50 miles of the proposed LNP site. Petition at 4. By virtue of their proximity to the site, these members have standing to participate in this proceeding in their own right. Each member has also submitted an affidavit authorizing GPF to represent his or her interests in

[10] *See, e.g., Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989) (observing that the presumption applies in proceedings for nuclear power plant "construction permits, operating licenses, or significant amendments thereto").

this proceeding.[11] Therefore, GPF meets the requirements for representational standing.

2. EPF

EPF identified four members who live within 50 miles of the proposed LNP site and who therefore have standing to participate in this proceeding as individuals. Petition at 6. Each member has also submitted an affidavit authorizing EPF to represent his or her interests in this proceeding.[12] Therefore, EPF meets the requirements for representational standing.

3. NIRS

The third entity, NIRS, identified seven members who live within 50 miles of the proposed LNP site. Petition at 11. These members have standing to participate in this proceeding in their own right under the Commission's proximity presumption. Each member has also submitted an affidavit authorizing NIRS to represent his or her interests in this proceeding.[13] Therefore, NIRS meets the requirements for representational standing.

III. STANDARDS GOVERNING CONTENTION ADMISSIBILITY

In order to become a party in an adjudicatory proceeding, a petitioner must submit at least one admissible contention. 10 C.F.R. § 2.309(a). The six basic requirements for an admissible contention are set forth in 10 C.F.R. § 2.309(f)(1), and can be summarized as follows:

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[11] *See* Petition, Exh. GPF-01, Affidavit of Jessica Burris ¶ 3 (Feb. 6, 2009); Petition, Exh. GPF-02, Affidavit of Gabriela Waschensky ¶ 3 (Feb. 6, 2009); Petition, Exh. GPF-03, Affidavit of Shawna Doran ¶ 3 (Feb. 66, 2009); Petition, Exh. GPF-04, Affidavit of Michael Canney ¶ 3 (Feb. 6, 2009); Petition, Exh. GPF-05, Affidavit of Gilman Marshall ¶ 3 (Feb. 6, 2009); Petition, Exh. GPF-06, Affidavit of Gary Ponze ¶ 3 (Feb. 6, 2009); Petition, Exh. GPF-07, Affidavit of Gary Lopez ¶ 3 (Feb. 6, 2009); Petition, Exh. GPF-09, Affidavit of Joyce Tentor ¶ 3 (Feb. 6, 2009).

[12] *See* Petition, Exh. EPF-01, Affidavit of Frank Caldwell ¶ 3 (Feb. 6, 2009); Petition, Exh. EPF-01, Affidavit of Emily Casey ¶ 3 (Feb. 6, 2009); Petition, Exh. EPF-01, Affidavit of December McSherry ¶ 3 (Feb. 6, 2009); Petition, Exh. EPF-01, Affidavit of David McSherry ¶ 3 (Feb. 6, 2009).

[13] *See* Petition, Exh. NIRS-01, Affidavit of Rob Brinkman ¶ 3 (Feb. 6, 2009); Petition, Exh. NIRS-02, Affidavit of Theodora Rusnak ¶ 3 (Feb. 6, 2009); Petition, Exh. NIRS-03, Affidavit of Frank Lockart ¶ 3 (Feb. 6, 2009); Petition, Exh. NIRS-04, Affidavit of Emily Casey ¶ 3 (Feb. 6, 2009); Petition, Exh. NIRS-05, Affidavit of Robert Tomashevsky ¶ 3 (Feb. 6, 2009); Petition, Exh. NIRS-06, Affidavit of Amanda Hancock ¶ 3 (Feb. 6, 2009); Petition, Exh. NIRS-07, Affidavit of Carol Gordon ¶ 3 (Feb. 6, 2009).

(i) *Specificity*: "Provide a specific statement of the issue of law or fact to be raised or controverted;"

(ii) *Brief Explanation*: "Provide a brief explanation of the basis for the contention;"

(iii) *Within Scope*: "Demonstrate that the issue raised in the contention is within the scope of the proceeding;"

(iv) *Materiality*: "Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;"

(v) *Concise Statement of Alleged Facts or Expert Opinion*: "Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue;" and

(vi) *Genuine Dispute*: "[P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief."

10 C.F.R. § 2.309(f)(1).

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." Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004). The Commission has stated that "the hearing process [is only intended for] issues that are 'appropriate for, and susceptible to, resolution in an NRC hearing.'" *Id.* "While a board may view a petitioner's supporting information in a light favorable to the petitioner . . . the petitioner (not the board) [is required] to supply all of the required elements for a valid intervention petition." *AmerGen Energy Co.* (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260 (2009). The rules on contention admissibility are "strict by design."[14] Further, absent a waiver, contentions

[14] *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).

challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications. 10 C.F.R. § 2.335(a). Failure to comply with any of these requirements is grounds for not admitting a contention. *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 636 (2004).

IV. RULING ON CONTENTIONS

A. Contention 1 (C1)

1. Statement of Contention 1

Proposed Contention 1 states:

> *CONTENTION 1 (AP1000 is not certified and current revision is not adopted)* The COLA is incomplete because at the moment many of the major safety components and procedures proposed for the Levy County reactors are only conditionally designed at best. In its COLA, PEF has adopted the AP1000 DCD[15] Revision 16 which has not been certified by the NRC and with the filing of Revision 17 by Westinghouse, Revision 16 will no longer be reviewed by the NRC Staff. PEF is now required to resubmit its COLA as a plant-specific design or to adopt Revision 17 by reference and provide a timetable when its safety components will be certified. Either the plant-specific design or adoption of AP1000 Revision 17 would require changes in PEF's application, including the final design and key operational procedures. Regardless of whether the components are certified or not, the COLA cannot be reviewed without the full disclosure of all designs and operational procedures.

Petition at 14.

2. Arguments Regarding Contention 1

Petitioners make two main categories of arguments in support of C1. First, Petitioners assert that the COLA is incomplete because it lacks many of the elements that are required for a COLA. These missing elements, according to Petitioners, are only "conditionally designed" and include "significant . . . design and operational practices," *id.,* the "final design of the reactors," *id.* at 15, the

[15] Strictly speaking, the term "DCD" or "Design Control Document" refers to a document that contains important information that was submitted in connection with a certified design. *See* Design Certification Rule for the AP1000 Design, 10 C.F.R. Part 52, Appendix D, § II.A. Inasmuch as AP1000 Rev. 16 has not been certified by the NRC, the design control documents submitted in the Rev. 16 application are "proposed DCD."

"DCD," *id.,* and the "probabilistic risk assessment (PRA)." *Id.* at 16. Second, C1 raises two relatively specific complaints about the COLA, one regarding "an incomplete recirculation screen design," *id.* at 15, and another dealing with the "unresolved instrumentation and controls problem." *Id.* at 16.

The gist of Petitioners' first (more general) attack is that the COLA is a moving target. They complain that, although the COLA currently incorporates and references (a) Revision 15 of the Westinghouse design for the AP1000 which is the certified design (Rev. 15 or Certified Design),[16] and (b) a proposed revision that Westinghouse submitted to NRC in 2006 and that is still pending (Rev. 16), the COLA must inevitably be amended again because on September 22, 2008, Westinghouse submitted yet another proposed revision to the AP1000 design (Rev. 17). *Id.* at 14-15. Petitioners argue that it is "impossible to conduct a meaningful technical and safety review of the COLA without knowing the final design of the reactors as they would be constructed by PEF." *Id.* at 15. They assert that PEF has acknowledged that it will amend this COLA to incorporate Rev. 17, *id.* at 14, 16, and that it constitutes "thousands of pages [of] revision that is sitting offshore." Tr. at 236. Petitioners argue that, unless they complain about this state of flux and get their contentions related to the impending Rev. 17 admitted *now,* they may never get another opportunity to challenge the impending changes. Tr. at 236-38. Petitioners' general attack concludes that:

> Without having the current configuration, design and operating procedures in the application, the risk assessment and SAMAs[17] cannot be determined. Until major components are incorporated into the COLA for a full review, much of the interaction between the various components cannot be resolved. The deficiencies in the . . . COLA are manifold with much of the technical descriptions of major components of the plant subject to change. Regardless of whether the reactor components would be certified or not at some time in the future, the COLA does not contain the necessary information on major design and operational components, nor is there any timetable for when these components may be certified.

Petition at 18-19.

The second category of C1 issues — two specific complaints — are only cryptically described. The first specific complaint is that the COLA is incomplete as demonstrated by the fact that NRC sent a "January 18, 2008, letter to Westinghouse docketing AP1000 revision 16 [where] there was a discussion of an incomplete recirculation screen design, i.e., the 'sump problem,' a necessary

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[16] Rev. 15 is the version currently "certified" by NRC and specifically referred to in the NRC regulations. *See* Design Certification Rule for the AP1000 Design, 10 C.F.R. Part 52, Appendix D, § III.A.

[17] The acronym "SAMA" means severe accident mitigation alternative or analysis and is discussed in Section IV.D.1.

component to the emergency cooling system that will affect the design for the proposed Levy County reactors." *Id.* at 15-16. No information is provided as to what is incomplete about the design. The second specific complaint is that "[t]he AP1000 reactors also have unresolved instrumentation and controls problem is [*sic*] that will ultimately impact the safety of the facility." *Id.* at 16. We are not told what the problem is.

PEF asserts that C1 is "inadmissible because it (1) impermissibly challenges NRC's Part 52 regulations; (2) is not supported by factual information or expert opinion; and (3) fails to controvert relevant portions of the Application." PEF Answer at 16. As to the first point, PEF says that C1 is a "direct attack on NRC's design certification process" because, under 10 C.F.R. § 52.55(c), a COLA applicant is authorized to "reference . . . an application for a design certification." *Id.* Thus, PEF reasons, its COLA reference to Rev. 16 is entirely legitimate. As to Rev. 17, PEF acknowledges that it plans to amend its COLA to reference Rev. 17, but asserts that this fact does not make the current COLA defective. *Id.* at 17. PEF agrees that "[i]f Progress were to revise its Application . . . then Petitioners could submit contentions at that time." *Id.* PEF asserts that this is not a situation where C1 is "otherwise admissible" (i.e., meets all the criteria of 10 C.F.R. § 2.309(f)(1)), and thus should be admitted and held in abeyance. *Id.* at 18. PEF cites two recent licensing board decisions denying contentions similar to C1.[18]

PEF goes on to assert that C1 fails to provide a "concise statement of 'the alleged facts or expert opinions' and 'specific sources and documents' on which the petitioner intends to rely," citing 10 C.F.R. § 2.309(f)(1)(v). *Id.* at 21. PEF points to Petitioners' allegation about the Staff's letter to Westinghouse (requesting additional information regarding the recirculation screen design) and asserts that a "simple reference to the Staff's RAI" does not constitute grounds for a contention. *Id.* at 21-22. PEF asserts that Petitioners provide no support for the allegation that the COLA's reference to Rev. 16 or possible future reference to Rev. 17 "somehow invalidate the existing PRA and SAMA analyses." *Id.* at 23. PEF closes by providing a document (PEF Answer Attachment A) that lists the nine areas where Petitioners allege that the COLA omitted necessary information and then cites to specific portions of COLA and Rev. 16 where such information is, says PEF, clearly provided. *Id.* at 24.

The NRC Staff agrees with PEF that C1 is inadmissible, asserting that C1 is a "challenge to the Commission's Licensing Process." Staff Answer at 15.

The regulations, Commission case law, and Commission policy clearly give COL

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[18] *Id.* at 19-20 (citing *Duke Energy Carolinas, LLC* (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431 (2008) (*Lee*) and *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-2, 69 NRC 87, 98 (2009) (*Summer*)).

applicants the right to reference a design certification application. 10 C.F.R. § 52.55(c); *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant), CLI-08-15, 68 NRC 1 (2008); Conduct of New Reactor Licensing Proceedings; Final Policy Statement, 73 Fed. Reg. 20,963, 20,972 (Apr. 17, 2008).

Id. at 15. The Staff argues that a challenge to the licensing process violates 10 C.F.R. § 2.335(a).

As to Petitioners' specific allegations regarding the AP1000 recirculation screen design and the instrumentation and controls issue, the Staff responds that Petitioners fail to provide any support or explanation as to what the problem or omission is. *Id.* at 16. The Staff states the "NRC staff's issuance of RAIs 'does not alone establish inadequacies in the application,' and [that the Commission] upheld the inadmissibility of a contention where 'petitioners themselves provided no analysis, discussion, or information on their own on any of the issues raised in the RAIs.'" *Id.* at 17 (citing *Oconee,* CLI-99-11, 49 NRC at 337).

With regard to Petitioners' complaint that the COLA is in a state of flux and that the AP1000 design is still evolving, the Staff posits that "if a referenced DCD is revised after submission of the [COLA] then the COL applicant has a choice between incorporating these revisions in their entirety, or else requesting an exemption from some of the changes, or pursuing a custom design." *Id.* at 24. The Staff agrees with PEF that "[w]hen and if the [COLA] is later amended, late filed contentions specifically taking issue with the amendment can then be submitted." *Id.*

3. Analysis and Ruling Regarding Contention 1

The Board concludes that Contention 1 is not admissible. Although Petitioners make general allegations that the COLA is incomplete, they have failed to point out (with the two exceptions analyzed below) any specific omission. Thus, they have failed to satisfy 10 C.F.R. § 2.309(f)(1)(vi) ("if the petitioner believes that the application fails to contain information on a relevant matter as required by law, [then the petitioner must provide] the identification of each failure and the supporting reasons for the petitioner's belief"). In each of the nine general areas of omission asserted by Petitioners, PEF's Attachment A demonstrates that the COLA, and its referenced certified design (Rev. 15) or proposed revised certified design (Rev. 16), in fact contain and cover that area. Petitioners' Reply fails to rebut these points. This is fatal, because an applicant is legally entitled to reference a standard design certification (i.e., Rev. 15). 10 C.F.R. § 52.73(a). Likewise, an applicant "may, at its own risk, reference . . . a design for which a design certification application has been docketed but not granted" (i.e., Rev. 16). 10 C.F.R. § 52.55(c).

The fact that the COLA is subject to, or even expected to, change does not make

it legally deficient. The NRC follows a "dynamic licensing process." *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-8, 41 NRC 386, 395 (1995). It is common for applicants to modify and amend their applications, often many times, and this does not, *per se,* render the application deficient. *See, e.g., Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-33, 60 NRC 749 (2004). If Petitioners wish to file a contention challenging the COLA, then they must focus on the COLA as it exists at this moment in time, *see, e.g.,* 10 C.F.R. § 2.309(f)(2) ("Contentions must be based on documents or other information available at the time the petition is to be filed"), and must point out specifically where or how the COLA is inadequate. *See* 10 C.F.R. § 2.309(f)(1)(vi). This they have not done.

The necessary corollary to NRC's dynamic licensing process is that, if and when the COLA is amended, petitioners must be given a fair opportunity to file new or amended contentions challenging these changes. This follows from 42 U.S.C. § 2239(a)(1)(A) (NRC "shall grant a hearing upon the request of any person whose interests may be affected by the proceeding") and *Union of Concerned Scientists v. NRC,* 735 F.2d 1437, 1443 (D.C. Cir. 1984) (NRC must grant a hearing on any *material* contention). PEF and the NRC Staff both concede this point. PEF Answer at 17; Staff Answer at 24. It is clear that if PEF amends its COLA (for example, by referencing Proposed Rev. 17), then Petitioners will be entitled to file new or amended contentions pursuant to 10 C.F.R. § 2.309(f)(2), and those contentions will be admissible if they meet the relevant criteria. *See infra* Section V.A.

Turning to the more specific elements of C1, Petitioners have failed to explain or allege how or why the recirculation screen design is "incomplete" or the instrumentation and controls design has a "problem." We are left in the dark as to what Petitioners want to litigate. This does not comport with 10 C.F.R. § 2.309(f)(1)(ii) ("provide a brief explanation") or (vi) (identify "each failure and the supporting reasons for the petitioner's belief"), or the intent of the regulation, i.e., to "focus litigation on concrete issues." 69 Fed. Reg. at 2202.

As the Commission held in *Oconee,* a petitioner cannot merely cite to the existence of an RAI and automatically get a contention of omission (or inadequacy) admitted. The existence of an RAI does not, by itself, constitute compliance with 10 C.F.R. § 2.309(f)(1), nor does it *ensure* the admission of a contention. Likewise, as PEF and the Staff agree, Tr. at 259, 269, the issuance of an RAI does not *immunize* a matter from being the subject of an admissible contention. If a contention meets the criteria of 10 C.F.R. § 2.309(f)(1) by alleging that there is an omission, identifying the omission, explaining why the omitted information is

necessary, and otherwise following the regulation, then it would be admissible, even if it is based on an RAI on the same subject. But this is not the case here.[19]

B. Contention 2 (C2)

1. Statement of Contention 2

Proposed Contention 2 states:

> *CONTENTION 2*: PEF should withdraw the COLA until the AP1000 certification is actually complete, or apply under Part 50.

Petition at 19.

2. Arguments Regarding Contention 2

Petitioners make no arguments or statement of any kind regarding C2. Instead, the petition merely quotes excerpts from two regulations — 10 C.F.R. §§ 52.1(a) (the definitions of the terms "standard design," "standard design approval or design approval," and "standard design certification or design certification") and 52.79(a) (required content of a COLA, including the requirement to provide a final safety analysis report).

PEF responds that C2 is a suggestion, but not an admissible contention, because it does not state an issue of law or fact that can be adjudicated or otherwise comply with any of the requirements of 10 C.F.R. § 2.309(f)(1). PEF Answer at 25-26. The NRC Staff agrees. Staff Answer at 26-27.

3. Analysis and Ruling Regarding Contention 2

Proposed Contention 2 is not admissible. It fails to state an issue of law or fact and makes no attempt to comply with the criteria of 10 C.F.R. § 2.309(f)(1).

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[19] Given that C1 fails to satisfy the basic contention admissibility requirements of 10 C.F.R. § 2.309(f)(1), it is not "otherwise admissible" and therefore need not be referred to the Staff and held in abeyance. *See* 73 Fed. Reg. at 20,972; *Shearon Harris,* CLI-08-15, 68 NRC at 4; *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-09-8, 69 NRC 317, 324, 327 (2009); *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-13, 69 NRC 575, 577 (2009).

C. Contention 3 (C3)

1. Statement of Contention 3

Proposed Contention 3 is not entirely clear. Initially, the Petition states "CONTENTION 3 (The Applicant does not meet the Financial Qualification Requirements of 10 C.F.R. § 50.33)." Petition at 20. Soon thereafter, the Petition elaborates:

> PEF has submitted a [COLA] which fails to demonstrate the standard of proof required by 10 C.F.R. § 50.33 in at least three respects: (i) total construction costs for this project are not fully stated and subject to a high level of uncertainty; (ii) the inputs to determine operating and maintenance (O&M) costs are uncertain; and (iii) there is not a favorable financial market to acquire the funding necessary to complete the project.

Id. at 20-21. We will assume that the longer quote constitutes the essence of C3.

2. Arguments Regarding Contention 3

Petitioners make three arguments to support their contention that the COLA fails to satisfy the financial qualification requirements of 10 C.F.R. § 50.33. First, Petitioners contend that PEF has chosen to omit disclosure of the projected costs of construction at Levy Units 1 and 2. *Id.* at 21. Petitioners assert that "construction cost estimates of new nuclear plants have spiraled out of control to gargantuan proportions since the time that Levy Units 1 and 2 were first announced and they remain highly volatile." *Id.* According to Petitioners, PEF's previous filings of estimated costs severely underestimated "the impact of the enormous inflation occurring in construction of nuclear generating plants over the last few years." *Id.* at 21-22. Petitioners state that the price of materials has increased and the global economy has deteriorated, and that even PEF has acknowledged that total costs could exceed their original estimate by $6 billion. Petition at 23. Petitioners are concerned that the increase in cost will result in an increase in rates to PEF customers. *Id.* at 23-24.

Second, Petitioners argue that PEF has "opted to omit" public disclosure of projected operation and maintenance (O&M) costs, which is a "critical omission" due to the allegedly great uncertainty of these costs. *Id.* at 25. Further, Petitioners are concerned that the demand for electricity in Florida is declining due to declining population growth and tourism, and this decrease undermines the "sound prospects of funding this project." *Id.* at 26. Petitioners warn that PEF has not yet identified any joint applicants or any other source of funding to support this project. *Id.* at 27. Petitioners assert that, due to the present economic situation,

PEF's decision to build two new nuclear reactors presents risks to the public that are unacceptable. *Id.* at 26.

Third, Petitioners argue that PEF's decision to erect "two extremely large, risky construction projects" is fiscally irresponsible and a "more modular approach made up of a greater variety of resource options" would be more prudent. *Id.* at 30. Nuclear power is the costliest form of energy, they argue, and PEF is taking an economic risk that could be decreased by choosing smaller and more diverse forms of energy generation. *Id.* Petitioners assert that PEF's concern about uncertainties with regard to alternate forms of energy contrasts with its assurance that the AP1000 design will have no uncertainties and "reflects an unwillingness to take alternatives seriously." *Id.* at 30-31.

PEF asserts that C3 is inadmissible because "Petitioners set forth no basis for the Contention, Petitioners have not provided sufficient facts or expert opinions supporting the Contention,[20] and the Contention does not raise a genuine issue of material dispute with the Application." PEF Answer at 26-27. First, PEF points out that the allegedly omitted construction cost information (estimating a construction cost of $16.6 billion for Levy) in fact appears in the ER in section 10.4.2.2.[21] *Id.* at 31. Furthermore, PEF contends that Petitioners' statements regarding the uncertain construction costs associated with nuclear reactors are not supported by facts or expert opinion and do not controvert the cost data in the COLA. *Id.* at 33. PEF also argues that Petitioners' concern with ratepayer impacts are similarly not supported by facts or expert opinion and do not dispute any information in the COLA. *Id.* at 35. Moreover, PEF says, ratepayer impacts are outside the scope of the COL proceeding because Florida, not the NRC, is charged with protecting ratepayers' interests. *Id.* (citing *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-02-16, 55 NRC 317, 343 n.53 (2002)).

With regard to O&M costs, PEF argues that it is an "electric utility"[22] and thus

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[20] Throughout its answer, PEF repeatedly complains that Petitioners must provide facts, evidence, and/or expert opinion in support of each contention. *See, e.g.,* PEF Answer at 26-27 ("not provided sufficient facts or expert opinion supporting the Contention"), *id.* at 27 (failed to "provide expert testimony or facts," "must be supported by facts"), *id.* at 28 ("are not supported by facts or expert opinion"), and *id.* at 52 ("not supported by facts or expert opinions"). We note, at the outset, that PEF misconstrues the regulation, which simply requires that Petitioners provide a *concise statement* of *alleged* facts *or* expert opinion which support" the Petitioners' position. 10 C.F.R. § 2.309(f)(1)(v) (emphasis added).

[21] In addition, PEF states that Petitioners could have viewed proprietary information, which discusses construction costs in more detail, had they followed the procedures set forth in the Hearing Notice. PEF Answer at 31.

[22] "*Electric utility* means any entity that generates or distributes electricity and which recovers the cost of this electricity either directly or indirectly, through rates established by the entity itself or

(Continued)

exempt under the first clause of 10 C.F.R. § 50.33(f)(1) from needing to provide an estimate of such costs. *Id.* at 37. PEF cites NRC Regulatory Guide 1.206 as supporting this interpretation. *Id.* This makes sense, PEF says, because electric utilities are regulated entities that are assured of covering their operating costs via their regulated rates. *Id.* at 38. Furthermore, PEF says that Petitioners' claims regarding Florida's economy, the need for power, and the current market are outside the scope of the proceeding, are not supported by alleged facts or expert opinion, and fail to raise a material dispute with the Application. *Id.* at 37-50.

Finally, PEF argues that Petitioners' complaint regarding alternatives is irrelevant to the discussion of financial qualifications. *Id.* at 51-52. Additionally, PEF asserts that issues regarding alternatives in this contention are lacking the support of alleged facts or expert opinions, and fail to raise a material dispute with the COLA. *Id.* at 52.

The NRC Staff agrees with PEF that C3 is inadmissible, asserting that C3 "fails to establish a genuine dispute with the applicant on a material issue of fact or law, in contravention of the requirements of 10 C.F.R. § 2.309(f)(vi), and fails to raise an issue within the scope of the proceeding, in contravention of 10 C.F.R. § 2.309(f)(iii)." Staff Answer at 27. The NRC Staff argues that Petitioners have only made general statements that constructing the plants will be very expensive but have failed to take issue with any information actually provided in the COLA. *Id.* at 27-28. Moreover, the Staff believes that Petitioners' assertion that it is financially irresponsible for PEF to build Levy Units 1 and 2 is outside the purview of NRC's concerns. The Staff states: "The fundamental purpose of NRC financial qualifications requirements is to ensure public health and safety . . . not to ensure the financial viability of a project." *Id.* at 28 (citation omitted).

Petitioners' Reply repeats their initial arguments. Petitioners dispute that PEF's projected construction costs are reasonable or legitimate. Reply at 6. They assert that the costs are increasing and "PEF is caught in an economic spiral that poses fundamental questions to its ability to acquire capital in an unreceptive financial marketplace." *Id.* Petitioners "fundamentally take issue" with the NRC Staff's assertion that NRC's financial qualification is limited to whether PEF can demonstrate that it possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs and related fuel cycle costs, and does not involve whether PEF is making a wise financial choice. *Id.* at 11. Petitioners believe that this is "fundamentally a matter of public policy" and should be the subject of the NRC's financial review. *Id.* at 12.

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by a separate regulatory authority." 10 C.F.R. § 50.2. The first clause of 10 C.F.R. § 50.33(f) states, "Except for an electric utility applicant for a license to operate a utilization facility," the application shall provide certain financial estimates and demonstrations.

3. Analysis and Ruling Regarding Contention 3

The Board concludes that Contention 3 is not admissible. Although Petitioners make general allegations that the COLA is incomplete, they have failed to point out any specific omission that is required by law to be included in the Application. As PEF points out, the COLA includes an estimate ($16.6 billion) of the construction costs for Levy Units 1 and 2. Although costs may be increasing, Petitioners fail to specify how this estimate is incorrect or inadequate. Thus, they have failed to satisfy 10 C.F.R. § 2.309(f)(1)(vi) ("if the petitioner believes that the application fails to contain information on a relevant matter as required by law, [then the petitioner must provide] the identification of each failure and the supporting reasons for the petitioner's belief"). Petitioners' assertions that building two new nuclear reactors in a troubled economy is fiscally irresponsible is outside the scope of the COL proceeding, in contravention of 10 C.F.R. § 2.309(f)(1)(iii).

Section 50.33(f) requires an application to state:

> Except for an electric utility applicant for a license to operate a utilization facility of the type described in § 50.21(d) or § 50.22, information sufficient to demonstrate to the Commission the financial qualification of the applicant to carry out, in accordance with regulations in this chapter, the activities for which the permit or license is sought.

To demonstrate financial qualification, an applicant for a combined license must show that it possesses funds or has "reasonable assurance of obtaining funds necessary to cover estimated" construction and fuel cycle costs. 10 C.F.R. § 50.33(f)(3). Accordingly, PEF is required to demonstrate that it has or expects to have the funds to cover construction costs. Though Petitioners argue in their Petition that this information was omitted from the Application, the Board finds, and Petitioners conceded at oral argument, that PEF's COLA does, in fact, contain this information. *See* Tr. at 153; ER § 10.4.2.2. Petitioners fail to demonstrate that the construction cost information was omitted from PEF's COLA, and therefore do not satisfy 10 C.F.R. § 2.309(f)(1)(vi).

Petitioners' argument that O&M costs must be disclosed in a COLA is incorrect. The plain language in section 50.33(f) excludes *electric utility* applicants for an *operating license* from being required to supply O&M costs. PEF asserts, and Petitioners do not dispute, that PEF is an electric utility. PEF Answer at 38. We agree. A COL is, in part, an operating license. Therefore, we conclude that PEF, as an applicant for a COL under 10 C.F.R. § 50.33(f)(3) is also exempt under 10 C.F.R. § 50.33(f) from the obligation to provide an estimate of O&M costs.

At oral argument, Petitioners expressed their concern that PEF is not able to provide "reasonable assurance" that necessary funding will be available for this project. Tr. at 151. Petitioners cite the teetering economy and the declining need for energy in Florida as components of a larger picture that puts into question

whether it is reasonable to assume that PEF can adequately estimate their costs and whether they will be able to obtain the necessary funds. Tr. at 152-53. However, the purpose of the financial qualification requirements of 10 C.F.R. § 50.33(f) is to ensure "the protection of public health and safety and the common defense and security"[23] and not to evaluate the financial wisdom of the proposed project. The regulations do not require the Board to determine whether economic conditions will have favorable or unfavorable impacts on a project. The Board is also not authorized or required to determine if alternate forms of energy would be more cost-efficient for PEF and Florida ratepayers. Petitioners acknowledged this fact at oral argument. Tr. at 154. Furthermore, Petitioners provided no other reason why the Board should question PEF's reasonable assurance to obtain funds for LNP.[24]

As discussed, *supra,* Petitioners' C3 is outside the scope of this proceeding and fails to establish an omission or deficiency in the COLA. Accordingly, Petitioners fail to meet the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(iii) and (vi).

D. Contention 4 (C4)

1. Statement of Contention 4

Proposed Contention 4 includes sixteen subparts and covers 40% of the Petition (forty pages). It focuses on various alleged inadequacies in PEF's environmental report (ER), asserting that the ER fails to address, or inadequately addresses, certain direct, indirect, and cumulative environmental impacts of the proposed LNP facility. Petition at 32; Tr. at 45, 64, 143. While not all elements of Contention 4 are admissible, for the reasons set forth below the Board concludes that C4 presents several issues that, when read together, are sufficiently pled to satisfy the criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi) and to thus constitute an admissible contention.

Contention 4 starts with an introductory assertion that the ER is inadequate (C4 and C4A). Petition at 32. Petitioners next allege ten specific omissions and deficiencies in the ER (C4B to C4K). *Id.* at 35-57. Contention C4 then asserts that, as a consequence of the deficiencies "described above," the ER also underestimates the zone of impact of the project, the zone of its impact on endangered or listed species, and the scope of mitigation measures that need to be

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[23] *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 303 (1997) (citing Financial Qualifications, 33 Fed. Reg. 9704 (July 4, 1968)).

[24] In fact, Petitioners do not dispute that there is a Florida statute that allows PEF to immediately collect money from ratepayers to pay for LNP, thereby further ensuring PEF's financial qualifications. Tr. at 160-61.

considered (C4L-C4N). *Id.* at 57-65. Contention 4 then includes a subpart dealing with environmental alternatives, C4O, which we will deal with in connection with three other environmental alternatives contentions (C9-C11), below.[25] Petition at 65. Finally, Petitioners raise a subissue regarding the ER's alleged inconsistency with 40 C.F.R. Part 230.[26]

More specifically, the following is a synopsis of the subparts of C4.

a. Introductory Assertion (C4 & C4A)

In the introduction, Petitioners assert the basic theme that the ER has "omissions, misrepresentations and failures," Petition at 32, and that the ER has "failed to address significant adverse direct, indirect and cumulative environmental impacts that would occur if the proposed LNP is constructed and operated as proposed."[27] *Id.* at 33. No specific omissions or deficiencies are included in C4 or C4A.

b. Specific Allegations (C4B-C4K)

Next, the Petition elaborates on the main theme, alleging and explaining ten specific omissions, misrepresentations, and/or deficiencies in the ER. Each of these subparts repeats the phrase "the ER failed to address certain adverse direct, indirect and cumulative environmental impacts" and then asserts a specific impact or deficiency. The specific direct, indirect, and cumulative impacts, supposedly omitted or inadequately covered in the ER, are as follows:

C4B: Impacts of constructing and mining for fill material, such as aggregate for fill, in floodplains. *Id.* at 35.

C4C: Impacts of mining for raw materials, such as aggregate for concrete, to construct the LNP facility. *Id.* at 38.

C4D: Impacts of onsite mining (excavation) and dewatering to construct and operate the LNP facility. *Id.* at 40.

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[25] Contention C4O is addressed in Section IV.H.7, below.

[26] The Part 230 subissue is mislabeled C4N. Since there is already a C4N, we name it C4P. *Compare* Petition at 63 (first N), *with id.* at 67 (second N).

[27] The various subparts of C4 consistently use the phrase "direct, indirect and cumulative environmental impacts." Petitioners also reference certain guidance of the Council on Environmental Quality. Petition at 32-33. The CEQ regulations indeed define "direct and indirect" impacts and "cumulative" impacts and require that they be considered in the EIS. *See* 40 C.F.R. §§ 1508.8,1508.7. Unless otherwise specified or warranted by the context, when we discuss C4 we use the phrase "environmental impact" to include "adverse direct, indirect, and cumulative environmental impact."

C4E: Impacts of constructing LNP within wetlands that are connected to the underlying Floridan aquifer system. *Id.* at 44.

C4F: Impacts of constructing and operating LNP on Outstanding Florida Waters (OFWs). *Id.* at 45.

C4G: Impacts of increases in nutrient concentrations in wetlands, floodplains and special aquatic sites, and other waters resulting from dewatering during construction and operation. *Id.* at 47.

C4H: Impacts from destructive wildfires resulting from dewatering during construction and operation. *Id.* at 48.

C4I: Salt drift and water quality impacts resulting from the use of coastal (salt) water in cooling towers situated inland and surrounded by freshwater wetlands, floodplains, special aquatic sites, and other waters. *Id.* at 49.

C4J: Greenhouse gas and global climate disruption impacts resulting from the LNP prematurely killing trees. *Id.* at 52-53.

C4K: Impacts of air quality degradation resulting from releases of particulate matter resulting from destructive wildfires resulting from the LNP project. *Id.* at 56.

c. Consequential Allegations

The Petition next alleges three defects in the ER that ostensibly flow from the foregoing ten specific defects. In each of these "consequential" allegations, the Petitioner asserts that, because the ER failed to adequately address the adverse direct, indirect, and cumulative environmental impacts as "described above," the ER likewise:

C4L: Failed to identify the zone of environmental impact and irreparable harm that the LNP would cause to public lands and private property, and erroneously concluded that the impacts of the project were small. *Id.* at 58.

C4M: Failed to identify the zone of environmental impact that the LNP would have on federally listed species and their habitats, and erroneously concluded that such impacts were not large. *Id.* at 61.

C4N: Failed to adequately address the irreversible and irretrievable commitments of resources involved in the project and thus failed to adequately address the appropriate mitigation of these impacts. *Id.* at 64.

d. 40 C.F.R. Part 230

As a final point, Contention 4 includes C4P alleging that the ER is defective because it failed to address "inconsistencies of the proposed LNP project with 40 C.F.R. [Part] 230. *Id.* at 67. Part 230 was issued by the U.S. Environmental Protection Agency (EPA), in conjunction with the U.S. Army Corps of Engineers (USACE), pursuant to section 404(b)(1) of the Clean Water Act, 33 U.S.C. § 1344(b)(1), and is entitled "Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material." 40 C.F.R. Part 230.

2. Standards Governing NEPA Contentions

Before turning to the numerous subparts of Contention C4, we address two general principles that govern our analysis of such "NEPA" contentions.

a. Admissibility not Merits: No Premature Adjudication

First, at this stage, the only question before us is whether a contention meets the admissibility requirements of 10 C.F.R. § 2.309(f)(1). This is not the time or place to determine the NEPA merits.[28] For example, the contention admissibility decision should not decide (under the guise of "materiality" or "scope") whether the environmental impacts that the Petitioners allege have been omitted from the ER are indeed "reasonable" or "significant," or whether an alternative that the Petitioners propound is reasonable.[29] For NEPA, which is governed by the "rule of reason," such reasonableness determinations are the merits, and should only be decided *after* the contention is admitted.[30] Instead, at the contention admissibility stage, a Board merely decides whether the contentions meet the six pleading requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).

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[28] *See, e.g., Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, NE), CLI-09-9, 69 NRC 331, 352 (2009) ("The Board simply has to find that each of the elements of contention admissibility is satisfied, and need not weigh the merits of the petitioner's arguments").

[29] *See Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 548 (1980) (citing *Mississippi Power and Light Co.* (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973)) ("It is enough that, as here, the basis for the contention respecting the inadequacy of the consideration of alternatives to the construction of this plant is identified with reasonable specificity. . . . it is not the function of a licensing board to reach the merits of any contention contained therein").

[30] NRC rules authorize the admission of strictly "legal issue" contentions, such as where the occurrence of certain alleged environmental impacts is not in dispute and the only issue is, under the "rule of reason," whether the EIS is legally required to cover such impacts or the EIS discussion was adequate. *See U.S. Department of Energy* (High-Level Waste Repository), CLI-09-14, 69 NRC 580, 590 ("[O]ur rules permit contentions that raise issues of law as well as contentions that raise issues of fact").

Our duty to avoid premature adjudication of the merits of NEPA contentions does not mean, however, that every allegation that an environmental impact should have been included in the ER or EIS, or allegation the alternatives analysis is inadequate or "not reasonable" must automatically be admitted. For example, if the contention (a) fails to provide a concise statement of the alleged facts or expert opinions that support the petitioner's position, (b) fails to include references to the specific portions of the ER that are allegedly defective, or (c) alleges an omission where there plainly is none, then the contention would be inadmissible for failure to meet 10 C.F.R. § 2.309(f)(1)(v) or (vi). Further, even if the NEPA contention is otherwise well pled, if it fails to *allege any facts* that support the petitioners' position (e.g., that a specified environmental impact should have been included or an alternative considered) or alleges that the ER must consider impacts or alternatives that are patently outside the realm of reason, then the contention should be denied for failure to demonstrate that the issue raised is within the legitimate scope of NEPA as required by 10 C.F.R. § 2.309(f)(1)(iii).

b. ER Is Mandated by Part 51, not NEPA

The second fundamental point is that the primary criterion of the adequacy of the ER is 10 C.F.R. Part 51, not NEPA. NEPA applies to "agencies of the Federal Government." 42 U.S.C. § 4322(2). It does not apply to private parties, such as applicants for NRC licenses.[31] Under NEPA, it is NRC, not the applicant, that must prepare the EIS and identify and discuss all reasonable alternatives. While NRC may require an applicant to submit certain information, the NRC cannot delegate its duty to comply with NEPA to the applicant.[32] Thus, while the adequacy of the ER may be informed by consideration of general NEPA principles, we must look to 10 C.F.R. Part 51 to determine if an ER is satisfactory or deficient.

Part 51 specifies that each application must be accompanied by an "Environmental Report." 10 C.F.R. § 51.45(a). The ER must contain, *inter alia,* a description of the proposed action, a statement of its purposes, and a discussion of the impacts, adverse environmental effects, and alternatives to the proposed

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[31] *See, e.g., Save the Bay, Inc. v. U.S. Army Corps of Engineers,* 610 F.2d 322, 326 (5th Cir. 1980); *Sierra Club v. U.S. Environmental Protection Agency,* 995 F.2d 1478, 1485 (9th Cir. 1993); *Natural Resources Defense Council, Inc. v. U.S. Environmental Protection Agency,* 822 F.2d 104, 129 n.25 (D.C. Cir. 1987); *District of Columbia v. Schramm,* 631 F.2d 854, 862 (D.C. Cir. 1980); *Defenders of Wildlife v. Andrus,* 627 F.2d 1238, 1243-44 (D.C. Cir. 1980); *see also* Daniel R. Mendelker, NEPA Law and Litigation §§ 1.1, 8.18 (2d ed. 2008).

[32] *See Washington Public Power Supply System* (WPPSS Nuclear Project No. 3), LBP-96-21, 44 NRC 134, 136 (1996); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), LBP-83-8A, 17 NRC 282, 285 (1983).

action. 10 C.F.R. § 51.45(b)(1)-(3). The ER must discuss environmental impacts "in proportion to their significance." 10 C.F.R. § 51.45(b)(1). The discussion of the alternatives must be "sufficiently complete to aid" the Commission in developing and exploring appropriate alternatives pursuant to section 102(2)(E) of NEPA. 10 C.F.R. § 51.45(b)(3). In addition, the ER must include an analysis that considers and balances the effects of the proposed action and its alternatives, and "the alternatives available for reducing or avoiding adverse environmental effects." 10 C.F.R. § 51.45(c). This analysis must contain "sufficient data to aid" the Commission in its development of an independent analysis.[33] *Id.*

ERs are required for COLAs, 10 C.F.R. § 51.50(c), including those that reference a standard design certification. 10 C.F.R. § 51.50(c)(2). ERs are also required for each application for a standard design certification. 10 C.F.R. § 51.55.

But the ER is not the EIS. For example, while the ER impact analysis must include "sufficient data to aid" the Commission, and the alternatives analysis must be "sufficiently complete to aid the Commission," in preparing the EIS, the regulations do not mandate that the ER must be equivalent to the EIS. Indeed, 10 C.F.R. § 2.309(f)(2) specifically recognizes that a challenge to the ER is different from a challenge to the EIS. Because the ER is the only environmental document available when NRC issues its notice of opportunity to request a hearing, initial contentions necessarily focus on the adequacy of the applicant's ER under Part 51. But 10 C.F.R. § 2.309(f)(2) recognizes that, when NRC issues the EIS, petitioners have the opportunity to file a second wave of environmental contentions. Such new contentions focus on the adequacy of the NRC Staff's EIS (or EA) under NEPA.

With these principles in mind, we turn to the subparts of C4.

3. Arguments Regarding Contention 4

This Board will not attempt to restate the 180 pages of pleadings filed concerning the admissibility of C4. Contention 4, as its single number implies, is intended as a single contention and was intended to be viewed as a single "whole cloth." Tr. at 41, 44. It is supported primarily by a declaration by Dr. Sidney Bacchus.[34] Like any other contention, some parts of C4 might be admissible and other parts might not. But we decline to approach C4 as sixteen separate contentions, with

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[33] Part 51 also includes an appendix (focusing on the EIS, but relevant to the ER), which specifies that the alternatives analysis is the "heart of the EIS," that "all reasonable alternatives will be identified," and which articulates some of the other general NEPA principles discussed in Section IV.F.3.a, above. *See* Format for Presentation of Material in Environmental Impact Statements, 10 C.F.R. Part 51, Appendix A.

[34] Petition, Exh. K, Expert Declaration by Dr. Sydney T. Bacchus in Support of Petitioners' Standing to Intervene in This Proceeding (Feb. 6, 2009) (Bacchus Declaration).

each subpart separately being required to satisfy each of the six criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi). This inappropriately "atomizes" the contention into sixteen subparts. Instead, we view C4 as a whole, i.e., a major allegation that the ER is inadequate conjoined with numerous specific illustrations or examples (in the pre-1989 parlance, "bases") as to the alleged omissions or deficiencies. Our analysis will parse the elements of C4 that are not admissible from those portions that, viewed as part of the main theme of C4, are admissible.

a. Petitioners' Arguments Regarding Contention 4

We start with Petitioners' arguments related to the ten specific subparts. At the outset, there is some confusion with regard to C4B. First, although C4B asserts that the ER "failed to address" the environmental impacts of "constructing the proposed LNP facility within flood plains," Petition at 35, it immediately acknowledges that the ER indeed addresses the construction of the LNP in the floodplain. *Id.* at 36. Petitioners assert that, while it touched on the topic, the ER failed to address all of its direct, indirect, and cumulative environmental impacts. Tr. at 64. Thus, on the one hand, C4B is complaining about certain omissions from the ER discussion regarding construction within the floodplain, and on the other hand, C4B can be seen as complaining about the adequacy of the ER's discussion of construction within the floodplain. Second, although C4B initially refers to the impacts of *construction* and alleges that PEF plans to raise the ground elevation up to 9 feet, C4B actually seems to focus on something different — the failure of the ER to identify and address the impact of the *mining* for the aggregate *for fill* that will be needed for the construction of the LNP. Petition at 36. Petitioners are concerned with the failure of the ER to deal with impacts associated with the (offsite) mining and assert that the "most logical sources for this aggregate fill are the existing and proposed mines in Levy and Citrus Counties." *Id.* Petitioners assert that such mining activities in that region of Florida would have "significant and myriad" adverse environmental impacts, including irreversible impacts on the "natural hydroperiod." *Id.* at 37. C4B is supported by the declaration of Dr. Bacchus, who expresses her opinion concerning the nature and extent of the cumulative impacts from mining in Levy and Citrus Counties. Bacchus Declaration at 5.

Subpart C4C also deals with mining, alleging that the ER failed to address the environmental impacts "from additional mining for the production of raw materials, such as aggregate *for concrete*[35] to construct the proposed LNP facility." Petition at 38 (emphasis added). Like C4B, C4C complains that the ER failed to

[35] C4B addresses mining for aggregate for *fill*, whereas C4C addresses *additional* mining for raw materials, such as aggregate for *concrete*.

identify the source of the necessary mined materials, asserts that the most logical sources are existing and proposed mines in the vicinity of the proposed LNP project, and maintains that such mining, in the sensitive local environment, would have significant adverse environmental impacts, including cumulative impacts, such as irreversible alteration of the natural hydroperiod. *Id.* at 39. The statement by Dr. Bacchus supports this contention. Bacchus Declaration at 5-6.

Subpart C4D asserts that the ER "failed to address" the environmental impacts, including cumulative impacts of "on-site mining (excavation) and dewatering" to construct and operate the proposed LNP. Petition at 40. But, again, this is obviously not a contention of omission, because Petitioners immediately cite several portions of the ER that address these subjects, *id.* at 41, and then explain, with Dr. Bacchus's support, why they believe these ER discussions are inadequate. *Id.* at 42-43. For example, with regard to dewatering, Petitioners note that the ER indicates that the LNP project will consume groundwater in amounts up to 550,000 gallons per day (gpd) (during construction) and 6 million gpd (during operation), and then assert that the ER fails to reflect that this rate of withdrawal will have irreversible dewatering impacts, such as destruction of wetlands, floodplains, special aquatic sites, and waters in the area. *Id.* at 42-43; Bacchus Declaration at 7-8. Dr. Bacchus, who holds a Ph.D. in hydroecology and has written extensively with regard to the hydroecology of Northern Florida, expresses her professional opinion that the impacts of such groundwater consumption, including cumulative impacts, would be large, and disagrees with the ER characterization of these impacts as small. Bacchus Declaration at 7-8.

Subpart C4E alleges that the ER failed to address the onsite and offsite environmental impacts resulting from the alleged connection of the wetlands on the LNP site to the "underlying Floridan aquifer system through a network of relict sinkholes." Petition at 44. While Dr. Bacchus cites no onsite data regarding PEF's land, she asserts that the environment in the vicinity and region of the LNP site is characterized by wetlands that are connected to each other and to the underlying Floridan aquifer via relict sinkholes. *Id.* at 45; Bacchus Declaration at 9. She asserts the LNP site is likewise connected to the aquifer, that the dewatering associated with the proposed project would "irrevocably affect" offsite wetlands, floodplains, special aquatic sites, and other waters, and that the ER needs to address the impacts associated with the underground interconnections between the site and the local aquatic environment. Bacchus Declaration at 9.

Subpart C4F continues the dewatering theme, asserting that the ER did not address the "impacts of mining/excavations, water use and other dewatering required for the proposed LNP project" on "Outstanding Florida Waters" (OFWs). Petition at 46. Petitioners explain that Florida law affords "the highest standard of protection" to OFWs and that the proposed project will "dewater the Withlacoochee and Waccasassa Rivers (both OFWs) and associated wetlands and uplands." *Id.* at 46. Dr. Bacchus, in her professional opinion, supports this statement. Bacchus

Declaration at 10. Dr. Bacchus and Petitioners assert that this dewatering will result in large and irreversible adverse impacts on these OFWs, rather than the small impacts reported in the ER. Petition at 46.

Subpart C4G also pursues the dewatering thread, asserting that the ER did not address the fact that mining/excavations, water use, and other dewatering will have on the nutrient concentrations in the environment. *Id.* at 47. Dr. Bacchus asserts that "[b]y dewatering the wetlands, flood plains, special aquatic sites and other waters throughout the site, vicinity and region . . . all existing nutrient concentrations will increase relative to any water that remains," that this will result in violations of Florida's "water quality standard for nutrients," and that this would "result in imbalances in natural populations of aquatic flora and fauna." Bacchus Declaration at 10; Petition at 47. Petitioners argue that this is an environmental impact that the ER should have covered. Petition at 47.

Subpart C4H asserts that the ER failed to address another alleged consequence of dewatering, i.e., increases in nutrients in the environment resulting from additional "destructive wildfires." *Id.* at 48. Dr. Bacchus states that "[b]y dewatering wetlands, flood plains, special aquatic sites and other waters throughout the site, vicinity and region of the proposed LNP project, those areas will be subjected to destructive wildfires that will destroy trees and organic soils," which will release "new sources of nutrients," which will "result in increased nutrient concentrations and subsequent imbalances in natural populations of aquatic flora and fauna." Bacchus Declaration at 11. Petitioners take the position that the ER is deficient because it failed to cover these environmental impacts.

Subpart C4I complains that the ER failed to adequately address the environmental impacts of the salt drift from the LNP project cooling towers. Petition at 49. Petitioners point out that "the LNP project proposes to use coastal [i.e., salt] waters for cooling towers located inland, in and surrounded by freshwater wetlands, flood plains, special aquatic sites and other waters that would be adversely affected by dewatering." *Id.* They assert that the water quality contamination resulting from such salt drift and deposits, when combined with the dewatering of the freshwaters in and around the LNP site, would cause irreparable harm to water quality throughout the site, vicinity, and region, including to OFWs. *Id.* at 49-51; Bacchus Declaration at 12. Petitioners state that evaporative losses from the LNP cooling towers would be 43.8 million gpd. Petition at 51. They also complain about the State of Florida's "NPDES permit review process," *id.,* although its relevance to air emissions of salt drift from cooling towers is unexplained.

Subpart C4J asserts that the ER failed to address the environmental impacts "to the nation's air resources resulting from the premature death of countless inland trees throughout the site, vicinity and region" that would allegedly result from the LNP project. *Id.* at 52. We are told that the premature tree deaths would result from dewatering, destructive wildfires, salt drift, filling and construction at the site, and cutting and herbicide application associated with the associated

transmission/utility corridors. *Id.* at 52-53. Petitioners assert that these premature tree deaths "will release stored carbon, comparable to releasing the 'yearly emissions from about 225,000 cars.'" *Id.* at 55 (internal citation omitted). They state that such "large scale release of stored carbon" will cause "significant air quality degradation" and will increase "climate disruption and sea level rise." *Id.* at 56. Petitioners assert that the ER should cover these environmental impacts.

Subpart C4K asserts that the ER failed to address the air emission of particulate matter from the destructive wildfires that are caused by the dewatering. *Id.* at 56. "The destructive wildfires . . . would convert trees and organic soils into significant airborne particulate matter that cannot be controlled, reduced, or mitigated by PEF." *Id.* at 57.

We now turn to the three subparts of C4 which assert that, given that the ER omitted or inadequately covered the various environmental impacts "described above" (e.g., in C4B-C4K), the ER was also deficient in its scope or coverage in some way. We label these as the "consequential" subparts of C4, because they purport to flow as a logical consequence of the ten specific alleged defects. Thus, for example, if we assume that the ER failed to address the impact of dewatering on offsite wetlands (C4D and E), then, logically the ER may also have failed to cover the full geographic extent or zone of impacts from the LNP project (C4L). The latter deficiency is asserted as a logical consequence of the former.

Consequential subpart C4L states that "because the LNP ER failed to address the environmental impacts of the proposed LNP project described above, the ER likewise failed to identify the zone of impact from the project," and "erroneously characterized the impacts as insignificant or small," and failed to reflect that such impacts, on public and private lands, are "irreparable and incapable of being mitigated." *Id.* at 58-59.

Consequential subpart C4M follows the same pattern. Petitioners state that, because the ER failed to address the environmental impacts "described above," it "likewise failed to identify the zone of environmental impact from the proposed LNP project on federally listed species" and should have concluded that such impacts were large (rather than small). *Id.* at 61. Under Petitioners' theory, since the ER underestimated the geographic extent of the LNP project's impact, the ER failed to address the extent of the project's harm to "habitat critical for survival and recovery of listed species" such as wood storks, red cockaded woodpeckers, and eastern indigo snakes. *Id.* at 62. Petitioners assert that depressional wetlands are habitats critical to (listed) wood storks and that such wetlands are the "most sensitive wetlands to hydroperiod alteration" that, Petitioners allege, will result from the dewatering associated with the LNP project. *Id.* Likewise, we are told that old-growth stands of native pine trees are critical habitats for (listed) red cockaded woodpeckers and these habitats will be adversely affected by the dewatering, etc. *Id.* at 62-63. In addition, Petitioners argue that the project

will impact seagrass beds in coastal areas and will thus impact the survival and recovery of listed green turtles. *Id.* at 63.

Consequential subpart C4N argues that the failure of the ER to address the environmental impacts described above "precluded them from identifying the zone of environmental impact from the proposed LNP project," including the zone of "irreversible and irretrievable commitments of resources." *Id.* at 64. Petitioners assert that "without a determination of the zone of impact, bona fide mitigation of the adverse environmental impacts cannot occur." *Id.*

The final subpart of C4, which we have denominated C4P, alleges that the proposed LNP project is inconsistent with 40 C.F.R. Part 230 and that the ER is deficient because it fails to address these inconsistencies. *Id.* at 67. Part 230 of 40 C.F.R. is a set of guidelines issued by EPA and the USACE for the specification of disposal sites for dredged or fill material. The Petition alleges various principles ostensibly incorporated in the Part 230 guidelines and complains that "there is no evidence that the ER had addressed the 'section 404(b)(1) guidelines' as described in 40 C.F.R. § 230.10." *Id.* at 70-71.

b. PEF's Arguments Regarding Contention 4

It is PEF's position that neither C4 nor any of its subparts satisfies the admissibility criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi). *See* PEF Answer at 55-155. PEF reviews each of the subparts of C4 as if each was a separate, stand-alone contention and argues that each subpart fails one or more of the six admissibility criteria. *Id.*

With regard to C4A, which introduces the main theme of the contention (e.g., that the ER failed to address all of the necessary direct, indirect, and cumulative impacts of the proposed LNP project), PEF notes that "Contention 4A" failed to provide a concise explanation of the basis for C4A as required by 10 C.F.R. § 2.309(f)(1)(ii), failed to explain the relevance of the supposed synopsis of the CEQ guidance, failed to show that C4A involves a genuine dispute on a material issue of law or fact under 10 C.F.R. § 2.309(f)(1)(vi), and lacks sufficient support under 10 C.F.R. § 2.309(f)(1)(v). *Id.* at 57-63. PEF points out that some parts of C4A are a "rambling, incoherent collection of phrases." *Id.* at 63. PEF states that, in several places the Petition incorrectly alleges that some subject is omitted, whereas the ER does address the subject in question. *Id.* at 58-60, 63.

With regard to C4B, PEF contends that Petitioners "mischaracterize" the COLA in several material respects. *Id.* at 65. PEF acknowledges that 39% of the site is within wetlands, *id.* at 60, and that the planned construction site is within the flood zone. *Id.* at 66. But, PEF asserts, Petitioners have greatly overestimated the type and areal extent of the fill. PEF states that Petitioners' allegation that "approximately 2.7m (9ft) of aggregate material (aka 'fill') would be placed over" the site is wrong because the COLA states that (a) the fill will not be

aggregate (but instead will be a roller-compacted concrete (RCC) bridging mat, supplemented by soil), *id.* at 67, and (b) the fill will not be placed on the entire plant site (approximately 300 acres) but instead will be limited to approximately 80.6 acres. *Id.* at 68. PEF asserts that Petitioners' allegation that the LNP will be constructed "in waters" must be incorrect, because such a site would be outside of the design envelope for the AP1000 certified design. *Id.* at 70. PEF argues that the alleged impacts from mining (for the fill material) are irrelevant because the application is for a nuclear power plant, not a mine. *Id.* at 70-71.

With regard to Subpart C4C, PEF argues that there is no requirement that the ER identify the source of the mined raw materials needed to construct the LNP project. *Id.* at 71-72. PEF says that C4C fails the test of 10 C.F.R. § 2.309(f)(1)(vi) because Petitioners complain about an alleged omission, but fail to articulate why the omitted information is needed. *Id.* at 72. PEF complains that Petitioners' allegation that the "most logical sources for this mined raw material are the existing and proposed mines in Levy and Citrus Counties," is a "bald assertion that is inadequate to support any contention." *Id.* PEF asserts, "[i]dle speculation about vague impacts from unrelated future actions not directly tied to the Application do not support a genuine dispute of a material fact." *Id.* at 73. The same is true, PEF says, for "vague claim that the [COLA] does not address hydroperiod and related adverse environmental impacts from the mining of aggregate material." *Id.* PEF says that the COLA states that the construction of the LNP project is "not anticipated to require the expansion of any mine, and will not affect the operation of an active quarry or mine." *Id.* at 74. PEF indicates that the construction of the LNP project would require approximately 25,000 cubic yards of concrete (12,239 per reactor) and asserts that this amount is environmentally "not material" because it is "minimal in comparison to the availability of concrete on the national or global market." *Id.* at 80. PEF concludes that Contention C4C fails to satisfy 10 C.F.R. § 2.309(f)(1)(ii), (iii), (iv), (v), and (vi).

PEF next argues that C4D, which alleges that the ER is deficient with regard to the environmental impacts of onsite excavation and dewatering, is inadmissible, in part because it mischaracterizes the COLA. *Id.* at 81. Indeed, PEF uses the words "mischaracterize," "mislead," or "misinterpretation" at least 20 times in discussing C4D. *Id.* at 81-89. For example:

> Contrary to Petitioners' mischaracterization of the Application, when considered in context, the Application states: (a) dewatering due to excavation will be minimal; (b) storm water ponds will maximize recharge to groundwater; (c) water quality impacts will be controlled by best management practices; and (d) temporary monitoring of groundwater level during construction will allow for corrective action to address excessive dewatering. Petitioners' mischaracterization of the description of excavation in the Application provides no basis for their issue.

Id. at 83. (Rather than a "mischaracterization," it appears to us that Petitioners merely dispute some factual assertions in the COLA and/or disagree with some of its qualitative assessments that the impacts will be "minimal," the recharge will be "maximized," the problems will be "corrected," and/or the dewatering will not be "excessive.") PEF asserts that the dewatering associated with onsite mining (e.g., excavation) for the LNP project will be temporary, because the hole will quickly be filled with nuclear island foundation. *Id.* at 84-85. PEF states, as if it were dispositive, that the storm water ditches and ponds associated with the constructed LNP will not result in adverse hydrologic alteration via nonmechanical dewatering because the ER clearly says so, i.e., states that "proper safeguards will be implemented to prevent long-term effects on local habitats" and "potential long-term impacts on groundwater levels from dewatering are anticipated to be SMALL." *Id.* at 86. Likewise, since the ER states that best management practices (BMPs) and monitoring that will "allow for corrective action" will be used, this establishes that no adverse environmental impacts will occur (and thus any contrary concern is a "mischaracterization"). *Id.* at 86-88. PEF says that Petitioners' statement that onsite dewatering will use 550,000 and 6 million gpd, respectively, during construction and operation is a "mischaracterization" because the COLA states that these groundwater withdrawals represent maximum usage, not necessarily actual usage, and the ER says these impacts will be SMALL. *Id.* at 88.

PEF argues that, if Contention C4D is a contention of omission, it fails because the ER contains discussions regarding excavation and dewatering. *Id.* at 89. If, on the other hand, C4D argues that the impacts of the project's water use, dewatering, and excavations would be LARGE rather than SMALL, then, according to PEF, the allegation is insufficiently supported because "NRC guidance states that LARGE impacts are those that 'are clearly noticeable and are sufficient to destabilize important attributes of the resource' and Petitioners have failed to identify the 'resource.'" *Id.* at 90.

As to C4E, PEF argues that it lacks adequate support because the studies by Dr. Bacchus merely state that relict sinkholes are common in this region of Florida, but do not identify any actual sinkholes on the LNP site and thus fail to provide any information connecting the wetlands at Levy to the Floridan aquifer. *Id.* at 91. PEF states that sinkholes are addressed in ER §§ 2.2.2.6.2 and 2.6.1.4, and that the petition does not contradict the ER. *Id.* at 92. PEF states that the proposed LNP is located at a site where sinkholes are few. *Id.* PEF argues that the Bacchus geologic case study of the connections between the regional wetlands and the underlying Floridan aquifer does not even refer to the LNP site. *Id.* at 95. PEF asserts that while Dr. Bacchus may be a hydroecologist, there is no showing that she has any expertise in geology and therefore her statements regarding relict sinkholes do not qualify as expert opinion. *Id.*

With regard to C4F, PEF argues that if it is a contention of omission, then it

fails because the ER indeed discusses the impacts of the LNP project on OFWs, whereas if it is a contention challenging the adequacy of the ER discussion of OFWs, then it fails because the Petition "mischaracterize[s]" the COLA, which clearly states that the impacts from dewatering will be SMALL. *Id.* at 97-98.

As to C4G, which alleges that the ER fails to address the increases in nutrient concentrations that will allegedly occur as a result of the dewatering of the LNP site, PEF says that this "contention" lacks an adequate basis and/or sufficient support because Petitioners fail to explain how "removing groundwater will somehow increase the concentrations of nutrients in the environment — even if none are added — such that water quality standards will be exceeded." *Id.* at 99. PEF asks "what aspect of the Application entails extracting pure water from the environment leaving remaining water concentrated with nutrients." *Id.* at 100. PEF questions "how extracting water can cause a violation of a discharge standard." *Id.* PEF points out that the ER states that "measures will be implemented . . . to ensure that erosion or siltation caused by dewatering [from construction] will be minimal" and that "impacts from dewatering are SMALL." *Id.* at 102.

PEF next turns to C4H (ER fails to cover the impacts of new nutrients that will be caused by wildfires that will be caused by dewatering), rejecting it because it fails to provide a "basis," fails to show any omission, and lacks required factual or expert support necessary to show that a genuine dispute exists on a material issue of law or fact. *Id.* at 104. PEF says there is "little rationale for Petitioners' belief that there is a connection between dewatering at Levy and wildfires because, as discussed in response to Contention C4D, minimal dewatering will occur at Levy." *Id.* at 105. Also, PEF says the ER does address wildfires, because it says that "all reasonable precautions will be implemented" to prevent them. *Id.* at 105-06. There is "no justification" for the allegation that wildfires will increase because C4H does not "dispute with specificity" the COLA's statement of precautions that will be taken. *Id.* at 106.

With regard to C4I (adequacy of ER discussion of salt drift impacts associated with using salt water for cooling towers located in a freshwater wetland), PEF states that there is no omission because the ER discusses salt drift and concludes that the impacts will be SMALL. *Id.* at 108-09. PEF says that the ER states that solid deposition projected from the cooling towers, even if all were salt, would be within the NRC guidelines (NUREG-1555) for no impact. *Id.* at 109. PEF argues that Petitioners fail to controvert either the NRC guidelines or the ER statement that the salt depositions will comply with them. *Id.* at 109-10. PEF rejects Petitioners' assertion that salt drift from cooling towers located on the coast is "normal," whereas the inland location of the LNP tower (albeit using saltwater for cooling) is not normal. *Id.* at 111. PEF adds that the NPDES process by the State is not part of the NRC process. *Id.* at 112.

As to C4J (adequacy of ER's discussion of global warming and greenhouse gases from premature tree deaths), PEF states that C4J lacks factual or expert

support and baldly asserts that "prematurely killing trees . . . releases stored carbon." *Id.* at 114. PEF says that Petitioners "have the obligation to show that omissions from the Application are significant." *Id.* PEF notes that the article cited by Petitioners refers to carbon storage in 40,000 square miles of forests in the upper Midwest and Great Lakes region and in no way provides support for the greenhouse gas impact of alleged premature tree deaths on the 3105-acre Levy site. *Id.* at 115. PEF argues that Petitioners' citation to an excerpt of testimony from a Dr. John Van Leer (apparently stating that there may be a 1.5-foot rise in sea level in the next 50 years) is unexplained and never connected to the LNP project. *Id.* at 116.

PEF's response to C4K (adequacy of ER's discussion of particulate matter air quality impacts caused by wildfires caused by dewatering caused by the LNP project) is, *inter alia,* that any such impacts are too remote because Petitioners provide no rationale for alleging the impacts from particulate matter will be significant. *Id.* at 124.

Subpart C4L is the first of Petitioners' "consequential" subparts, alleging that as a result of the deficiencies "described above," the ER failed to identify and discuss the full zone of environmental impact of the proposed LNP project. PEF asserts that the "sole basis" for this "contention" is the "vague and unsupported impacts discussed in Contentions 4A through 4K" and that this is insufficient. *Id.* at 126. Further, PEF argues that "whatever a 'zone of environmental impact' is . . . Petitioners do not raise a genuine dispute with . . . the Application's analysis of impacts as SMALL . . . and provide no rationale for alleging that all impacts will be LARGE." *Id.* at 127. PEF asserts that if C4L is a contention of omission, then it fails because the ER indeed addresses all of the geographic areas listed by the Petitioner, and if it is a contention of inadequacy, then it fails because it provides no supporting reasons or explanations as to how or why the ER discussion is inadequate. *Id.* at 128-29. Again, PEF argues that impacts are only considered to be LARGE if the impacts on the resource are clearly noticeable and sufficient to destabilize it, and Petitioners have, according to PEF, failed to "identify with specificity what resource" would be so impacted. *Id.* at 130.

With regard to C4M, the second consequential subpart of Contention 4 (failure of ER to adequately discuss the full zone of impact on federally listed species), PEF asserts that the ER is not required to identify the zone of impact on listed species or their habitat because "before issuing any Incidental Take Permit, the U.S. Fish and Wildlife Service (USF&WS) must consider the anticipated duration and scope of the applicant's planned activities," and therefore the matter is covered. *Id.* at 131-32. While 10 C.F.R. § 51.45(d) requires that the ER list all federal licenses and permits that must be obtained, the "ER is not required to include each and every piece of information" needed to obtain each such permit. *Id.* at 132. PEF states that the ER acknowledges that an Incidental Take Permit

may be required from USF&WS and commits PEF to obtain it, implying that this is sufficient for the ER. *Id.*

Regarding C4M, PEF points out that the ER indeed includes discussions of the listed species enumerated by Petitioners, including a discussion of the eastern indigo snake, Florida scrub jay, the green turtle, the manatee, the red-cockaded woodpecker, and the wood stork. *Id.* at 133-35, 139-42. PEF asserts that Petitioners fail to recognize that the ER discusses that "native habitats on the LNP property have been significantly altered through silviculture operations and mobile listed species are likely to preferentially use less disturbed habitats on adjacent conservation lands." *Id.* at 136. PEF states that Petitioners have failed to provide adequate support for the assertion that the ER has underestimated the degree to which the LNP project will impact listed species. *Id.* at 137.

The third consequential subpart of Contention 4 is C4N (alleged failure of ER to adequately address the zone of irreversible and irretrievable commitments of resources and appropriate mitigation measures). PEF states that the Petition does "not cite, let alone dispute" the numerous places in the COLA that discuss mitigation. *Id.* at 145.

Finally, focusing on C4P (failure to consider compliance with 40 C.F.R. Part 230), PEF notes that Petitioners have merely provided a "rambling narrative of purported issues" concerning compliance with Part 230 but fail to articulate any reason why the COLA should comply with it, since Part 230 regulations are only guidelines. *Id.* at 147. PEF says that C4P raises an issue outside of the scope of the COLA proceeding, implying that since another entity (EPA and/or the USACE) has jurisdiction over dredge and fill permits under Part 230, the ER and EIS for a COLA can exclude such impacts. *Id.* PEF asserts that 10 C.F.R. § 51.45(d) only requires that the ER cover the status of environmental permitting. *Id.* at 148.

c. NRC Staff Arguments Relating to Contention 4

Given PEF's relatively thorough (100-page) challenge, we will only briefly summarize some of NRC Staff's main arguments in opposition to the admission of Contention C4. With regard to the alleged failure of the ER to address the impacts of mining, the Staff asserts that "NEPA does not require analysis of impacts that would be too attenuated from the proposed action." Staff Answer at 30-31. The Staff argues that a contention "will be ruled inadmissible if the petitioner has offered no tangible information, no experts, no substantive affidavits." *Id.* at 32. The Staff asserts that the Petitioner "must provide sources and expert opinions in support of their contentions." *Id.* at 35.

With regard to salt drift, the Staff points out that the 43 million gpd of evaporation is essentially distilled water and that the only salt leaving the cooling tower comes from incidental water droplets, not from the evaporation of the water. *Id.* Further, the Staff cites the ER as stating that the maximum offsite

salt deposition rate is predicted to be 6.81 kilograms per hectacre per month (kg/ha/mo), which, the ER says, is below the threshold rate of 10 kg/ha/mo set by NUREG 1555.[36] *Id.* at 35, 40-41.

With regard to subpart C4P (concerning 40 C.F.R. Part 230 and compliance with the guidelines related to the disposal of dredged or fill material in wetlands), the Staff asserts that the issue is "outside the scope of the proceeding because the NRC has no jurisdiction over the issuance of permits under 40 C.F.R. section [*sic*] 230." *Id.* at 52.

4. Analysis and Ruling Regarding Contention 4

a. Ruling on Generic Issues

Before tackling Contention 4 and its numerous subparts, the Board will confront several relatively generic issues that have been raised in the pleadings. Once we clear away some of these issues that cut across several of the C4 subparts, we can more adequately assess which portions of C4 meet the admissibility criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi) and which do not. First, we dispense with the proposition, seemingly asserted by PEF, that the environmental impacts of the mining necessitated by the LNP project are automatically immaterial or outside of the scope of NEPA or Part 51 because they do not occur *on* the LNP site. PEF Answer at 71. Given that Table S-3 to 10 C.F.R. § 51.51 covers numerous offsite environmental impacts associated with the licensing of nuclear power plants, it is obvious that offsite environmental impacts are not, *per se,* excludable from an ER or EIS. The requirement of Part 51 that the ER cover all significant environmental impacts associated with a project is not limited to onsite environmental impacts. PEF acknowledged this point during the oral argument. Tr. at 74.

Second, we reject the proposition that, since the ER is silent about the location of the offsite mine, any contention regarding offsite mining is inadmissible (because, e.g., it is speculative). PEF Answer at 71. If the environmental impact of such mining activities is potentially significant, then the failure of the ER to disclose the location of the offsite mine does not immunize it from being the subject of a legitimate contention.

Third, it is important to clarify that there is nothing in the law or regulations that requires, at the admissibility stage, that a contention be supported by an expert opinion, substantive affidavits, or evidence. The regulations require that a petitioner provide a concise statement of the "alleged facts or expert opinion" that support the petitioner's position. 10 C.F.R. § 2.309(f)(1)(v). This disjunctive

[36] Environmental Standard Review Plan, NUREG-1555 at 7.3 (Vol. 2, Mar. 2000). The Staff notes that the ER also states that the maximum onsite deposition rate from the LNP project is predicted as 10.75 kg/ha/mo. Staff Answer at 33.

statement — alleged facts *or* expert opinion — makes clear that there is no requirement to have an expert or to provide an expert opinion. And it simply requires *alleged* facts, not proven facts or evidence. Nor does the second half of 10 C.F.R. § 2.309(f)(1)(v), which requires the petitioner to provide "references" to the specific sources and documents which the petitioner "intends to rely on" to support its position, constitute a requirement that, to be admissible, a contention must be accompanied by facts, experts, affidavits, or evidence. Likewise, 10 C.F.R. § 2.309(f)(1)(vi), which requires that the petition include "sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of fact" does not require the submission of expert affidavits or evidence. It merely requires some information showing that there is a genuine dispute on a material issue.

Fourth, 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).

Fifth, we reject the proposition that the ER and EIS can properly exclude any environmental impact that is regulated by another federal or state entity or that, because NRC has no jurisdiction to *regulate* an environmental impact, it can be excluded, *per se,* from the ER or EIS. The Staff suggests this with regard to dredge and fill activities in wetlands. Staff Answer at 52. PEF likewise suggests this with regard to Incidental Taking Permits (issued by the USF&WS regarding endangered species) and the USACE regulation of wetlands. PEF Answer at 131-32, 147. NRC regulations (10 C.F.R. § 51.71(d) n.3 and Part 51, Appendix A, § 5), the CEQ regulations (40 C.F.R. § 1502.14(c)), and the case law (*Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 834-36 (D.C. Cir. 1972) specifically reject this position. PEF conceded, at oral argument, that the fact that an agency (other than NRC) has jurisdiction to issue a permit concerning a certain environmental impact of the PEF project does not mean that the subject may be excluded from the ER or EIS. Tr. at 97. Despite the clarity of the law on this point, the opponents of contention admissibility keep repeating this pernicious canard.

Sixth, we reject PEF's suggestion that if the Petitioners disagree with a statement in a COLA or ER then it is a "mischaracterization" that should not be credited or considered. It appears to us that some of Petitioners' allegations represent genuine disagreements concerning qualitative judgments or conclusory statements in the ER (e.g., that the impacts will be SMALL, or negligible, or not excessive, or that best management practices automatically assure that no

environmental impacts occur). While we agree that Petitioners need to explain how or why they disagree with statements in the COLA or ER, once challenged, there is no presumption that the COLA or ER is correct or accurate. To the contrary, the applicant, as the proponent of the license, bears the burden of proof. 10 C.F.R. § 2.325.

Seventh, we note that NRC guidelines or regulatory guides are not legally binding on the Staff, the Board, or the Commission. Thus, for example, assuming, *arguendo,* that the amount of offsite salt drift from the LNP project is within the limits prescribed by the Staff in NUREG-1555, this does not render a contention (e.g., that the ER has failed to adequately characterize the impact of the salt drift on a particular freshwater wetland) inadmissible.

Finally, we note that a number of subparts of Contention 4 concern the proper characterization of the environmental impacts. Are they large or small? NRC regulations specify that the determination focuses on whether the impacts are "clearly noticeable and are sufficient to destabilize important attributes of the resource." 10 C.F.R. Part 51, Appendix B, Table B-1 n.3. But there appears to be no definition of the term "resource." Tr. at 378-79. For example, in determining whether the LNP project will have noticeable impacts on water resources, should we define the resource as the onsite wetlands? The regional wetlands and waters? The Gulf of Mexico? The oceans? More specifically, at one point PEF suggests that mining for aggregate for concrete can be summarily dismissed because the 25,000 cubic yards of concrete (and aggregate) needed for the LNP project is negligible compared to the "global or national" availability of concrete. If the "resource" is the globe, then the mining necessitated by any individual project will almost never have a noticeable impact on the resource. It may be we will obtain better legal briefing on this issue with regard to some of the admitted portions of C4.

b. Ruling and Analysis on Specifics

While not all elements of Contention 4 are admissible, the Board concludes that C4 presents certain major issues, which, when read together, are sufficiently pled to satisfy the criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi) and to thus constitute an admissible contention. The basic allegation of C4 is that the ER does not comply with 10 C.F.R. Part 51 because it does not adequately address all indirect and cumulative environmental impacts that result from certain specified aspects of the proposed LNP project.[37] In this respect, C4 provides a "specific statement

[37] We reject the suggestion that, because C4 uses the phrase "failed to address," C4 can only be seen as a contention of omission, and any reference to the relevant topic in the ER automatically results *(Continued)*

of the issue of law or fact to be raised or controverted." 10 C.F.R. § 2.309(f)(1)(i). In addition, Petitioners have provided a "brief explanation of the basis" or theory underlying C4. 10 C.F.R. § 2.309(f)(1)(ii). To wit: 10 C.F.R. § 51.45 requires that the ER cover all significant environmental impacts associated with the proposed project, and (allegedly) the PEF ER fails to meet this legal requirement because it does not adequately address the indirect and cumulative environmental impacts associated with certain specified aspects of the LNP project. That is the theory or rationale that underpins C4. Further, we have no difficulty in concluding that this topic is "within the scope" of this proceeding, i.e., an application to construct and operate two nuclear power reactors in a wetland area of Northern Florida, as required by 10 C.F.R. § 2.309(f)(1)(iii). Nor do we have difficulty in concluding that the general issue as to whether the ER adequately covers the significant environmental impacts associated with the proposed LNP project is "material" to this proceeding. 10 C.F.R. § 2.309(f)(1)(iv). While some of the subparts of C4 may not satisfy the scope or materiality requirements of the regulation, certainly other subparts do.[38]

Next, we turn to 10 C.F.R. § 2.309(f)(1)(v) which requires that the petition provide a "concise statement of the alleged facts or expert opinion which support the requestor's/petitioner's position" together with "references to the specific sources and documents" that the petitioner intends to rely upon to support its position. Contention 4 includes both a concise statement of various "alleged facts" and is accompanied by an "expert opinion." Dr. Sidney Bacchus, who (as noted above) has a Ph.D. in hydroecology and has studied and written concerning the hydroecology of Northern Florida, where the LNP project is proposed to be

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in the denial of C4. It is obvious that Petitioners know that the ER addressed, in some sense, some of the C4 topics (e.g., C4D which asserts that the ER "failed to address" the indirect and cumulative impacts of dewatering, and immediately cites the fact that the ER addresses the topic of dewatering, and then explains why this ER discussion is alleged to be inadequate). In context, it is clear that these pro se Petitioners are arguing that the ER is inadequate, either because the ER failed to discuss the alleged indirect or cumulative impact of the LNP project (e.g., mining) or, although the topic was mentioned (e.g., dewatering), the ER failed to adequately address the topic in some defined way. So long as C4 provides some explanation as to how or why Petitioners assert that the discussion in the ER is inadequate, there is the basis for a reasoned response by PEF, and an issue that is specific and fairly litigable.

[38] PEF, treating each of the sixteen subparts of C4 as a separate contention, argues that some of these sixteen subparts are, individually, inadmissible because Petitioners allegedly did not provide the "supporting reasons for the petitioner's belief" that the omitted information was necessary. *See* 10 C.F.R. § 2.309(f)(1)(vi). We reject these arguments. Reading C4 as a whole, it is clear that Petitioners are asserting that Part 51 requires ERs to analyze and consider all significant indirect and cumulative environmental impacts resulting from a proposed project. When a subpart of C4 asserts that certain information is omitted or inadequate, the reason why Petitioners believe that this information is necessary is clear — Petitioners believe that it is required under Part 51. This is true, whether C4 is considered as a whole (as we consider it) or considered as a series of related contentions.

located, has the knowledge, experience, and education to make her declaration of assistance to this Board in understanding these issues. And while she is not an expert on all subjects, and not a geologist, the Board believes that her considered opinions regarding the connection of the Northern Florida wetlands (such as the LNP site) to the underlying Floridan aquifer via relict sinkholes are helpful to our understanding of the environmental impacts of the LNP project and are admissible.

Finally, we believe that, in general, C4 satisfies the requirement that the petition provide "sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact," including references to the specific portions of the application that are alleged to be inadequate or to have omissions, with "supporting reasons" why the allegedly omitted information is necessary. 10 C.F.R. § 2.309(f)(1)(vi). Again, Dr. Bacchus's expert opinion and statements are sufficient information to meet this criterion.

We now turn to the subparts of C4. Some of them are adequately supported and some are not.

Subparts C4 and C4A: As PEF points out, neither of these subparts provides a separate, coherent, and stand-alone contention. But that is not their intent. Instead, we read these as the introductory overview of a single contention challenging the adequacy of the ER's coverage of certain indirect and cumulative environmental impacts of the proposed LNP project. As such, they are a proper *part* of an admissible contention.

Subparts C4B, C4C, and C4D (excavation portion): These subparts allege that the ER's coverage of indirect and cumulative impacts of various alleged mining activities associated with the proposed LNP project is deficient and inadequate. C4B focuses on offsite mining for aggregate for fill,[39] C4C on offsite mining for aggregate for concrete, and C4D on onsite mining (i.e., excavation). We do not reject these concerns merely because they deal with offsite environmental impacts. This is because both Part 51 and NEPA require the consideration of all significant environmental impacts without distinguishing between onsite and offsite impacts. *See* Table S-3 of 10 C.F.R. § 51.51. Rather, we reject these subparts because Petitioners have failed to provide any support for the proposition that such mining impacts could rise to the realm of potentially significant environmental impacts that could even arguably be reasonable under 10 C.F.R. § 51.45. Even assuming, *arguendo*, that the mining activities will have some environmental impact, the ER is not required to cover every possible

[39] C4B also contains a perfunctory mention of the inadequacy of the ER discussion of construction within the floodplain. But, except for this introductory mention, the supporting information for C4B focuses entirely on the alleged impacts of mining for aggregate fill. We note however that various portions of C4, such as dewatering, raise issues associated with "construction within the floodplain" and therefore, in this sense some construction-related portions of C4 are being admitted.

impact. Petitioners have some responsibility to support the allegation that the impact (even indirect or cumulative) is plausibly significant. This they have failed to do. As the NRC Staff has pointed out, the ER does not need to address highly attenuated impacts where the petitioner has failed to show that they are even plausibly within the realm of reason.

Subparts C4D (dewatering portion), C4E, C4F, C4G, and C4H: These subparts allege that the ER's coverage of indirect and cumulative impacts associated with the dewatering that will result from the construction and operation of the proposed LNP project is deficient and inadequate. C4D focuses on the alleged inadequacy of the ER's discussion of the onsite and offsite impacts of dewatering, both active (e.g., pumping and use of groundwater) and passive (e.g., nonmechanical dewatering related to surface impoundments). C4E asserts that the ER has inadequately addressed the impacts that onsite dewatering will cause onsite and offsite, due to alleged connections via the underlying Floridan aquifer system. C4F alleges that the ER has inadequately covered the impacts that dewatering will have on OFWs. C4G alleges that the ER fails to address the alterations and imbalances in nutrient concentrations in the aquatic environment that will result from the dewatering associated with the LNP project. C4H argues that the ER fails to address the increases in nutrient concentrations that will result from the allegedly increased prevalence of wildfires that will result from dewatering. While we make no ruling as to the merits of any of these allegations, the Board finds that Petitioners, and their expert, Dr. Bacchus, have met the criteria of 10 C.F.R. § 2.309(f)(1) to admit these allegations as part of C4. These alleged indirect and cumulative impacts of the proposed LNP project have been sufficiently alleged and supported to fairly raise the issue as to whether, under the rule of reason, they are significant enough to have been included in the ER under 10 C.F.R. § 51.45.

Subpart C4I: This subpart alleges that the ER's coverage of indirect and cumulative impacts of the salt drift and deposition resulting from situating cooling towers (using saltwater) in an inland, freshwater wetland area, was inadequate. Although, as Petitioners recognize, the ER addressed the subject of salt deposition (indicating that the quantity of salt deposition complies with the Staff guidance NUREG-1555), they question the adequacy of this discussion and the conclusion that these impacts are acceptable. Again, without addressing the merits of this allegation, we conclude that this subpart at least meets the criteria of 10 C.F.R. § 2.309(f)(1).

Subpart C4J: This subpart alleges that the ER failed to address the greenhouse gas and global climate disruption environmental impact that will result due to the fact that the LNP project will prematurely kill trees. We reject this subpart because Petitioners have failed to provide any support for the proposition that the number of trees that might be destroyed as a result of the LNP project could, even arguably, be potentially significant or reasonably affect global warming. Petitioners' comparison of the LNP site to the potential impact of the destruction

of 40,000 square miles of northern forests is patently absurd. Subpart C4J is too attenuated and lacks any indication that it is within the realm of reason under Part 51 or NEPA.

Subpart C4K: This subpart alleges that the ER failed to address the degradation of air quality that will be caused by the release of particulate matter that will result from the wildfires that will result from the dewatering associated with the LNP project. We reject this subpart because it takes the alleged chain of causation a step too far, and demands that the ER address impacts that are highly speculative, remote, and attenuated. Petitioners failed to present any plausible support or argument that any such air quality impacts, even cumulatively, would be significant enough to require inclusion in the ER under 10 C.F.R. § 51.45.

Subparts C4L, C4M, and C4N: These subparts allege that, as a consequence of the inadequate coverage of the indirect and cumulative impacts described in subparts C4B-C4K, the ER failed to adequately identify the zone of environmental impacts, zone of impacts on listed species, irreversible and irretrievable environmental impacts, and appropriate mitigation related to the proposed LNP project. While it is accepted that the ER covers the topics in question (zone of impacts, impacts on listed species, mitigation measures), the gist of these three subparts is that, given the underestimation of the impacts "described above" in C4B-C4K, the ER inadequately covered those topics. This is a fair and logical assertion. Thus, within these limitations, and limited to those subparts of C4 that we have admitted, the Board concludes that these consequential allegations are admissible as well.

Subpart C4P: This subpart alleges that the ER is deficient because it failed to address inconsistencies of the proposed LNP project with the section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material of 40 C.F.R. Part 230. NRC Staff and PEF argue that this subpart is inadmissible because, *inter alia,* NRC does not have jurisdiction to regulate, or issue permits authorizing, the disposal of dredge or fill material into wetlands. As stated above, we reject these arguments. ERs and EISs are required to consider all significant environmental impacts of a proposed project, even if the regulation of such impacts falls outside of NRC's jurisdiction and lies with another agency. *See* 10 C.F.R. Part 51, Appendix A, § 5.

Nevertheless, we conclude that subpart C4P is not an admissible component of C4. Despite Petitioners' lengthy recitation of the various guidelines of 40 C.F.R. Part 230, we fail to understand how these are connected to any alleged deficiency in the ER. Section 51.45 requires the ER to consider all significant environmental impacts. Section 51.45(d) requires the ER to enumerate the status of the applicant's compliance with all other applicable regulatory requirements, licenses, and permits. How have these requirements not been met? While Part 51 requires that the ER consider all significant environmental impacts, it does not authorize NRC to regulate, or even to enforce, compliance with all other

environmental laws and regulations.[40] It assumes that, in due course, the applicant will obtain any such required permits and comply with otherwise applicable laws and regulations (environmental or otherwise). The rambling review of Part 230 does not support an admissible contention.

In conclusion, we rule that, properly narrowed, C4 presents an admissible contention. It is a contention alleging that the ER fails to comply with Part 51 because it fails to adequately address, and underestimates, the following indirect and cumulative environmental impacts of constructing and operating the proposed LNP project: (a) onsite and offsite dewatering impacts associated with the connection of the site with the underlying Floridan aquifer system, impacts on OFWs, impacts to water quality resulting from increased concentrations of nutrients resulting both directly from dewatering and indirectly via additional wildfires that will be caused by dewatering; (b) impacts of salt drift from the saltwater cooling towers into the freshwater aquatic environment; and (c) the underestimation of the zone of environmental impact and areal extent of impact on listed species, irreversible and irretrievable impacts, and mitigation measures associated with (a) and (b).

E. Contention 5 (C5)

1. Statement of Contention 5

Proposed Contention 5 states:

> *CONTENTION 5*: Proximity of Proposed Site to Crystal River Nuclear Power Station not Assessed in SAMA Analysis.

Petition at 72.

2. Introduction Regarding SAMA and SAMDA

Inasmuch as C5 asserts that the COLA has not adequately assessed the "SAMA" analysis, it is appropriate for us to define this term and briefly review its legal and regulatory context. NRC regulations require that nuclear reactors be designed to withstand certain postulated events or accidents, called "design basis

[40] The same is true of NEPA. The agency required to perform the EIS is required to make its decision (e.g., whether to issue a license) based on a consideration of all environmental impacts, even those outside of its jurisdiction, but the lead agency is not to assume responsibility or jurisdiction over all environmental impacts. Unless otherwise shown, other agencies can be assumed to be doing their respective regulatory functions.

accidents" or DBAs.[41] By definition, a DBA results in negligible offsite consequences because the reactor is designed to handle such an event. After the accident at Three Mile Island however, the NRC focused on an additional category of accident — severe accidents — which are defined as "reactor accidents more severe than design basis accidents" and those in which "substantial damage is done to the reactor core whether or not there are serious offsite consequences."[42] NRC requires that applicants examine and evaluate the consequences of severe accidents in both the AEA (safety) and NEPA (environmental) context.

In the safety context, NRC regulations specify that the application must address the potential consequences of a severe accident, i.e., a beyond design basis accident. 10 C.F.R. § 50.33(g) (COLA must include emergency planning information for the "emergency planning zone," generally consisting of an area with a 10-mile radius from the proposed reactor). An application must include a safety analysis report (SAR) that covers the design features that will mitigate the radiological consequences of accidents. 10 C.F.R. § 50.34. The final SAR of a COLA must contain analysis of a severe accident involving a "fission product release from the core into the containment . . . [including] any fission product cleanup systems intended to mitigate the consequences of the accidents." 10 C.F.R. § 52.79(a)(1)(vi). The "fission product release" assumed for the FSAR is based on "a major accident . . . assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products." 10 C.F.R. § 52.79(a)(1)(vi) n.5. Similar regulations apply to standard designs.[43] Thus, the safety regulations require the applicant to perform a severe accident mitigation analysis (SAMA), and a severe accident mitigation design alternatives (SAMDA) analysis.[44]

In the environmental context, NEPA § 102(2)(C) "implicitly requires agencies

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[41] Although NRC regulations use the term "design basis accident" dozens of times, *see, e.g.,* 10 C.F.R. §§ 50.2 (definitions of "design basis" and "safe shutdown"), 50.34(f)(3)(v)(B)(1), 50.36(d)(2)(ii)(B), 50.44(b)(4), and 50.49(b)(1)(ii), the regulations do not define it.

[42] Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants, 50 Fed. Reg. 32,138, 32,138 (Aug. 8, 1985).

[43] The SAR component of an application for a Standard Design Certification must analyze and address the problem of such "extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products." 10 C.F.R. § 52.47(a)(2). The SAR must provide "special attention" to "design features intended to mitigate the radiological consequences of accidents" where there is a "substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products." 10 C.F.R. § 52.47(a)(2)(iv) & n.3.

[44] A SAMDA is a subpart of a SAMA. Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,426 (Aug. 28, 2007) ("SAMDAs are alternative *design* features for preventing and mitigating severe accidents, which may be considered for incorporation into the proposed design. The SAMDA analysis is that element of the severe accident mitigation alternatives [SAMA] analysis dealing with design and hardware issues") (emphasis in original).

to consider measures to mitigate [environmental] impacts." Nuclear Energy Institute; Denial of Petition for Rulemaking, 66 Fed. Reg. 10,834, 10,836 (Feb. 20, 2001). Council on Environmental Quality regulations provide elaboration, defining the term "mitigation," and requiring that the EIS include appropriate mitigation measures. *See* 40 C.F.R. §§ 1508.20, 1502.14(f), and 1502.16(h). NRC regulations follow suit, requiring that the ER include an analysis of the "alternatives available for reducing or avoiding adverse environmental effects." 10 C.F.R. § 51.45(c). In addition, the ER associated with each application for a standard design certification must address the costs and benefits of SAMDAs. 10 C.F.R. § 51.55(a). Finally, the regulations provide that if a COLA "references a . . . design certification . . . then the presiding officer shall not admit contentions . . . concerning [SAMDAs] unless the contention demonstrates that the site characteristics fall outside of the site parameters in the standard design certification." 10 C.F.R. § 51.107(c); *see also* 10 C.F.R. § 51.75(c)(2). Part 51 addresses SAMAs and SAMDAs in several other places.[45]

The Commission's Environmental Standard Review Plan, NUREG-1555 at 7.3, explains the purpose of the SAMA analysis:

> The scope includes the identification and evaluation of design alternatives and procedural modifications that reduce the radiological risk from a severe accident by preventing substantial core damage (i.e., preventing a severe accident) or by limiting releases from containment in the event that substantial core damage occurs (i.e., mitigating the impacts of a severe accident).

A SAMA analysis thus has the dual purpose of prevention and mitigation, locating it within both the technical and the environmental analyses of a COLA. SAMA analyses must be site specific and given careful consideration in order to comply with NEPA and the AEA. *See Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 741 (3d Cir. 1989).

3. Arguments Regarding Contention 5

We now turn to Petitioners' complaint concerning the SAMA analysis related to the proposed LNP project. Petitioners raise two main points. First, C5 raises a general argument, asserting that, although the COLA is based on the Rev. 16 (uncertified) version of the AP1000 nuclear reactor design, the Probablistic Risk Assessment (PRA) in the COLA is still based on the earlier Rev. 15 AP1000 design. Petition at 72. Thus, according to Petitioners, "the entire SAMA section does not appear to be relevant at this time." *Id.*

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[45] *See* 10 C.F.R. §§ 51.53(c)(3)(ii)(L) (SAMA), 51.30(d) (SAMDA).

Second, Petitioners assert that there is a specific "striking omission" in the ER chapter on severe accidents because "there is no consideration of the impact of a severe radiological accident at Crystal River Energy Complex (CREC). An accident at the nuclear unit at CREC could disrupt normal operations at Levy units 1 and 2 and should be analyzed in the SAMA for this COL." *Id.* Petitioners contend that "the safety provisions for the control room operators at [LNP] will presume that the source of any radiological disruption originates from an AP1000," and "may not be sufficient" if the "source of the radiological emergency is in fact the CREC." *Id.*

PEF bristles at Petitioners' "unsubstantiated assertion that Levy is proximate to the CREC station," yet acknowledges that it is only 9.6 miles away. PEF Answer at 156. PEF argues that Petitioners are attempting "to raise some vague concern about some non-specific Levy control-room procedures not being sufficient in some unidentified way because of some unidentified radiological emergency that arises from CREC." *Id.* "Petitioners provide no facts, technical support, or NRC guidance (or indeed any reason at all) that a study of mitigation alternatives at Levy need consider a severe accident at Crystal River Unit 3." *Id.* PEF also expresses confusion with regard to Petitioners' concern over control room operations, claiming that control room operator training procedures are described in Chapter 13 of the FSAR, and that Petitioners "do not identify [the] relevance [of control room operations] to the SAMA analysis of ER Chapter 7." *Id.* at 157.

Further, PEF argues that C5 is outside the scope of the LNP licensing proceeding and instead "should be adjudicated in a proceeding related to Crystal River Unit 3." *Id.* PEF also asserts that Petitioners have not met the requirements of 10 C.F.R. § 2.309(f)(1)(vi) because C5 does not cite any law or regulation that would require PEF to consider an accident at CREC in its SAMA. *Id.* at 158. PEF asserts that NRC regulatory guidance "states that a study of hazardous facilities within five miles of the project is adequate." Because CREC is located 9.6 miles away, PEF says that its SAMA can ignore CREC. *Id.* (citing Reg. Guide 1.206 § C.I.2.2). Additionally, PEF asserts that Petitioners have not raised a genuine dispute with the severe accident analyses contained in ER Chapter 7 or FSAR Chapter 19, which they must do to satisfy 10 C.F.R. § 2.309(f)(1)(vi). *Id.* at 159. Finally, PEF claims that a site-specific PRA was performed and was indeed based, at least in part, on Rev. 16, contrary to what Petitioners assert. *Id.* PEF claims that Petitioners did not adequately address why the revisions to the AP1000 DCD were material to the SAMA, but they assert that NRC regulations permit them to reference a DCD under review, and that if a change is made to the COLA, Petitioners can raise an issue at that time. *Id.*

The NRC Staff agrees with PEF that C5 is outside the scope of the proceeding. Staff Answer at 55. Additionally, NRC Staff argues that Petitioners fail to demonstrate why a discussion of an accident at CREC is required to be included in PEF's SAMA. *Id.* Therefore, NRC Staff asserts that Petitioners fail to meet

the requirements of 10 C.F.R. § 2.309(f)(1)(iii) and (vi), and C5 is therefore inadmissible. *Id.*

Petitioners' Reply addresses neither PEF's nor NRC Staff's arguments.

4. Analysis and Ruling Regarding Contention 5

The Board finds that C5 is inadmissible.

We reject the Petitioners' first point — that the COLA is defective because it is likely to be amended to reflect the PRA for Rev. 16 — for the same reasons that we rejected C1. The fact that the NRC licensing process is dynamic and applications are commonly supplemented or amended is not, in itself, the basis for an admissible contention. At the current moment, PEF's application includes a PRA, and unless Petitioners assert some specific deficiency in that PRA, Petitioners have failed to submit an "otherwise admissible" contention.[46]

Petitioners' second, more specific, argument — that the SAMA for the LNP project is inadequate because it fails to consider a scenario whereby an accident at the nearby CREC nuclear power plant could trigger a severe accident at LNP — raises some issues of legitimate concern. In particular, this case appears to be one of the few times (perhaps the first) where a new nuclear power reactor is proposed to be located within the 10-mile emergency planning zone (EPZ), *see* 10 C.F.R. § 50.33(g), of an entirely different nuclear power station. The adequacy of the Applicant's control room and equipment design radiological protections, in light of the fact that the reactor is proposed to be located within the EPZ of an existing reactor, is an issue that is appropriate in a COLA or Standard Design Certification proceeding. *See System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 292 (2004).

This Board is concerned that PEF does not appear to address CREC in its COLA, even though CREC is located only 9.6 miles northeast of LNP and is within LNP's 10-mile emergency planning zone. 10 C.F.R. § 50.33(g). PEF does not consider CREC in its emergency plans, claiming that an accident at CREC would not impact operations at LNP. Tr. at 199. PEF makes this claim based on the fact that multiple reactors (under common management) have historically been allowed to be co-located. *Id.* at 199-200. While this may be true, the Board is uneasy with PEF's apparent dismissal of the significance of CREC's proximity to the proposed LNP.

Further, we are concerned about PEF's approach to Reg. Guide 1.206 § C.I.2.2. PEF states that this guidance "states that a study of hazardous facilities within five miles of the project is adequate." PEF Answer at 158. This is incorrect. Section

[46] PEF concedes that Petitioners may raise new or amended contentions if changes are made to the COLA. Tr. at 186; PEF Answer at 159.

C.I.2.2 states that applicants must "consider *all* [industrial, transportation, and military] facilities and activities within five miles of the nuclear plant." It also requires that the COLA "include facilities at a greater distance as appropriate based on their significance." Despite this language, PEF contends that it need not mention the fact that PEF proposes to locate the LNP within the 10-mile-radius emergency planning zone of the CREC nuclear power station. Tr. at 195-98. It seems obvious to this Board that the existence of another independent nuclear power plant within the EPZ of the proposed LNP reactor is "significant." Given that CREC is within LNP's emergency planning zone, it is necessarily implicit that the NRC believes that an emergency at one facility could have an impact on the other. We read Reg. Guide 1.206 as clearly requiring that the LNP COLA address the possible impacts of the proximity of CREC.

In this context, we are uncertain how 10 C.F.R. § 51.107(c) applies. It specifies

> If the [COLA] references a standard design certification . . . then the presiding officer in a combined license hearing shall not admit contentions proffered by any party concerning [SAMDAs] unless the contention demonstrates that the site characteristics fall outside of the site parameters in the standard design certification.

10 C.F.R. § 51.107(c). The first problem is that the PEF COLA references an *uncertified* design (i.e., Rev. 16). Thus, PEF is proceeding "at its own risk." 10 C.F.R. § 52.55(c). Second, it is unclear whether the "site parameters in the standard design certification" (i.e., Rev. 15) include locating the AP1000 in a place where an independent nuclear power plant is within its EPZ.

In the end, however, we conclude that C5 fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v). While we recognize that CREC is within the LNP's EPZ, C5 alleges that the LNP *SAMA* is inadequate, yet Petitioners have failed to allege facts that establish any plausible scenario whereby an accident at CREC would ignite a *severe accident* at LNP. Petitioners state only that "[a]n accident at the nuclear unit at CREC could disrupt normal operations at Levy" without alleging how these operations would be disrupted and how an accident at CREC would ignite a severe accident (i.e., substantial core damage) at LNP. Petition at 72. Petitioners also fail to establish how the mitigation and prevention measures in PEF's existing SAMA analysis would be inadequate in dealing with a severe accident at LNP *as a result of an accident at CREC.* Aside from a vague reference to safety provisions for control room operators, *see id.,* Petitioners do not allege any facts that demonstrate how an accident at CREC will affect LNP in such a way that would require PEF to include such an analysis in their COLA. Because Petitioners fail to allege facts that support their position that PEF must include a discussion of CREC in their SAMA analysis, Petitioners do not meet the contention admissibility requirement of 10 C.F.R. § 2.309(f)(1)(v).

Likewise, Petitioners have failed to "demonstrate that the site characteristics

[of the LNP site] fall outside the site parameters in the standard design certification [Rev. 15 of the AP1000]. Thus, C5 does not clear the bar of 10 C.F.R. § 51.107(c).

The Board does recognize, however, the unusual situation in this case — that LNP would be located less than 10 miles from CREC, another independent nuclear facility. As such, we are concerned that PEF does not address CREC in its COLA, aside from the recognition that CREC is located 9.6 miles northeast of LNP. ER § 1.1.2. Even though CREC is within LNP's 10-mile emergency planning zone, 10 C.F.R. § 50.33(g), PEF does not consider CREC in its emergency plans, claiming that an accident at CREC would not impact operations at LNP. Tr. at 197-99. The Board is uneasy with this approach.

Due to these concerns, the Board recommends that this issue be considered by the Commission (or Board) when it conducts the mandatory review and hearing that must be held in this case. 10 C.F.R. § 51.107(a).

F. Contentions 6A and 6B (C6A, C6B)

Contention C6 is stated in two parts, C6A and C6B. We consider them separately.

1. Statement of Contention 6A

Proposed Contention 6A states:

> *CONTENTION 6 (in two parts)*: The application is deficient in its discussion of high-level radioactive waste that would be generated by Levy County units 1 and 2. *6A*: The application fails to evaluate the environmental impacts of the lack of options for permanent disposal of Spent Nuclear Fuel (SNF) from LNP.

Petition at 73.

2. Arguments Regarding Contention 6A

Petitioners allege that the ER is deficient because it does not discuss the environmental implications of the lack of options for the permanent disposal of spent nuclear fuel (i.e., high-level radioactive waste (SNF or HLW)) that will inevitably be generated by the proposed new reactors. *Id.* Petitioners point to section 5.7.6 of the ER which states, "Federal law requires that high level and transuranic wastes are to be buried at a repository and no release to the environment is expected" as specified in 10 C.F.R. § 51.51, Table S-3. Petitioners say that these statements are patently incorrect, in that DOE has recognized that significant radioactive releases from a Yucca Mountain facility would occur and continue to occur for many hundreds of thousands of years. *Id.* at 74. Petitioners

point out that this is consistent with EPA standards for Yucca Mountain, which recognize that radioactive releases will occur and establish permissible limits for such releases.[47] *See* 40 C.F.R. Part 197.

Petitioners next take issue with PEF's reliance on NRC's Waste Confidence Decision Review (WCD), 55 Fed. Reg. 38,474 (Sept. 18, 1990), as embodied in the NRC's Waste Confidence Rule (WCR), 10 C.F.R. § 51.23. Petition at 75. The WCR is a regulation that announces NRC's "generic determination" that "there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century" with sufficient capacity for "any reactor to dispose of" the HLW that it generates. 10 C.F.R. § 51.23(a). Based on this determination, NRC concluded, under NEPA, that ERs and EISs for nuclear reactors are not required to discuss the environmental impacts of the SNF and HLW that they inevitably generate. 10 C.F.R. § 51.23(b).

Petitioners assert, *inter alia,* that the WCR and WCD do not apply to new plants (such as LNP Units 1 and 2) and therefore PEF's ER is deficient, under NEPA, for failure to cover the environmental impacts of SNF and HLW. Petitioners point out that the NRC has recently reopened the WCR and WCD for public comment, Waste Confidence Decision Update, 73 Fed. Reg. 59,551 (Oct. 9, 2008), and that Yucca Mountain (whose capacity is limited to 63,000 metric tons of commercial HLW) cannot possibly hold all of the HLW generated by existing and proposed commercial reactors such as LNP. Petition at 77-81. Thus, Petitioners conclude that PEF's ER must address the environmental impacts of the SNF and HLW, such as the impacts of indefinite storage of the material on the LNP site. Petition at 83.

PEF argues that C6A is inadmissible because it is an impermissible challenge to two NRC regulations, the WCR (10 C.F.R. § 51.23) and Table S-3 (attached to 10 C.F.R. § 51.51). PEF Answer at 161. PEF points to 10 C.F.R. § 2.335, which states that "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding." *Id.* Moreover, PEF claims that the WCR applies to "any reactor" and thus *does* apply to new reactors, such as LNP Units 1 and 2. *Id.* at 162. PEF asserts that Petitioners' concern with the reopening of the WCR should be raised in the rulemaking process, and not in this COL proceeding. *Id.* at 166.

NRC Staff concurs that C6A is an impermissible challenge to NRC regulations and that the WCR does indeed apply to new reactors. Staff Answer at 56-57. The

[47] *Id.* (citing 40 C.F.R. Part 197; Final Rule: "Public Health and Environmental Radiation Protection Standards for Yucca Mountain, Nevada," 73 Fed. Reg. 61,256 (Oct. 15, 2008)).

Staff cites several decisions rejecting substantially similar challenges to the WCR on the ground that such challenges are prohibited by 10 C.F.R. § 2.335.[48]

Petitioners' Reply is silent with regard to C6A.

3. Analysis and Ruling Regarding Contention 6A

Contention C6A is inadmissible under 10 C.F.R. §§ 51.23 and 2.335. The first regulation (the WCR) states flatly that "no discussion of any environmental impact of spent fuel storage . . . for the period following the term of the . . . reactor combined license . . . is required in any environmental report." 10 C.F.R. § 51.23(b). Whether this regulation is correct or not, it is binding on us. The second regulation states, "no rule or regulation of the Commission . . . is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding subject to this part." 10 C.F.R. § 2.335(a). Contention C6A must therefore be denied.

The Board rejects the argument that 10 C.F.R. § 51.23 only applies to existing reactors and does not cover new or proposed reactors. The regulation specifically refers to "any reactor." 10 C.F.R. § 51.23(a). When it was originally promulgated, the Commission explained that 10 C.F.R. § 51.23 was intended to cover "the storage of spent fuel in *new or existing* facilities."[49] And, the regulation specifically refers to reactors to be covered by "combined licenses," 10 C.F.R. § 51.23(b), none of which exist yet. Thus, we conclude that the WCR is not limited to reactors that existed in 1984, 1990, or 1999, and that it applies equally to proposed new reactors, such as PEF's, subject to combined licenses (i.e., COLs).

Petitioners also challenge the conclusion in Table S-3 of 10 C.F.R. § 51.51 that high-level waste from LNP will be safely disposed of and that there will be no release of radioactivity from the disposal site into the environment. At least six Licensing Boards have rejected similar contentions.[50] More importantly,

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[48] *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-69 (2004); *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 587 (2008); *Lee,* LBP-08-17, 68 NRC at 431; *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 416 (2008); *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 337 (2008); *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 267-68 (2007); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 246-47 (2004); *Grand Gulf,* LBP-04-19, 60 NRC at 296-97.

[49] Requirements for Licensee Actions Regarding the Disposition of Spent Nuclear Fuel upon Expiration of Reactor Operating Licenses, 49 Fed. Reg. 34,688, 34,689 (Aug. 31, 1984) (emphasis added).

[50] *See, e.g., Shearon Harris,* LBP-08-21, 68 NRC at 587 n.35; *Lee,* LBP-08-17, 68 NRC at 457; *Bellefonte,* LBP-08-16, 68 NRC at 416; *North Anna,* LBP-08-15, 68 NRC at 337; *Vogtle ESP,* *(Continued)*

the Commission has recently held that a Licensing Board may not admit a contention that directly or indirectly challenges Table S-3. *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 75 (2009). This Board is bound by that ruling, and therefore will not address Petitioners' issues with Table S-3 because they are outside the scope of this COL proceeding. 10 C.F.R. § 2.309(f)(1)(iii).

Having rejected Contention 6A, we note that the NRC has reopened the WCR. If genuinely new information becomes available as a result of the WCR proceeding that contravenes the COLA in this case, then Petitioners may file a motion seeking the admission of a new or amended contention pursuant to 10 C.F.R. § 2.309(f)(2).

4. Statement of Contention 6B

Proposed Contention 6B states:

> *CONTENTION 6B*: Petitioners request that the Commission reconsider the Waste Confidence Decision in light of the September 11, 2001, terrorist attacks.

Petition at 83.

5. Arguments Regarding Contention 6B

In C6B, Petitioners request that the Commission reconsider the WCR. Petition at 83. Petitioners contend that the terrorist attacks on the United States on September 11, 2001, are an example of unexpected events that call into question NRC's conclusions in the WCR regarding safe storage of high-level waste. *Id.* at 84. Petitioners also request the right to respond, in this adjudicatory proceeding, to any final decision regarding the Commission's recent reopening of the WCR. *Id.* at 86-87.

Both PEF and the NRC Staff oppose C6B as being inapposite to the Commission's long-standing practice of not requiring consideration of terrorist attacks as part of the Agency's NEPA review. PEF Answer at 168; Staff Answer at 57-58. Furthermore, PEF and the NRC Staff argue that the COL proceeding is not the proper forum for this contention. Finally, NRC Staff asserts that Petitioners should raise their concerns in the rulemaking process, and not in this adjudicatory proceeding. Staff Answer at 59.

Petitioners make no further comment on C6B in their Reply.

LBP-07-3, 65 NRC at 267-68; *Clinton ESP,* LBP-04-17, 60 NRC at 246-47; *North Anna ESP,* LBP-04-18, 60 NRC at 268-69; *Grand Gulf,* LBP-04-19, 60 NRC at 296-97.

6. Analysis and Ruling Regarding Contention 6B

The Board finds that C6B is inadmissible. This Board does not have the authority to grant the requested relief, i.e., to order the Commission to reconsider the WCR. Contention C6B is outside the scope of this proceeding under 10 C.F.R. § 2.309(f)(1)(iii).

We note, parenthetically, that the Commission is already reconsidering the WCR and WCD and accepted public comment on both.[51] Petitioners and others who believe the WCR needs revision may use those proceedings to express their concerns.[52]

In this context, we note that Petitioners' request that the WCR be revised to include consideration of terrorist attacks on a nuclear facility is an issue that the Commission has dealt with and resolved. Despite the Ninth Circuit's holding in *San Luis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016 (9th Cir. 2005), the Commission declined to require the agency to consider terrorist threats as part of the NEPA review process. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 126 (2007). The Commission stated that it will follow the Ninth Circuit ruling only in that Circuit, and elsewhere will continue to adhere to the current policy of "refus[ing] to consider the consequences of a terroris[t] attack" on nuclear facilities in other cases. *Id.* at 128. Moreover, the Third Circuit recently affirmed the Commission's *Oyster Creek* decision in *New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132 (3d Cir. 2009). The court held that NJDEP could not challenge NRC's conclusion with regard to terrorist attacks because NJDEP failed to demonstrate "that the NRC could undertake a more meaningful analysis of the specific risks associated with an aircraft attack on Oyster Creek." *Id.* at 136-37.

G. Contentions 7 and 8 (C7, C8)

1. Statement of Contentions 7 and 8

Proposed Contentions C7 and C8 are both founded on the allegation that there is no licensed facility in the United States that is available to accept and dispose of the low-level radioactive waste (LLW) that LNP Units 1 and 2 will inevitably generate.[53] Contention C7 is a NEPA contention, alleging that the ER has not

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[51] *See* Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 73 Fed. Reg. 59,547 (Oct. 9, 2008); Waste Confidence Decision Update, 73 Fed. Reg. 59,551 (Oct. 9, 2008).

[52] *Oconee,* CLI-99-11, 49 NRC at 345 ("If Petitioners are dissatisfied with our generic approach to the problem, their remedy lies in the rulemaking process, not in this adjudication").

[53] Contentions C6A and C6B deal with the alleged lack of disposal facilities for HLW. In contrast, Contentions C7 and C8 deal with LLW.

adequately addressed the environmental impacts of this situation. Contention C8 is a parallel safety contention, alleging that the COLA has not adequately addressed the safety aspects of the absence of a LLW disposal facility. Proposed C7 states:

> *CONTENTION 7*: Progress Energy Florida's (PEF) application to build and operate Levy County Nuclear Station Units 1 & 2 violates the National Environmental Policy Act by failing to address the environmental impacts of the waste that it will generate in the absence of licensed disposal facilities or capability to isolate the radioactive waste from the environment. PEF's environmental report does not address environmental, environmental justice, health, safety, security or economic consequences that will result from lack of permanent disposal for the radioactive wastes generated.

Petition at 87. The next sentence makes clear that C7 refers to LLW ("the issue of long term radioactive waste management and disposal of Class B, C, and Greater than C 'low level' radioactive waste is not adequately addressed"). *Id.*

Meanwhile, Contention C8 focuses on PEF's alleged failure to comply with the AEA and its regulatory requirements (i.e., "safety" issues) as follows:

> *CONTENTION 8*: A substantial omission in the Progress Energy Florida's (PEF) application to build and operate Levy County Nuclear Stations Units 1 & 2 is the failure to address the absence of access to a licensed disposal facility or capability to isolate the radioactive waste from the environment. PEF's FSAR does not address an alternative plan or the safety, radiological and health, security or economic consequences that will result from lack of permanent disposal for the radioactive waste generated.

Petition at 93-94. This contention challenges PEF's final safety analysis report (FSAR), which is a requirement of NRC's "safety" regulations under the AEA. 10 C.F.R. § 52.79(a) ("The application must contain a final safety analysis report"). Contention C8 immediately incorporates "all citations and basis" for C7 and makes clear that C8 also focuses on LLW. *Id.*

Both C7 and C8 are based on the fundamental factual assertion that, as of July 1, 2008, the LNP Units 1 and 2 have no licensed disposal site to which to send their Class B, C, and Greater-than-C LLW.[54] Petition Exhibit PI-05, Declaration

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[54] "As of July 1, 2008, the Barnwell, South Carolina disposal site has limiting [*sic*] its access to waste generated within the Atlantic Compact (SC, NJ, CT). The US Ecology-run commercial radioactive waste disposal site at Hanford/Richland Washington already limits access to generators in the Northwest and Rocky Mountain States only. A recently licensed, but legally contested site in Texas can take waste from Texas and Vermont only. For the rest of the country, then, including *(Continued)*

of Diane D'Arrigo ¶ 5. PEF concedes that, as of this moment, that statement is true. Tr. at 324.

Given the close relationship between C7 and C8, our analysis will cover them together.

2. Arguments Regarding Contention 7

Building on the fact that, as of this moment, there is no place where PEF can send its LLW for disposal, Petitioners point out that the ER is founded on the proposition that LLW will be disposed of quite promptly (e.g., within a year or so) offsite. Petition at 88. Petitioners concede that some onsite storage is contemplated in the ER, but only for a short time until the trucks arrive to transport it offsite. *Id.* Section 3.1.1.5 of the ER says that the LNP site will have facilities for "storing processed waste in *shipping and disposal* containers." *Id.* (emphasis added). Section 3.5.3 of the ER states that LLW will be collected, accumulated, processed, and packaged and that "[t]he packaged waste is stored in the auxiliary and radwaste buildings until it is *shipped offsite to a licensed disposal facility.*" *Id.* (emphasis added). The Petitioners assert that, confronted with the fact that no offsite LLW disposal facility is available, PEF's ER must address the potential environmental impacts associated with longer term storage of all of the B, C, and Greater-than-C LLW. *Id.* at 89. They assert that 10 C.F.R. § 51.51, Table S-3 (which is a table of data regarding certain of the environmental effects of the uranium fuel cycle that serves as the "basis" for evaluating environmental effects of, *inter alia,* LLW from nuclear power plants) assumes that LLW will be disposed of via land burial. *Id.* at 90. But, Petitioners assert, given the closure of the LLW disposal facility in Barnwell, South Carolina, PEF's ER needs also to address the environmental impacts of prolonged storage and management of the LLW on the LNP site. *Id.* at 90-91.

Petitioners also assert that the ER should evaluate the impacts of licensing the LNP site under 10 C.F.R. Part 61 (dealing with land disposal). *Id.* at 91. In addition, Petitioners state "[i]t is imperative that the safety and security issues of extended onsite storage, de facto disposal, be addressed" in the FSAR, *id.,* and that PEF must submit information that will show that it can, during extended onsite storage, still satisfy the requirements of 10 C.F.R. Part 20 and 10 C.F.R. Part 50, Appendix I (dealing with keeping human exposures to radiation "as low as reasonably achievable" (ALARA)). *Id.* at 92. Finally, they assert that ER

Florida, generators of Class B and C radioactive waste have no licensed disposal site to which to send their waste. In addition, there is no disposal site for Greater-than-C radioactive wastes which would be generated by the Levy Nuclear Power 1 and 2 reactors if they operate." Pet. Exh., Declaration of Diane D'Arrigo ¶ 5; *see also* RIS 2008-12, "Considerations for Extended Interim Storage of Low-Level Radioactive Waste by Fuel Cycle and Materials Licensees," May 9, 2008, at 2; Tr. at 324.

§§ 1.3.1 and 1.3.3, dealing with decommissioning planning and cost estimates, are deficient because they provide "no recognition of the increased costs that may be associated with disposal of a cumulative total of LLRW from operations of the facility."[55] *Id.*

PEF opposes the admission of C7 and C8, relying primarily on the Commission's recent decision in *Bellefonte,* CLI-09-3, 69 NRC 68. PEF Answer at 172. PEF states that in *Bellefonte,* the Commission reversed the underlying Board decision that admitted two LLW contentions (one NEPA, one Safety) that were similar to C7 and C8 herein. *Id.* PEF also points out that C7 and C8 are similar to a single, consolidated contention that was partially admitted, and partially denied, in *North Anna,* LBP-08-15, 68 NRC 294. PEF Answer at 173. PEF asserts that, in both *North Anna* and in *Bellefonte,* the licensing boards concluded that the disposal of Greater-than-Class C (GTCC) LLW is the responsibility of the federal government. *Id.* PEF indicates that both boards also dismissed the portions of the contentions dealing with Part 61 as speculative and immaterial. *Id.* For the same reasons, PEF says that C7 and C8 should be denied. *Id.* at 174.

PEF additionally points out that Petitioners concede that C7 raises a challenge to 10 C.F.R. § 51.51 Table S-3 (Petition at 87 n.30) and that this is impermissible, and renders C7 inadmissible, citing *Bellefonte* and 10 C.F.R. § 2.335. *Id.* at 179. PEF says that the ER indeed provides information concerning the radiological impact of the LLW during normal operations and shows that they comply with ALARA and 10 C.F.R. Part 20. *Id.* at 181-82.

The NRC Staff argues that C7 is an impermissible attack on a Commission regulation — 10 C.F.R. § 51.51 Table S-3 — in violation of 10 C.F.R. § 2.335. Staff Answer at 59-60. The Staff asserts that Petitioners fail to cite or reference discussions in the ER related to LLW handling and management, such as ER §§ 3.5.4.3 (solid waste storage system), 5.4 (radiological impacts of normal operations), 5.4.1.3 (direct radiation from the LNP), and 5.7.1.10 (radioactive wastes). *Id.* at 61. The Staff faults Petitioners for complaining that the COLA assumes that a LLW disposal facility will be available, whereas C7 and C8 assume that it will not. *Id.* at 62. The Staff concludes by pointing out that the Commission ruled, in *Bellefonte,* that 10 C.F.R. Part 61 is inapplicable in COL proceedings because it only applies to land disposal facilities that receive LLW from others, not to onsite disposal of a facility's own LLW. *Id.* at 63.

In their Reply, Petitioners point out that in *Bellefonte* (which was decided after the original petition was filed), the Commission confirmed that "contentions such as Contentions 7 and 8 . . . are appropriate for consideration in licensing hearings."

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[55] Parts 61, 20, and 50 (ALARA) are all "safety" issues, relevant primarily to C8. We mention them here, because the Petition includes them in C7. As stated, however, C8 immediately incorporates all of the citations and arguments in C7. Thus, we analyze the relevance of these regulations primarily in our ruling on C8.

Reply at 34 (citing *Bellefonte,* CLI-09-3, 69 NRC at 77 n.42 (slip op. at 11 n.42) ("[W]e do not rule out that, in a future COL proceeding, a petitioner could proffer an application-specific contention suitable for litigation on the subject of onsite storage of low-level radioactive waste")). Petitioners argue that Table S-3 is only relevant to a limited extent and does not govern the storage issues raised by C7. *Id.* Petitioners rebut the assertion that they have not substantiated their claim that no offsite disposal is available for Class B, C, and GTCC, by citing various reports confirming (as was said in the D'Arrigo Declaration) that such LLW disposal facilities are not available, and none have opened in the United States in the last 30 years (other than one facility in Texas that can take Texas and Vermont LLW). *Id.* at 35. Petitioners maintain that they indeed read the ER and the COLA, that their LLW challenge focuses on short-term storage prior to shipment offsite, and that the proposed DCD for the AP1000 Rev. 17 states, "[t]he AP1000 has no provisions for permanent storage of radwaste. Radwaste is stored ready for shipment." *Id.* at 36 (citing Rev. 17 DCD at 11.4.2.1). "The assumption is made that all dose limits in 10 C.F.R. 20 and 50 will be met for public releases and worker exposures, but there is no indication that those dose calculations were done including a full inventory of Class B, C and [GTCC] radioactive waste . . . for all the years the reactors will operate. This is an omission." *Id.*

3. Arguments Regarding Contention 8

Petitioners' arguments in support of C8 expressly incorporate all citations and bases for C7. Petition at 94. They assert that the ER and FSAR indicate that thousands of curies in LLW will be generated by LNP Units 1 and 2 and that, although they contain a discussion of the routine treatment and processing of such waste, this discussion is inadequate because it does not deal with the "very long term economic, safety, security and environmental consequences of storing [LLW], nor of the routine and potential accidental releases over time." *Id.* at 95. Petitioners state that the COLA fails to "explain or address how safety and security issues of extended on-site storage" will be maintained with increasing amounts of LLW, pointing out that section 3.5 of the ER ("[s]olid radioactive wastes are collected and packaged for temporary storage, shipment, and offsite disposal") assumes prompt shipment offsite. *Id.* at 96-97.

PEF opposes C8 because, as stated in *Bellefonte,* 10 C.F.R. Part 61 is not applicable to disposal of wastes on a party's own site. PEF Answer at 175. It points to NRC guidance that a nuclear power plant facility "need not be initially designed to store waste for its entire operational life." *Id.* at 176 (citing NUREG-0800, "Standard Review Plan for Review of Safety Analysis Reports for Nuclear Power Plants" at 11.4025 (Rev. 3, Mar. 2007)). PEF argues that C8 (which deals with long-term storage of LLW onsite) must fail because it fails to challenge the portions of the FSAR that discuss onsite handling, solidification,

and dewatering of LLW. *Id.* at 177. PEF challenges Petitioners' assumption that no offsite disposal will be available for a long period of time and the "incorrect premise that the lack of a licensed disposal site . . . means that the waste will remain on site indefinitely." *Id.* at 178.

The NRC Staff responds to C8 by asserting that it must be dismissed because Petitioners have failed to provide any regulatory references showing that a COLA is required to address disposal of LLW, "beyond providing a mechanism for processing and packaging waste in preparation for [offsite] disposal." Staff Answer at 63. Thus, the Staff sees no genuine dispute over a material issue of law or fact as required in 10 C.F.R. § 2.309(f)(1)(vi). *Id.*

4. Analysis and Ruling Regarding Contentions 7 and 8

The Board concludes that C7 and C8, while generally inadmissible, contain a narrow issue concerning onsite storage and management of LLW for a potentially extended period that is admissible. We agree with PEF and NRC Staff that C7 and C8 are inadmissible insofar as they raise issues under 10 C.F.R. Part 61, or insofar as they constitute a challenge to Table S-3 of 10 C.F.R. § 51.51. Nevertheless, properly narrowed, they each assert an issue that meets the admissibility criteria of 10 C.F.R. § 2.309(f)(1) and comports with the Commission's decision in *Bellefonte.*[56]

At the outset, it is clear that 10 C.F.R. Part 61 is simply inapplicable to the issue of LLW management at Levy Units 1 and 2. Part 61 only applies to the "land disposal of radioactive waste . . . *received from other persons.*" 10 C.F.R. § 61.1 (emphasis added). Thus, even if PEF's long-term storage of LLW onsite is deemed tantamount to land disposal, Part 61 would be inapplicable. This is true both for the safety contention (C8) and the NEPA contention (C7). Part 61, which deals with *safety* issues only, is obviously not applicable to C7. The Commission recently affirmed the dismissal of equivalent contentions in *Bellefonte,* stating that "Part 61 is inapplicable here because it applies only to land disposal facilities that *receive* waste from others, not to onsite facilities . . . where the licensee intends to *store* its own low-level radioactive waste."[57] CLI-09-3, 69 NRC at 73. Petitioners conceded this point at oral argument. Tr. at 308. For the foregoing reasons, we

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[56] Although a Board is not required to narrow a contention to sever the inadmissible portions from the admissible portions, a Board may do so. *Pennsylvania Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-76-6, 9 NRC 291, 295-96 (1979). We choose to exercise this option here.

[57] Similar claims were rejected in recent cases that also involved proposed reactors in states that, like Florida, presently lack access to a disposal facility for LLW. *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 221 (2009); *North Anna,* LBP-08-15, 68 NRC at 316-17; *Bellefonte,* LBP-08-16, 68 NRC at 414.

find that Petitioners' assertion that PEF should consider licensing LNP under Part 61 is an inadmissible part of this contention because it is outside the scope of this proceeding. 10 C.F.R. § 2.309(f)(1)(iii).

Similarly, to the extent that C7 and C8 challenge 10 C.F.R. § 51.51 Table S-3, they are inadmissible under 10 C.F.R. § 2.335, which states "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding." Again, this is what the Commission held in *Bellefonte,* CLI-09-3, 69 NRC at 75. The Commission noted that "Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and concludes that this kind of disposal will not result in the release of any 'significant effluent to the environment.'" *Id.* at 75 n.30. Accordingly, we may not admit a contention that challenges this conclusion.

In *Bellefonte,* however, the Commission stated, "we do not rule out that, in a future COL proceeding, a petitioner could proffer an application-specific contention suitable for litigation on the subject of onsite storage of low-level radioactive waste." *Id.* at 77 n.42. The Commission further concluded that "[t]he questions of the safety and environmental impacts of onsite low-level waste *storage* are, in our view, largely site- and design-specific, and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions." *Id.* at 76-77 (emphasis in original). Further, the Commission observed that, even if it had chosen to promulgate a "low-level waste confidence" rule, such a rule would not, if it followed the pattern of the high-level waste confidence rule, "alter any requirements to consider in the adjudicatory proceeding the environmental impacts of *waste storage* during the term of the license." *Id.* at 77 (emphasis added).

Furthermore, in *Bellefonte,* the Commission noted at several points, without criticism, that contentions very similar to C7 and C8 had been admitted by the Board in the *North Anna* proceeding. *Id.* at 73 (where the *North Anna* Board admitted the FSAR LLW contention on other grounds), 74 (where the *North Anna* Board admitted the NEPA LLW contention). The Commission stated:

> Specifically, the *North Anna* Board had reasoned that (i) a COLA's Environmental Report must address the environmental costs of managing low-level wastes, (ii) the analysis must be based on Table S-3, (iii) Table S-3 "may be supplemented by a discussion of the environmental significance of the data set forth in the table as weighed in the analysis for the proposed facility," (iv) the table "does not include health effects from the effluents described in the table," (v) the health effects "may be the subject of litigation in individual licensing proceedings," and (vi) "the increased need for interim storage of [LLW] because of the closure of the Barnwell facility implicates the health of plant employees, an issue that Table S-3 does not resolve."

Id. at 74-75 (internal citations omitted).

These factors apply with equal force to the PEF COLA. Thus, based on *Bellefonte,* it is clear that there are elements of C7 and C8 that are specific to the PEF COLA, dealing with the environmental and safety consequences of the potential need for extended storage of LLW on the Levy site, and that satisfy the requirements of 10 C.F.R. § 2.309(f)(1). The Board therefore admits these contentions, narrowed as follows:

> *CONTENTION 7*: Progress Energy Florida's (PEF's) application is inadequate because the Environmental Report assumes that the class B, C, and greater than C low-level radioactive waste (LLW) generated by proposed Levy Units 1 and 2 will be promptly (e.g., within two years) shipped offsite and fails to address the environmental impacts in the event that PEF will need to manage such LLW on the Levy site for a more extended period of time.
>
> *CONTENTION 8*: Progress Energy Florida's (PEF's) application is inadequate because the Safety Analysis Report assumes that the class B, C, and greater than C low-level radioactive waste (LLW) generated by proposed Levy Units 1 and 2 will be promptly (e.g., within two years) shipped offsite and fails to address compliance with Part 20 and Part 50 Appendix I (ALARA) in the event that PEF will need to manage such LLW on the Levy site for a more extended period of time.

These contentions concern only extended onsite storage, not permanent disposal, of LLW. Contention C7, as narrowed, does not challenge the assumption of Table S-3 that LLW from reactors will *eventually* be disposed of through shallow land burial, nor the Table's conclusion that this kind of disposal will not result in the release of any significant effluent into the environment. Neither C7 nor C8, as narrowed, is based on 10 C.F.R. Part 61.

The Board concludes that C7 and C8, as narrowed, satisfy the admissibility requirements of section 2.309(f)(1). Contentions C7 and C8 are contentions of omission, i.e., ones that claim, in the words of 10 C.F.R. § 2.309(f)(1)(vi), that "the application fails to contain information on a relevant matter as required by law . . . and the supporting reasons for the petitioner's belief."[58] Specifically, while the ER and the FSAR may discuss temporary and short-term management of the LLW onsite, they do not confront the plausible problem of longer term management of LLW onsite (i.e., longer than 2 years).

We find the requirements of section 2.309(f)(1)(i) and (ii) to be satisfied as well because C7 and C8 adequately describe the alleged omissions and explain that, given the reality of the closure of Barnwell, the issue of extended onsite management and storage of LLW is legitimate. Part 51 requires that environmental impacts be discussed in proportion to their significance. 10 C.F.R. § 51.45(b)(1).

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[58] *North Anna,* LBP-08-15, 68 NRC at 314-15; (quoting *Pa'ina Hawaii, LLC,* LBP-06-12, 63 NRC 403, 413 (2006).

Similarly, the AEA and the NRC regulations thereunder require that applications for nuclear power plants show that the issuance of the license would not be inimical to, and will provide adequate protection to, the health and safety of the public. AEA §§ 103(d), 182(a); 10 C.F.R. §§ 52.81, 50.40(a). These two narrowed contentions challenge the legal sufficiency of PEF's ER and FSAR and are within the scope of the proceeding as required by 10 C.F.R. § 2.309(f)(1)(iii). *See North Anna,* LBP-08-15, 68 NRC at 316-17; *Pa'ina,* LBP-06-12, 63 NRC at 414.

With regard to C7, NRC regulations require the ER to describe the proposed action and discuss, among other things, "[t]he impact of the proposed action on the environment," "[a]ny adverse environmental effects which cannot be avoided should the proposal be implemented," and "[a]ny irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." 10 C.F.R. § 51.45(b)(1), (2), (5). The allegation that PEF's ER does not meet these requirements raises a material issue under 10 C.F.R. § 2.309(f)(1)(iv).

Similarly, with regard to C8, NRC safety regulations require the COLA to describe the kinds and qualities of radioactive materials expected to be produced in the operation and the "means for controlling and limiting the radioactive effluents and radiation exposures within the limits set forth in [10 C.F.R. Part 20]." 10 C.F.R. § 52.79(a)(3). The safety regulations require that the application include a description of equipment and measures taken to assure that any exposures to radioactive materials such as LLW are kept "as low as reasonably achievable" (ALARA), including a "description of the provisions for . . . storage . . . of solid waste containing radioactive materials." 10 C.F.R. §§ 50.34a(a) and 50.34a(b)(3); *see also* Part 50, Appendix I (relating to ALARA). As PEF acknowledged, the dose calculations in the COLA are based on the assumption that no more than 2 years of LLW would be stored in the LNP radwaste building, and PEF has not done the safety calculations for a source term greater than a 2-year accumulation. Tr. at 329-30. Given the closure of Barnwell, the current absence of any alternative disposal facility for LNP LLW, and the large length of time often required for the licensing of new LLW facilities, we conclude that Petitioners have raised a legitimate and material safety issue, as required by 10 C.F.R. § 2.309(f)(1)(iv).

With regard to 10 C.F.R. § 2.309(f)(1)(v), a petitioner must allege facts that support the contention. For a contention of omission, a petitioner must show that the application omits information that is required by law to be included. Here, Petitioners have fairly alleged that the only LLW licensed facility (Barnwell) is no longer available to LNP and that the COLA does not confront the plausible looming scenario whereby the LLW 2-year storage capacity will be reached and exceeded. Accordingly, C7 and C8 have "alleged facts" and provided documents that Petitioners intend to rely on, as required by 10 C.F.R. § 2.309(f)(1)(v).

Finally, under section 2.309(f)(1)(vi), when an application is alleged to be deficient, the petitioner must identify the deficiencies and provide supporting

reasons for its position that such information is required. For the reasons already explained, Petitioners have adequately identified the alleged deficiencies and explained why further information is required concerning PEF's plans for management of LLW. Petitioners therefore have established a genuine dispute with PEF on a material issue. 10 C.F.R. § 2.309(f)(1)(vi).

The Board notes that PEF claims to have discussed the impacts of LLW management and storage in sections 3.5, 5.4, 5.5, 5.7, and 11.4.6 of the Application. PEF Answer at 117, 181. However, in the few instances where the ER mentions storing LLW onsite prior to disposal, it is usually in the context of processing and short-term storage prior to shipment to an unnamed, offsite disposal facility. Ultimately, the ER fails to describe a plan for storing the LLW onsite for an extended period of time (greater than 2 years), in the event that shipping offsite is not possible.

In sum, we admit C7 and C8, as narrowed, because they meet the admissibility criteria of 10 C.F.R. § 2.309(f)(1) and do not conflict with applicable NRC regulations.

H. Multiple Contentions Related to NEPA Alternatives Analysis

1. Overview of NEPA Alternatives Contentions

Petitioners have filed four NEPA contentions that challenge PEF's ER on the ground that it allegedly fails to adequately address all reasonable alternatives to the proposed construction and operation of two new nuclear power reactors, producing a total of 2200 MWe, in Levy County, Florida. The four "NEPA Alternatives" contentions are as follows:

Proposed Contention 9 (C9) states:

> *CONTENTION 9*: PEF environmental report omits consideration of major renewable energy option: solar thermal hot water. The PEF environment [*sic*] report has an omission in 9.2.2.3, Solar Power. Pursuant to 10 C.F.R. § 2.309(f)(1) the co-petitioners contend that PEF failed to consider small scale solar thermal applications in its review of solar thermal technologies. Unlike photovoltaics and centralized solar concentrator technology, solar domestic water heaters have the potential to displace base load over the entire 24 hour day because of the thermal energy storage aspects of the technology. This was not considered.

Petition at 97.

Proposed Contention 10 (C10) states:

> *CONTENTION 10*: PEF has grossly underestimated the potential for conservation and efficiency in its environment [*sic*] report. The PEF environment [*sic*] report has an omission in 9.2.1.1, Initiating Conservation measures. Pursuant to 10

C.F.R. § 2.309(f)(1) the co-petitioners contend that PEF has grossly underestimated the potential for Energy Efficiency and Conservation in its service areas. The current realities [*sic*] is that their conservation efforts are little more than rate payer financed public relations campaigns that make a half hearted effort at demand side management.

Petition at 98-99.

Contention 11 (C11) states:

CONTENTION 11: The basis for PEF's analysis of renewable energy options is inherently flawed since all options assessed are assumed to be centralized power production sites; PEF fails to assess distributed generation using renewable energy technologies.

Petition at 100.

Proposed Partial Contention 4.O (C4O) states:

CONTENTION 4.O: Alternatives without adverse environmental impacts of the proposed LNP — The LNP ER failed to address alternatives to the proposed LNP that are readily available and that would avoid the adverse direct, indirect, and cumulative environmental impacts described above [i.e., described in C4A to C4N].[59]

Petition at 65.

2. Standards Governing NEPA Alternatives Analysis

Before discussing Contentions C9-C11 and C4O, it is worthwhile to review the relevant Part 51 and NEPA requirements related to alternatives. The duty to consider alternatives originates with two provisions of NEPA — (1) 42 U.S.C. § 4322(2)(C)(iii), which requires that an agency's environmental impact statement (EIS) include "a detailed statement [of the] alternatives to the proposed action," and (2) 42 U.S.C. § 4322(2)(E), which requires that an agency "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." The NRC and the CEQ agree that the NEPA alternatives analysis is the "heart of the environmental impact statement."[60] Likewise, they

[59] Although C4O is a portion of C4, we treat it as more closely related to C9-11, the other NEPA alternatives contentions.

[60] 10 C.F.R. Part 51, Subpart A, Appendix A, § 5; 40 C.F.R. § 1502.14; *City of Shoreacres v. Waterworth,* 420 F.3d 440, 450 (5th Cir. 2005).

agree that the law requires that the EIS identify and discuss "all reasonable alternatives." 10 C.F.R. Part 51, Subpart A, Appendix A, § 5; 40 C.F.R. § 1502.14.

This does not mean, however, that every conceivable alternative must be included in the EIS.

> To make an impact statement something more than an exercise in frivolous boilerplate the concept of alternatives must be bounded by some notion of feasibility . . . . Common sense also teaches us that the "detailed statement of alternatives" cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man.[61]

As discussed above, the "rule of reason" governs the agency's duty to identify and consider all reasonable alternatives under NEPA.[62]

The goals of the project's sponsor are given substantial weight in determining whether an alternative is reasonable. *City of New York v. U.S. Department of Transportation,* 715 F.2d 732, 742 (2d Cir. 1983). In this regard, "[a]n agency cannot redefine the [applicant's] goals,"[63] and the EIS alternatives analysis should be based around the applicant's goals, including its economic goals. *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (internal citations omitted).

Commission decisions follow the foregoing principles. "When reviewing a discrete license application filed by a private applicant, a federal agency may appropriately 'accord substantial weight to the preferences of the applicant,' and may take into account the 'economic goals of the project's sponsor.'" *Id.* Likewise, the Commission has stated that "[i]n considering alternatives under NEPA, an agency must 'take into account the needs and goals of the parties involved in the application.'" *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 146 (2006) (quoting *Citizens Against Burlington, Inc.,* 938 F.2d at 199). In addition, the NRC regulations state that "[a]n otherwise reasonable alternative will not be excluded from discussion solely on the ground that it is not within the jurisdiction of the NRC." 10 C.F.R. Part 51, Subpart A, Appendix A, § 5.

Although the applicant's goals are given substantial weight, NEPA does not allow the applicant to define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered under 42 U.S.C. § 4322(2)(C)(iii)

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[61] *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 551 (1978).

[62] *Westlands Water District v. U.S. Department of Interior,* 376 F.3d 853, 868 (9th Cir. 2004); *City of Bridgeton v. Federal Aviation Administration,* 212 F.3d 448, 458 (8th Cir. 2000).

[63] *Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 199 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991).

and (E). "[B]lindly adopting the applicant's goals is a 'losing proposition' because it does not allow for the full range of alternatives required by NEPA."[64] Furthermore, "NEPA requires an agency to 'exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of the project' and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals." *Envtl. Law & Policy Ctr.,* 470 F.3d at 683 (quoting *Simmons,* 120 F.3d at 669). An applicant "may not define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the [applicant's] goals," because this would make the agency's EIS alternatives analysis a "foreordained formality." *Citizens Against Burlington,* 938 F.2d at 199. As the CEQ has said, "reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant."[65] While NRC does not consider CEQ pronouncements to be binding,[66] they are entitled to substantial deference. *See Limerick,* 869 F.2d at 725, 743.

3. Contention 9 (C9)

a. Arguments Regarding C9

Proposed C9 states that the ER "omits consideration" of the option of "solar thermal hot water" and "failed to consider small scale thermal applications."[67] Petition at 97. Petitioners assert that although ER § 9.2.2.3 discussed some solar power alternatives such as "photovoltaics and centralized solar concentrator technology," it did not consider "solar domestic water heaters [which] have the potential to displace base load." *Id.* They allege that solar thermal water heating has the potential to reduce the average homeowner's power consumption by 20%, citing a report by the American Council for an Energy-Efficient Economy (ACEEE), which was purportedly attached to "exhibit Quillen-01" to the petition.[68] Petition at 98. Petitioners also reference a "pilot program in Lakeland,

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[64] *Environmental Law & Policy Center v. NRC,* 470 F.3d 676, 683 (7th Cir. 2006); *Simmons v. U.S. Army Corps of Engineers,* 120 F.3d 664, 669 (7th Cir. 1997).

[65] Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,027 (Mar. 23, 1981).

[66] *See* Environmental Protection Regulations for Domestic Licensing and Related Conforming Amendments, 49 Fed. Reg. 9352 (Mar. 12, 1984) ("NRC as an independent regulatory agency can be bound by CEQ's regulations only insofar as those regulations are procedural or ministerial in nature").

[67] Contention C9 is quoted in full in Section IV.H.1.

[68] Quillen Exhibit One was attached to the Declaration of Carter Quillen, PE, when the original Petition was filed. *See, e.g.,* PEF Answer at 187 n.89. However, the Office of the Secretary was unable

(Continued)

Florida that found that a group of utility customers were able to replace 8.3% of their energy consumption by installing thermal solar water heaters." *Id.*

PEF attacks the admissibility of C9 on several grounds. First, PEF asserts that section 8 of the ER clearly addressed the issue of solar water heaters, quoting the ER as saying that PEF had "launched an innovative solar-energy initiative that offers customers rebates and incentives to install a solar-thermal water heater" and describing the cost and energy savings of such heaters. PEF Answer at 184. PEF notes that the issue of solar water heaters, and the extent to which they could reduce the demand, was considered in proceedings before the Florida Public Service Commission (FPSC), which concluded that, despite such demand-side management (DSM) measures, LNP Units 1 and 2 are necessary. *Id.* at 184-85. PEF stated that, in addition to the DSM discussion in section 8 of the ER, it also "extensively studied a very expansive set of generation alternatives" including "wind, geothermal, hydropower, solar power (concentrating solar power systems and photovoltaic cells) wood waste (and other biomass), municipal solid waste, energy crops, petroleum liquids, fuel cells, coal, natural gas, integrated gasification combined cycle, and various combinations of the above." *Id.* at 185 (citing ER § 9-9-9-32).

Second, PEF argues that the alternatives analysis section of the ER only needs to consider alternatives that create additional electrical power or generating capacity, and that solar water heaters, which reduce demand but do not add generating capacity, need not be covered. *Id.* at 183-84. PEF cites the NRC Staff's guidance document, which it says only requires discussion of "sources of energy that could reasonably be expected to meet the demand . . . for additional generating capacity." *Id.* (citing NUREG-1555 at 9.2.2-1). PEF quotes a recent Board decision for the proposition that "an applicant is not required to examine all possible alternatives, but only those that can reasonably accomplish [the applicant's] purpose." *Summer,* LBP-09-2, 69 NRC at 110-11.

Third, PEF argues that Petitioners "fail to adequately support" C9. PEF criticizes Petitioners for merely referring to the long ACEEE report, without citing any specific page or discussing the "evidence" it supposedly contains. PEF Answer at 186. PEF points out that, even if all eleven policy recommendations in the ACEEE report were adopted, the report acknowledges that this would not meet even 30% of Florida's projected energy needs by 2023. *Id.* at 186-87. As to the Lakeland Electric pilot study cited in the Petition, PEF argues that "even if accurate, the fact that customers in one pilot program in one Florida municipality were able to replace 8.3% of their power with solar water heaters clearly does not

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to include Exhibit One on the Agency's Electronic Hearing Docket due to NRC's policy against accepting password protected documents. *See* Use of Electronic Submissions in Agency Hearings, 72 Fed. Reg. 49,139, 49,146 (Aug. 28, 2007). All parties have had access to Exhibit One, and the Board was able to review it as well.

support a claim that such water heaters could displace the need for 2200 MWe of baseload generation." *Id.* at 188.

The NRC Staff also asserts that C9 is not admissible. The Staff points out that ER § 9.2.2.4 discusses "both solar power and thermal options" and rejects them because of their inability to produce the 2200 MWe. Staff Answer at 72. In addition, the Staff notes, the ER discussed the "concept of thermal energy storage" and PEF's program "for offering to install solar-thermal water heaters for their customers." *Id.* at 73. The Staff goes on to point out that Petitioners make no attempt in C9 to indicate that "solar thermal domestic water heaters are a reasonable alternative that needs to be further examined in the ER," *id.,* and that they make "no assertion . . . that would suggest that their proposed alternative could generate energy on a scale equivalent to the proposed reactors." *Id.* at 74. The Staff asserts that "the Lakeland pilot project involved only 60 households" chosen for their specifically advantageous qualities. *Id.* With reference to the ACEEE report, the Staff notes that "Commission practice is clear that a petitioner may not simply incorporate massive documents by reference as the basis for or as a statement of his contentions." *Id.* at 75 (citing *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240-41 (1989)). The Staff concludes that "an alternative failing to meet the purpose and need of the project is not a reasonable alternative" and that, in this regard, Petitioners "simply do not provide sufficient information to suggest that solar thermal domestic water heaters constitute a reasonable alternative to reactors producing large amounts of baseload electric power." *Id.*

In their Reply, Petitioners first reject the assertion that "any project that is not directly equivalent to the production of 2000 megawatts of base load electric power" is *per se* not a reasonable alternative. Reply at 37. They argue that the term "reasonable alternative" is not totally controlled by the applicant's desire to maximize financial returns, and should be informed by broader environmental considerations and benefits, such as would be effected by a mix of actions that would include greater DSM. *Id.* at 38-39. Petitioners state that PEF limited its alternatives analysis "strictly to a centralized approach to providing energy," thereby failing to consider solar thermal water heaters, an "entire category" of "viable energy generation alternatives." *Id.* at 39. Next, Petitioners argue that PEF's solar thermal water heater program offers consumers "insignificant financial incentives" and is "not the same as seriously considering the capitalization of that infrastructure and offering it to consumers as an alternative." *Id.* at 39. Finally, Petitioners say that C9 is not limited to solar water heating, but instead covers a "broad range of 'Bottom Up' alternative energy production options," because PEF was "only considering 'Top Down' strategies." *Id.* at 40.

b. Analysis and Ruling Regarding C9

The Board concludes that proposed C9 is not admissible. The essential problem with C9 is that it is primarily a contention of omission arguing that the ER failed to address the options of domestic solar thermal water heating, whereas it is clear that the ER specifically discusses this matter in section 8 of the ER. Section 2.309(f)(1)(vi) of 10 C.F.R. requires the identification of each omission, and here Petitioners have failed to rebut PEF's answer, which flatly points out where and how the ER does, in fact, deal with the solar water heater alternative.

Alternatively, even if we view C9 as a contention alleging that the ER discussion of the solar water heater alternative is inadequate (rather than omitted), Petitioners have failed to allege any facts that support the claim that solar water heating could possibly serve as a substitute for the proposed project. The Petition cites nothing to even suggest that domestic solar water heaters could eliminate 2200 MWe of demand or could otherwise realistically substitute for 2200 MWe. A reference to a dense, single-spaced, 107-page report (the ACEEE report), without a clue as to where or how it supports Petitioners' cause, does not support the Petitioners' claim. And, even if the ACEEE report is read charitably and we assume that all eleven of its recommendations were implemented immediately, this does not show that Florida could eliminate the need for LNP Unit 1 and Unit 2. The FPSC has already assessed such DSM and declared that these two new nuclear power plants are needed.[69] Likewise, Petitioners' citation of a tiny pilot study of sixty homes, which, even though ideally situated for solar water heaters, only achieved an 8.3% DSM savings, is of little help. Petitioners must at least allege some facts that support their assertion that solar water heaters, their proposed alternative, could plausibly be within the realm of NEPA's rule of reason as a substitute for 2200 MWe. This they have not done.

Finally, Petitioners have failed to explain or suggest that the ER fails to meet the relevant legal standards, e.g., 10 C.F.R. § 51.45. The ER's discussion of alternatives must be "sufficiently complete to aid the Commission in developing and exploring . . . appropriate alternatives." 10 C.F.R. § 51.45(b)(3). Contention C9 does not even allege that this standard was not met.

4. Contention 10 (C10)

a. Arguments Regarding C10

Contention C10 alleges that PEF has "grossly underestimated the potential for Energy Efficiency and Conservation in its service areas" and that PEF's energy conservation efforts are "little more than public relations campaigns" and "make

[69] PEF Answer at 184-85; *see also* Tr. at 360.

a half hearted effort" at DSM.[70] Petition at 99. Petitioners again cite the ACEEE Report, which, they assert, states that "with proper incentives and leadership, 30% of Florida's energy needs could be met by conservation and renewable resources by 2023." *Id.* Petitioners argue that aggressive conservation and efficiency avoid the need for further transmission line construction, do not increase the burden of water use, do not generate waste, and avoid radiological consequences of potential accidents. *Id.* at 99-100.

PEF responds that the claim — that the ER's DSM analysis is insufficient — fails to raise a material dispute because, in fact, "ER Sections 9.2.1.1 and 9.2.1.1.1 describe in detail Progress's many programs for conservation measures and energy efficiency." PEF Answer at 192. Nor, says PEF, does C10 deal with "ER Sections 8.2.2.2 and 8.4 which provide further detailed information concerning Progress's efforts to encourage energy efficiency and substitutions." *Id.* PEF observes that while C10 alleges that the ER "grossly underestimates" DSM, Petitioners fail to discuss, controvert, or explain why or how the foregoing sections of the ER are inadequate. *Id.* at 193. PEF goes on to argue that DSM matters are "outside of the scope of this proceeding" because DSM is not a substitute for the addition of baseload power, which is the accepted project purpose. *Id.* at 194 (citing *Summer,* LBP-09-2, 69 NRC at 109 (slip op. at 23)). PEF asserts that only alternatives that generate equivalent baseload power are reasonable. *Id.* at 195. Finally, PEF argues that Petitioners' claims about radiological consequences, transmission lines, waste, and water use lack any supporting allegations of fact or expert opinion. *Id.* at 195-97.

The NRC Staff agrees that C10 is not admissible. Like PEF, the Staff points to ER §§ 9.2.1.1 and 8.2.2.2, which discuss energy conservation and DSM, and asserts that C10 "fails to effectively grapple with the ER's alternatives analysis" and "nowhere specifically describes how the conservation programs described in the ER are deficient, much less provide documentary or expert support that would suggest any specific and substantial deficiencies." Staff Answer at 77. The Staff notes that, at most, the ACEEE Report refers to energy savings in 2023, which is not consistent with the 2016-2017 time frame for proposed LNP Units 1 and 2. *Id.* Like PEF, the Staff asserts that C10 "fails to explain how energy conservation is a reasonable alternative in light of the need for a large amount of baseload electric power." *Id.* at 78 (citing *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801 (2005); 40 C.F.R. § 1502.14(a); *Summer,* LBP-09-2, 69 NRC at 108-10 (slip op. at 22-24)).

Petitioners' Reply to PEF and the Staff states, in full, "Reduction of consumption IS a substitute for the production of base-load power. DSM that shifts consumption off of peak is admirable, but not comparable." Reply at 40.

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[70] Contention 10 is quoted in full in Section IV.H.1.

b. Analysis and Ruling Regarding C10

Contention C10 is not admissible for much the same reasons as C9. When confronted with the obvious fact that the ER actually deals with the subject of energy conservation and DSM at some length, Petitioners fail to explain how or why this analysis is inadequate. If this is a contention of omission, PEF has shown that there is no omission. If this is a contention of deficiency or inadequacy, Petitioners were required to explain how or why the ER is inadequate or deficient. In order for a contention to be admitted, the Board, and the opposing parties, need to be provided with some idea of what is to be litigated at the evidentiary hearing. The purpose of 10 C.F.R. § 2.309(f)(1) is to "focus litigation on concrete issues and result in a clearer and more focused record for decision." 69 Fed. Reg. at 2202. Here, Petitioners have failed to explain what is left of C10 after PEF's citation to ER §§ 8.2.2.2 and 9.2.1.1.

The Board also concludes that Petitioners have failed to allege facts or provide expert opinion that would support their contention that the ER's discussion of energy efficiency and DSM is somehow deficient. *See* 10 C.F.R. § 2.309(f)(1)(v).

5. Contention 11 (C11)

a. Arguments Regarding C11

Although C11 never refers to them, this contention is a NEPA/Part 51 contention that the ER is inadequate because PEF failed to consider the alternative of "distributed generation using renewable energy technologies," i.e., "fuel free power generation (wind, solar, appropriate hydro) . . . at or near, the point of power consumption."[71] Petition at 100. Such decentralized power generation, we are told, avoids the many costs of a large-scale centralized plant (e.g., transmission lines, loss of electricity over expanded distances, the "burden of water use/water consumption" and waste generation). *Id.* Petitioners cite a 2006 *New York Times* article titled "Sunny Side Up," which states that such decentralized power business plans are being implemented in several parts of the country. *Id.* at 101. Petitioners close with an argument that distributed power is the wisest policy:

> When assessed in the context of distributed energy infrastructure based on electronic interface (so-called "smart grid") so that consumption is responsive to production capacity and efficient use of the electricity generated, then decentralized generation with renewable energy makes far more sense than a large thermal-power facility with its inherent challenges of security, safety, and probably most important, water consumption. Distributed generation with fuel-free renewable resources is the ultimate in "fuel diversification" and energy independence since it removes the

[71] Contention 11 is quoted in full in Section IV.H.1.

> burden of ANY fuel supply whatsoever. The construction of another large scale base load nuclear plant, along with hundreds of miles of high voltage transmission lines, is not the best investment we can make toward a clean, safe, sustainable and carbon neutral energy future; therefore the interests of the members of the co-petitioning organizations are not well served by this plan, and will, instead, be subjected to unnecessary risks and hazards as outlined in this petition.[72]

PEF responds that C11 is not admissible because it does not "offer reasoned support that distributed power using renewables is a reasonable alternative to Levy." PEF Answer at 198. Next, PEF argues that Chapter 9 of the ER "extensively analyzes" a long list of renewable alternatives, such as wind, geothermal, hydropower, solar, wood waste, etc., including "various combinations of the above." *Id.* PEF notes that the FPSC's final order in the Levy "need determination proceeding" stated:

> Renewable alternatives such as solar [and] wind . . . have not yet become cost-effective, and these technologies are highly dependent on intermittent natural energy sources that can be a valuable energy resource but cannot be depended upon to produce firm capacity. Thus the Final Order concluded based on the record, we find there are no renewable energy sources and technologies . . . reasonably available for PEF that might mitigate the need for Levy Units 1 and 2.

Id. at 199 (internal quotes and cites omitted).

PEF argues that since its "elected purpose" is to generate baseload, only those alternatives that generate baseload could possibly be reasonable. *Id.* "Since Petitioners have not shown that distributed generation is a reasonable alternative to Progress's selected purpose for the Application — baseload generation — Contention 11 raises an issue outside of the scope of this proceeding and immaterial to the decision the Commission must make." *Id.* at 200.

PEF goes on to argue that Petitioners have failed to provide alleged facts or expert opinion in support of their argument that distributed generation using renewable energy technologies is a plausible alternative that Part 51 requires the ER to analyze. PEF points out that one *New York Times* article and two books (with no page citations) do not suffice. *Id.* at 201-04. PEF adds that the Quillen Declaration, which was attached to the Petition but never cited in C11, is simply a conclusory restatement of the contention itself, i.e., that the ER is "inherently flawed" since it fails to assess the potential of "distributed generation using renewable energy technologies." *Id.* at 201.

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[72] *Id.* at 101-02 (citing S. David Freeman, *Winning Our Energy Independence* (2007); Arjun Makhijani, *Carbon Free, Nuclear Free: A Roadmap for U.S. Energy Policy* (2007)). Petitioners cite to these long documents without ascription to any specific page.

The NRC Staff rejects C11 "for many of the reasons cited in the Staff response" to proposed C9 and C10. Staff Answer at 79. The Staff points out that the ER discusses three of the alternatives mentioned in C11 (solar in § 9.2.2.4, wind in § 9.2.2.4, and hydropower in § 9.2.2.1), but Petitioners "do not even reference, much less identify a dispute with, the analysis contained in these sections of the Levy ER." *Id.* The Staff's arguments both reiterate its responses to C9 and C10, and generally agree with PEF's answer.

Petitioners' Reply adds little. They simply state that the goal of the project should be defined as "meeting the electric power needs of the applicant's customers" and not be limited to "nuclear reactors that are not cost effective, or ancient-carbon coal and natural gas" facilities. Reply at 40.

b. Analysis and Ruling Regarding C11

Given the similar structure, support (or lack thereof), and theme of C9, C10, and C11, our ruling in this case is the same as for the first two. Contention C11 is inadmissible because Petitioners have failed to address the fact that the ER indeed deals with renewable energy alternatives such as solar, wind, and hydroelectric and to explain why the ER is legally inadequate. The determination of contention admissibility under 10 C.F.R. § 2.309(f)(1) is not the time or place for broad policy arguments as to why a "distributed energy infrastructure" based on a "smart grid" "makes far more sense" or is the "ultimate in fuel diversification and energy independence" or why "another large scale base load nuclear plant . . . is not the best investment." Petition at 101-02. This Board does not decide energy policy, nor do we adjudicate the business wisdom of a proposed investment. Instead, at this stage, we are simply looking for some indication that Petitioners have identified and articulated some concrete allegation as to how or why the ER fails to satisfy some legal requirement (*e.g.,* Part 51), and some understanding as to what will actually be litigated at the evidentiary hearing. This contention is not admissible because it is not plausibly explained or supported by alleged facts. *See* 10 C.F.R. § 2.309(f)(1)(ii) and (v).

We need not resolve whether PEF's purpose is unreasonably narrow or whether a proposed alternative is so far beyond the realm of reason that it must be rejected out of hand. We need not get into the merits of NEPA (i.e., reasonableness) at all. We do not reach these questions because C11 fails at a much more mundane level, i.e., it fails to explain why the ER discussion is deficient and fails to provide alleged facts or expert opinions that would support its admission. 10 C.F.R. § 2.309(f)(ii) and (v).

6. Contention 4O (C4O)

a. Arguments Regarding C4O

Contention C4O is a general statement that the ER failed to address readily available alternatives that would avoid the adverse impacts of proposed LNP Units 1 and 2.[73] Petition at 65. It is a generic version of contentions C9-C11. Petitioners assert two main arguments in support of C4O. First, they claim that the ER "summarily dismissed solar power alternatives" because the ER assumed that solar would need a "footprint" of approximately 71,500 acres for photovoltaic (PV) and 33,000 acres for solar thermal systems, and the ER concluded that this footprint would greatly exceed the size of the proposed LNP site. *Id.* Petitioners assert that the ER should have considered placing the PV and/or solar systems on the rooftops of its customers, which, Petitioners state, would solve the footprint problem and avoid the adverse environmental impacts of construction on a greenfield site. *Id.* at 66. They cite to the Florida Solar Energy Center as an entity promoting the rooftop approach, and attach two articles indicating that California has such a program. *Id.* Second, Petitioners assert, without explanation, that the ER should have considered the "decoupling alternative."[74] *Id.* at 66-67.

Given the similarity of C4O to C9-C11, PEF's Answer raises many of the same objections. First, PEF argues that C4O is inadmissible because Petitioners have provided no factual or expert support indicating why the ER's analysis of solar is insufficient, and thus fail to satisfy 10 C.F.R. § 2.309(f)(1)(v). PEF Answer at 150. PEF goes so far as to argue that Petitioners must provide "evidence" before their contention may be admitted, *id.* at 150, and that C4O is inadmissible because Petitioners fail to provide "expert testimony."[75] *Id.* at 153.

Second, PEF rejects the proposition that the ER "summarily dismissed" solar, pointing out that ER § 9.2.2.4 has an extended analysis of solar options and a much broader explanation as to why they are not suitable. PEF Answer at 151-52. "If Petitioners do not agree with the analysis in the ER, then their contention must at least explain why." *Id.* at 152.

Third, PEF references its response to C11 and states that since Petitioners have provided "no analysis or support whatsoever indicating how its option of solar

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[73] Contention C4O is quoted in full in Section IV.H.1.

[74] Petitioners fail to explain or define what they mean by the "decoupling alternative." In Exhibit J to the Petition, however, Dr. Romm states that decoupling involves rewriting utility regulations "to decouple utility profits from the sale of electricity." Petition, Exh. J, Decoupling Alternative: Stimulating Smarter Utilities ¶ 1 (Feb. 6, 2009).

[75] Evidence is not required at the contention admissibility stage. Instead, the petitioner must provide "a concise statement of the *alleged* facts or expert opinion" which support the contention, *references* to sources and documents on which the petitioner intends to rely, and sufficient *information* to show that a genuine dispute exists. *See* 10 C.F.R. § 2.309(f)(1)(v) and (vi) (emphasis added); *Crow Butte,* CLI-09-9, 69 NRC at 352.

power on rooftops . . . is somehow feasible as an energy alternative to baseload capacity," they have failed to show that there is a genuine dispute, as required by 10 C.F.R. § 2.309(f)(1)(vi). *Id.* at 154. PEF asserts that 71,500 acres of PV on rooftops (even assuming it would supply baseload) is "much too large to construct piece by piece on privately owned residential and commercial building rooftops." *Id.* at 154 n.74.

Fourth, PEF states that revenue decoupling is a state regulatory matter that is outside of the scope of, and not material to, the NRC licensing process, citing 10 C.F.R. § 2.309(f)(1)(iii) and (iv). *Id.* at 154.

The NRC Staff raise similar objections. Referencing its response to C9-C11, the Staff again asserts that C4O is, *per se,* not admissible because "an alternative energy source is not a reasonable alternative and therefore need not be considered under NEPA unless it can generate an amount of electric power comparable to that of the proposed nuclear power plant." Staff Answer at 48. They state that nothing in the Petition or its attachments remotely suggests that rooftop solar is a feasible alternative to LNP Units 1 and 2. *Id.* As to decoupling, the Staff says that decoupling is simply a financial mechanism to encourage DSM, and as such (a) has already been considered in the ER, and (b) does not need to be considered in the ER because it is not a reasonable alternative. *Id.* at 49.

In reply, Petitioners reiterate that the ER fails to address "individual based solar production," perhaps enhanced by "Feed in Tariffs," a concept that is totally unexplained. Reply at 32. We are told that "[r]ooftops across Florida are perfect for the production of solar power" and that the ER cost analysis fails to consider the advantages of solar in cutting infrastructure costs, such as transmission lines. *Id.*

b. Analysis and Ruling Regarding C4O

Our ruling on C4O, like our analysis of C9-C11, is based on the mundane specifics of the contention, rather than on broad philosophical discussions about whether PEF's purpose is the sole criterion of what is reasonable or whether the solar alternatives are *per se* unreasonable. The plain fact is that the ER considered solar alternatives. The flaw in C4O, like C9-C11, is that Petitioners have failed to explain how or why the ER discussion of solar alternatives is inadequate or what would be litigated at the evidentiary hearing. ER § 9.2.2.4 spends four pages analyzing solar options and does not "summarily dismiss" solar solely on the basis of its footprint at the Levy site. As PEF points out, the ER discusses that Florida does not have the arid climate that would render solar efficient, that solar power technologies are still in the demonstration phase of development, and that the costs of PV cell technologies greatly exceed the costs of nuclear. PEF Answer at 152. Further, Petitioners fail to even reply to PEF's point that that 71,500 acres of PV on rooftops is "much too large to construct piece by piece on privately

owned residential and commercial building rooftops." *Id.* at 154 n.74. While it is a given that the "reasonableness" of a proposed alternative is the merits of a NEPA contention, and thus not to be resolved at the contention admissibility stage, contention admissibility at least requires that the petitioner provide some explanation under 10 C.F.R. § 2.309(f)(1)(ii) or some alleged facts under 10 C.F.R. § 2.309(f)(1)(v) that support the claim that the proposed alternative is plausibly within the realm of reason. This they have not done.

We note, finally, that Petitioners' cryptic reference to the "decoupling alternative" does not make C4O admissible. As previously discussed, the ER covers DSM. Petitioners have failed to provide a brief explanation as to why the ER discussion of DSM fails to satisfy 10 C.F.R. Part 51.

V. MOTION FOR ADMISSION OF NEW CONTENTION 12

A. Standards Governing the Admissibility of New or Amended Contentions

Three regulations address the admissibility of additional contentions once an adjudicatory proceeding has been initiated. These are 10 C.F.R. § 2.309(f)(2), which deals with the admission of "*timely*" new contentions; 10 C.F.R. § 2.309(c), which deals with the admission of "*nontimely*" new contentions; and 10 C.F.R. § 2.309(f)(1), which establishes the basic criteria that all contentions must meet in order to be admissible.

The first step in assessing the admissibility of a new contention is to determine if it is timely under 10 C.F.R. § 2.309(f)(2)(iii), or nontimely under 10 C.F.R. § 2.309(c).[76]

If the new contention is timely, then it is evaluated under the three-factor test of 10 C.F.R. § 2.309(f)(2). This regulation, which was added in 2004, provides that new contentions may be filed after the initial docketing, with leave of the presiding officer, upon a showing that:

> (i) The information upon which the amended or new contention is based was not previously available;

[76] *See, e.g., Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 572 (2006); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-06-16, 63 NRC 737, 744-45 (2006); *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 192-93 (2007); *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 265 n.5 (2007); Licensing Board Order (*Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4) Ruling on Request to Admit New Contention) (Oct. 14, 2008) at 5-11 (unpublished) (Bellefonte New Contention Ruling).

(ii) The information upon which the amended or new contention is based is materially different than information previously available; and

(iii) The amended or new contention has been submitted in a *timely* fashion based on the availability of the subsequent information.[77]

The admission of new contentions under 10 C.F.R. § 2.309(f)(2) does *not* run afoul of the Commission's aversion to petitioners who "disregard [NRC's] timeliness requirements," *nor* does it allow petitioners to add new contentions that "simply did not occur to [them] at the outset."[78] It is axiomatic that contentions can only be founded on information that is "available at the time" the contention is to be filed. 10 C.F.R. § 2.309(f)(2). By definition, and through no fault or negligence of the petitioner, contentions admitted under 10 C.F.R. § 2.309(f)(2)(i)-(iii) are founded on *material* new information that was *not* available at the time when the petition was initially due.[79] Contentions that meet the three criteria of this regulation are in no sense late, dilatory, or untimely.

In sum, if the petitioner is able to show that new and materially different information has become available, and promptly files a new contention based on this new information, then the new contention is admissible (assuming it also

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[77] 10 C.F.R. § 2.309(f)(2) (emphasis added). The regulations do not define or specify an exact number of days whereby we can measure or determine whether a contention is "timely" or "nontimely." It is subject to a reasonableness standard, depending on the facts and circumstances of each situation. However, Boards often specify a timeliness criterion in their initial scheduling order.

[78] *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004); *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428-29 (2003).

[79] We must keep in mind that the NRC "shall grant a hearing upon the request of any person whose interests may be affected by the proceeding," 42 U.S.C. § 2239(a)(1)(A) (AEA § 189(a)(1)(A)), and must grant such a hearing on any *material* contention. *Union of Concerned Scientists,* 735 F.2d at 1443. Thus, 10 C.F.R. § 2.309(f)(2) is necessitated by the NRC's policy of initiating its adjudicatory proceedings (i.e., issue the notice of opportunity to file contentions) at a very early stage in the administrative process, *long before* the NRC Staff and the applicant have finished drafting, submitting, and publishing the relevant documents and information to the public. For example, in this case, due to the fact that the Westinghouse AP1000 certified design has already changed from Rev. 15, to Rev. 16, to Rev. 17, and the fact that PEF has indicated that it will likely amend its COLA, it is clear that substantial new and material information will be generated during the multiyear NRC-PEF process. Even PEF acknowledges that Petitioners have the right to file new and amended contentions when PEF amends its application. Tr. at 207. Likewise, since the NRC issued its "notice of opportunity to request a hearing" months, if not years, before the NRC Staff will finish filing requests for additional information, much less issue its final safety evaluation report (FSER) and final environmental impact statement (FEIS), substantial new and material information is likely to come to light. Section 2.309(f)(2) satisfies AEA § 189(a) and accommodates the fact that *material* new and different information will inevitably arise *after* the initial docketing of this COLA and the publication of notice of opportunity for hearing by allowing a petitioner to assert new or amended contentions based on such new information.

satisfies the six general contention admissibility standards contained in 10 C.F.R. § 2.309(f)(1)).

If a proposed new contention is not timely under 10 C.F.R. § 2.309(f)(2), then a second step occurs and its admissibility is governed by 10 C.F.R. § 2.309(c), which deals with "nontimely filings." While timely new contentions (i.e., which the petitioner filed promptly) are subject to a three-factor test, in contrast, nontimely new contentions (i.e., where the petitioner was dilatory) are subject to a more stringent standard — the eight-factor balancing specified in 10 C.F.R. § 2.309(c). The most important of these eight factors is the first factor, a showing of "good cause, if any, for the failure to file on time." 10 C.F.R. § 2.309(c)(1).

The third step in determining the admissibility of any new contention is the requirement that it satisfy the six standards specified in 10 C.F.R. § 2.309(f)(1). These six criteria were discussed in Section III.A, above.

B. Arguments Regarding Motion to File New Contention 12

On March 9, 2009, Petitioners filed a pleading titled, in part: "New Contention . . . Based on Information Not Previously Available," requesting that a new "generic issue" (Contention 12) be admitted and held in abeyance. *See supra* note 5. Because this pleading (Motion C12) was filed after the 60-day time frame had expired for filing initial contentions under the December 9, 2008, *Federal Register* notice, Contention 12 was filed as a new contention "pursuant to 10 C.F.R. § 2.309(f)(2)." *Id.* Proposed Contention 12 states:

> Neither the Proposed Waste Confidence Decision nor the Proposed Spent Fuel Storage Rule satisfies the requirements of NEPA or the Atomic Energy Act. Therefore they fail to provide adequate support for the Applicant's Environmental Report or for an Environmental Impact Statement in this particular licensing case. The deficiencies in the Waste Confidence Rule also fatally undermine the adequacy of the NRC's findings in Table S-3 of 10 C.F.R. § 51.51 to satisfy NEPA. Unless and until the NRC remedies the deficiencies in the Waste Confidence Rule, Table S-3, and the Proposed Spent Fuel Storage Rule, the NRC has no lawful basis to issue a license for the proposed Levy County nuclear power plant.

Motion C12 at 4.

Petitioners state that Contention C12 is "based on comments that NIRS [and others] submitted on February 6, 2009," in response to NRC's October 9, 2008, proposed "update" to its "Waste Confidence Decision" and its proposed update to 10 C.F.R. § 51.23, regarding the temporary storage of spent fuel after cessation of reactor operations.[80] Motion C12 at 1-2. The motion attaches Petitioners'

[80] Motion C12 at 1; *see also* 73 Fed. Reg. at 59,551; 73 Fed. Reg. at 59,547.

February 6, 2009, comments to the proposed rulemaking (Comments).[81] Motion C12 at 2. The motion states that Contention 12 raises the "exact same concerns raised in our Comments," and "is intended to be identical to the Comments." *Id.* at 3-4. The motion "seeks to enforce, in this specific proceeding, the NRC's commitment that it 'would not continue to license reactors if it did not have reasonable confidence that the wastes can and will in due course be disposed of safely'" and "also seeks to enforce the requirements of NEPA." *Id.* at 2 (internal citation omitted). Petitioners "recognize that the issues raised by our Comments — and therefore by this contention — are generic in nature" and therefore they ask that Contention 12 be "admitted and held in abeyance in order to avoid the necessity of a premature judicial appeal if this case should conclude before the NRC has completed the rulemaking proceeding." *Id.* at 3.

Petitioners argue that 10 C.F.R. § 2.309(f)(2)(i) is satisfied because the information on which this contention is based (i.e., the Comments) was "not available" to them until February 6, 2009, the date they filed the Comments. *Id.* at 9. Petitioners assert that 10 C.F.R. § 2.309(f)(ii) is met because, "while some of the information presented in this contention may have been publicly available," it is nevertheless "materially different" given that Petitioners had not previously "integrated [the information] into a single document that presented a comprehensive and integrated analysis" of the Waste Confidence Rule and related matters. *Id.* at 9. Finally, Petitioners contend that Contention 12 was filed in a "timely manner," as required by 10 C.F.R. § 2.309(f)(2)(iii), because the Comments (and supporting declarations and reports) had only been available to them "in final form" since February 6, 2009. *Id.*

PEF and the NRC Staff argue that Motion C12 and proposed new Contention 12 do not meet the requirements of sections 2.309(f)(2), 2.309(c), *or* 2.309(f)(1). PEF New Answer at 5-6; Staff New Answer at 6-7. Furthermore, PEF and the NRC Staff assert that Contention 12 is inadmissible because it is an impermissible challenge to the Commission's ongoing rulemaking. PEF New Answer at 12; Staff New Answer at 9-10.

C. Ruling on Motion C12 and Proposed New Contention 12

Our first inquiry is to determine whether Motion C12 and proposed new

[81] Comments of the Institute of Energy and Environmental Research on the U.S. Nuclear Regulatory Commission's Proposed Waste Confidence Rule Update and Proposed Rule Regarding Environmental Impacts of Temporary Spent Fuel Storage (Feb. 6, 2009); Declaration by Dr. Arjun Makhijani in Support of Comments of the Institute for Energy and Environmental Research on the U.S. Nuclear Regulatory Commission's Proposed Waste Confidence Decision Update (Feb. 6, 2009); Declaration by Dr. Gordon R. Thompson in Support of His Critique of NRC's Waste Confidence Decision and Environmental Impact Determination (Feb. 6, 2009).

Contention 12 were timely and otherwise meet the criteria for the filing of new contentions under 10 C.F.R. § 2.309(f)(2). It is clear to us that they do not.

Section 2.309(f)(2)(i) states that the petitioner must show that "the information upon which the amended or new contention is based was not previously available." In this case, however, Petitioners admit and acknowledge that proposed Contention 12 is based entirely on Petitioners' *own* Comments. Thus, they are asserting that they were unaware of their own Comments until the date (February 6, 2009) that they filed these Comments. This is absurd. Surely Petitioners were aware, or should have been aware, of the information contained in their own Comments before they filed them. The date of the Comments themselves, February 6, 2009, cannot be the date that the information in the Comments first became available to Petitioners.

The next question is: when did the information in their own Comments first become available to Petitioners? Stated alternatively, have Petitioners made a showing, as required by 10 C.F.R. § 2.309(f)(2)(i), that the information *contained* in, or referred to in, their February 6, 2009, Comments was somehow "previously unavailable" to them? It appears not. Even Petitioners admit that "some of the information presented in [the Comments] may have been [previously] publicly available." Motion C12 at 9. But, Petitioners assert, the information which is the basis of their new contention meets the 10 C.F.R. § 2.309(f)(2)(i) "previously unavailable" criterion, and the 10 C.F.R. § 2.309(f)(2)(ii) "materially different" criterion, because the information had not previously been "integrated into a single document that presented a comprehensive and integrated analysis." *Id.*

We reject this argument. The fact that a party "integrates," consolidates, restates, or collects previously available information into a new document, does not convert it into "previously unavailable" information. Putting old wine into new wineskins does not make it new wine. Otherwise, a party could always file new contentions simply by repackaging old information into an affidavit or report with a fresh new date, declare their own new report to be new information, and thereby "bootstrap" themselves into satisfying 10 C.F.R. § 2.309(f)(2)(i) and (ii). This does not comport with the plain language or the spirit of the regulation.

Nor can a person satisfy the "previously unavailable" standard by showing that, as a subjective matter, he or she only recently became aware of, or realized the significance of, public information that was previously available to all.[82] The "previously unavailable" standard is not a subjective one.

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[82] Some cases involve a situation where information becomes available piecemeal over time and the foundation for a new or amended contention under 10 C.F.R. § 2.309(f)(2) does not become reasonably apparent until the last piece is made available and falls into place. In such "mosaic" cases, while some of the earlier pieces of information may have been available for a long time, the admissibility

(Continued)

Because Petitioners' own Comments, necessarily, were neither new information nor "previously unavailable" to them, we look briefly to see if the *contents* of the Comments contain previously unavailable information that might support the new contention under 10 C.F.R. § 2.309(f)(2)(i). We think not. The Comments are a nineteen-page single-spaced brief that reviews the legal and factual history and background of the NRC's Waste Confidence Decision, and the NRC's handling and decisions concerning the environmental impacts of temporary storage of spent fuel under NEPA, including 10 C.F.R. § 51.51, Table S-3. The Comments cite many cases, statutory provisions and regulations and present various arguments concerning NRC's proposed rulemaking. But we see no information contained in the Comments that seems to be particularly new. Nor do Petitioners point out any information in the Comments that was "previously unavailable."

The same seems to be true for the two major declarations/reports attached to the Comments. If the Declaration by Dr. Arjun Makhijani and the attached report from the Institute for Energy and Environmental Research (IEER) contain significant new factual information that was not available when the original contentions were due herein (Feb. 6, 2009), the Petitioners have not pointed it out. The same applies to the second major attachment to the Comments, the Declaration of Dr. Gordon R. Thompson, and his attached report from the Institute for Resource and Security Studies (IRSS). Indeed, Dr. Thompson's Declaration (which deals with the risks associated with the high-density storage and racking of spent nuclear fuel in pools), covers information and grounds that a 2006 licensing board characterized as "well trod." *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 160 (2006), *aff'd,* CLI-07-3, 65 NRC 13, 17-18 (2007).

As a final point, we reject the suggestion that the NRC's October 9, 2008, rulemaking notices *themselves* constitute new information that satisfies the "previously unavailable" criterion of 10 C.F.R. § 2.309(f)(2)(i).[83] The fact that NRC is "proposing to revise its generic determination on the impacts of the storage of spent fuel," 73 Fed. Reg. at 59,547, or "has decided to again undertake a review of its Waste Confidence findings," 73 Fed. Reg. at 59,551, is not sufficient, *per se,* to constitute new information and thus to open the door to new or amended contentions. NRC's call for comments on proposed actions is a normal rulemaking activity that may or may not ever materialize into a new final agency action or

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decision "turns on a . . . determination about when, as a cumulative matter, the separate pieces of the . . . information 'puzzle' were sufficiently in place to make the particular concerns . . . reasonably apparent." *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-15, 44 NRC 8, 26 (1996); *see also Vermont Yankee,* LBP-06-14, 63 NRC at 579. Even in such mosaic situations, the standard is still an objective one: at what moment should a reasonable person have recognized that there was a problem? There is no reason to think that this is a mosaic situation.

[83] *See* Bellefonte New Contention Ruling at 7.

new final rule. The announcement of such a proposal together with a request for comments is akin to a request for additional information (RAI) by the NRC. It is well established that an RAI, in itself, does not constitute grounds for a contention. *See Monticello,* CLI-06-6, 63 NRC at 164; *Oconee,* CLI-99-11, 49 NRC at 336-37. Similarly, we conclude that a proposed rulemaking and request for comments, do not, in and of themselves, constitute "previously unavailable" information that would entitle a party to file a new contention under 10 C.F.R. § 2.309(f)(2)(i). If the RAI or proposed rulemaking contains or reveals new information, then such information may be the basis of a new contention. But the fact that an RAI or rulemaking proposal has been issued is not, in itself, new information (i.e., previously unavailable and materially different) that justifies a new contention.

In sum, the motion to file proposed Contention 12 fails to show that the proposed contention arises from information that was unavailable and materially different from the information that was available to Petitioners. Therefore, it is not admissible as a timely new contention under 10 C.F.R. § 2.309(f)(2)(i)-(iii).

Thus, we turn to the eight-factor balancing test of 10 C.F.R. § 2.309(c), which governs the admissibility of *nontimely* contentions. As discussed, *supra,* under this regulation the most important showing that Petitioners must make is the first one (10 C.F.R. § 2.309(c)(1)), i.e., a showing of "good cause, if any, for the failure to file on time." *Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 351 (2006). Petitioners have made no attempt to address any of the eight factors, much less a showing that they had good cause for not submitting the same contention as part of their original petition on February 6, 2009. Indeed, the fact that Petitioners filed their regulatory Comments on the same date that they filed their original petition herein indicates, almost conclusively, that, as of that very date, they were aware of the facts and issues supporting Contention 12 and could have included it in their original petition. We conclude that Petitioners have failed to show that their proposed new contention should be admitted as a nontimely new contention under 10 C.F.R. § 2.309(c).

Thus, Motion C12 is denied and proposed new Contention 12 is not admissible.[84]

[84] We note, but need not reach, the argument by PEF and the NRC Staff that proposed Contention 12 violates 10 C.F.R. § 2.335(a) ("no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding"), because it challenges the Waste Confidence Rule (10 C.F.R. § 51.23) and/or Table S-3 of 10 C.F.R. § 51.51. *See Bellefonte,* CLI-09-3, 69 NRC at 75.

VI. SELECTION OF HEARING PROCEDURES

A. Legal Standards

As required by 10 C.F.R. § 2.310(a), upon admission of a contention the Board must identify the specific hearing procedures to be used. NRC regulations provide for a number of different hearing procedures, two of which are relevant here.[85] First, Subpart G of 10 C.F.R. Part 2, which is mandated for certain proceedings, *see, e.g.,* 10 C.F.R. § 2.310(d), establishes NRC "Rules for Formal Adjudications," where parties are permitted to "propound interrogatories, take depositions, and cross-examine witnesses without leave of the Board." *Vermont Yankee,* LBP-06-20, 64 NRC at 201. Second, Subpart L of 10 C.F.R. Part 2 provides for more "informal" proceedings where discovery is prohibited (except for (1) specified mandatory disclosures under 10 C.F.R. § 2.336(f), (a), and (b); and (2) the mandatory production of the hearing file under 10 C.F.R. § 2.1203(a)). 10 C.F.R. § 2.1203(d). Under Subpart L, the Board has the principal responsibility to question the witnesses. 10 C.F.R. § 2.1207(b)(6).

The standard for allowing the parties to conduct cross-examination is the same under Subparts G and L, to wit — the Administrative Procedure Act (APA) standard for cross-examination in formal administrative proceedings as set forth in 5 U.S.C. § 556(d) ("A party is entitled . . . to conduct such cross examination as may be required for a full and true disclosure of the facts"). *See Citizens Awareness Network, Inc. v. NRC,* 391 F.3d 338, 351 (1st Cir. 2004); *see also* 69 Fed. Reg. at 2,195-96. This is a liberal standard, but even under the APA § 556(d) there is no absolute right to cross-examination. *Seacoast Anti-Pollution League v. Costle,* 572 F.2d 872, 880 (1st Cir. 1978). And even though the APA § 556(d) *substantive standard* is the same under Subpart G and L, NRC's *procedures* differ. Cross-examination occurs virtually automatically in Subpart G hearings, subject to normal judicial management and the requirement to file a cross-examination plan. *See* 10 C.F.R. §§ 2.319, 2.711(c). In contrast, under Subpart L, a party seeking to conduct cross-examination must file a written motion and obtain leave of the Board. 10 C.F.R. § 2.1204(b).

The Board determines which hearing procedure to use on a contention-by-contention basis.[86] The key regulation enumerates specific situations where a certain procedure is mandated or available, 10 C.F.R. § 2.310(b)-(h), and states

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[85] If the hearing on a contention is "expected to take no more than two (2) days to complete," 10 C.F.R. § 2.310(h)(1), the Board can impose the Subpart N procedures for "Expedited Proceedings with Oral Hearings" specified in 10 C.F.R. § 2.1400-.1407. These procedures are highly truncated, but may prove appropriate for certain contentions at a later stage.

[86] *See, e.g.,* 10 C.F.R. §§ 2.309(g) and 2.310(d) (Subpart G used if the "resolution of the contention" meets specified criteria); *Vermont Yankee,* LBP-06-20, 64 NRC at 202.

that if a contention does not fall within one of those categories, "proceedings . . . *may* be conducted under the procedures of subpart L of this part." 10 C.F.R. § 2.310(a) (emphasis added). Thus, if no particular procedure is compelled, the Board must exercise its discretion and select the hearing procedure most appropriate for the newly admitted contentions.[87] A general discussion of this issue is found in *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-31, 60 NRC 686, 704-06 (2004).

Under 10 C.F.R. § 2.309(g), if a petitioner relies upon 10 C.F.R. § 2.310(d) in requesting a Subpart G proceeding, then the petitioner must demonstrate, by reference to the contention, that its resolution "necessitates resolution of material issues of fact relating to the occurrence of a past activity where the credibility of an eyewitness may reasonably be expected to be at issue and/or issues of the motive or intent of the party or eyewitness material to the resolution of the contested matter." 10 C.F.R. § 2.310(d).

B. Ruling

Petitioners did not address the selection of hearing procedures in their petition. PEF raised the issue, however, arguing that Subpart L procedures should be used because Petitioners did not demonstrate that the facts at issue in this case would best be resolved through the more formal Subpart G procedures. PEF Answer at 205. In their Reply, Petitioners asserted that Subpart G procedures should be used to resolve the contentions. Reply at 41. The NRC Staff did not address the issue.

The Board concludes that, for the time being, the Subpart L hearing procedures will be used to adjudicate each of the contentions we have admitted thus far, i.e., Contentions 4, 7, and 8. We reach this result as follows. First, we find that there has been no showing under 10 C.F.R. § 2.310(d) that the Subpart G procedures are *mandated* for any of the admitted contentions. Second, exercising our discretion under 10 C.F.R. § 2.310(a), we have seen no reason or need to apply the Subpart G procedures to any of the admitted contentions. Cross-examination is equally available under Subparts L and G. We therefore rule that, for the time being, the procedures of Subpart L will be used for the adjudication of each of the admitted contentions.[88]

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[87] While the first section in each subpart addresses the "Scope" of the subpart, these are not consistent with 10 C.F.R. § 2.310, and are mutually contradictory. For example, 10 C.F.R. § 2.1200, "Scope of subpart L," and 10 C.F.R. § 2.1400. "Purpose and scope of subpart N," both state that "The provisions of this subpart . . . govern *all adjudicatory proceedings*" with an identical list of exceptions. This is not what section 2.310 states, and is simply not possible (e.g., Subpart L and Subpart N cannot simultaneously govern license renewal proceedings for materials licensees).

[88] The selection of hearing procedures for contentions at the outset of a proceeding is not immutable

(Continued)

VII. CONCLUSION AND ORDER

For the reasons set forth above, the Board rules as follows:

A. Petitioners Nuclear Information and Resource Service, the Green Party of Florida, and the Ecology Party of Florida have standing as required by 10 C.F.R. § 2.309(a) and (d).

B. Petitioners have propounded at least one admissible contention as required by 10 C.F.R. § 2.309(a) and are admitted as parties herein. Specifically, Contentions 4, 7, and 8, as restated and narrowed in Attachment A hereto, are admitted pursuant to 10 C.F.R. § 2.309(f)(1).

C. Accordingly, the Petition to Intervene is granted.

D. All other original contentions are denied.

E. Proposed new Contention 12 is denied for failure to comply with either the requirements for filing timely new contentions under 10 C.F.R. § 2.309(f)(2) or nontimely new contentions under 10 C.F.R. § 2.309(c).

F. Pursuant to our discretionary judgment under 10 C.F.R. § 2.310(a), we conclude that the hearing procedures of 10 C.F.R. Part 2, Subpart L will, at least at this stage of the proceeding, govern the adjudication of each of the admitted contentions.

This order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. §§ 2.311 or 2.341(f).[89] Any petitions for such review must be filed within ten (10) days of service of this Memorandum and Order.

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because, *inter alia,* the availability of Subpart G procedures under 10 C.F.R. § 2.310(d) depends critically on whether the credibility of eyewitnesses is important in resolving a contention, and witnesses relevant to each contention are not identified, under 10 C.F.R. § 2.336(a)(1) until *after* contentions are admitted. *See Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 272 (2007); *see also* 10 C.F.R. § 2.1402(b).

[89] The right to interlocutory appeal of this Order under 10 C.F.R. § 2.311 is fundamentally asymmetrical. As the Commission reads it, this regulation allows the Applicant or Staff to immediately appeal the *admission* of all of the contentions, but denies Petitioners the right to immediately appeal the *denial* of any of the contentions. Thus, under 10 C.F.R. § 2.311, PEF can appeal the admission of the three admitted contentions, but Petitioners cannot appeal the denial of the nine contentions. Any appeal by the Petitioners of the admitted contentions must "abide the end of the case," i.e., wait approximately 2 or 3 years until the Staff issues the FSER and FEIS and the final disposition of the evidentiary hearing on the three admitted contentions. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77, 80 (2000) (citing *Northern States Power Co.* (Tyrone Energy Park, Unit 1), ALAB-492, 8 NRC 251, 252 (1978)). The only exception to this harsh rule is found in 10 C.F.R. § 2.341(f)(2), which entitles Petitioners to request, and the Commission, in

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IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[90]

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

Dr. William M. Murphy
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 8, 2009

its discretion, to grant interlocutory review if it is shown, *inter alia,* that the issue threatens Petitioners with immediate and serious irreparable impacts or affects the basic structure of the proceeding in a pervasive manner. *See Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 132 (2009).

[90] Copies of this Memorandum and Order were sent this date by the agency's E-Filing system to the counsel/representatives for (1) Progress Energy Florida, Inc.; (2) Nuclear Information and Resource Service, The Green Party of Florida, and The Ecology Party of Florida; and (3) NRC Staff.

ATTACHMENT A

CONTENTION 4: Progress Energy Florida's (PEF's) Environmental Report fails to comply with 10 C.F.R. Part 51 because it fails to adequately address, and inappropriately characterizes as SMALL, certain direct, indirect, and cumulative impacts, onsite and offsite, of constructing and operating the proposed LNP facility:

A. Impacts to wetlands, floodplains, special aquatic sites, and other waters, associated with dewatering, specifically:

   1. Impacts resulting from active and passive dewatering;

   2. Impacts resulting from the connection of the site to the underlying Floridan aquifer system;

   3. Impacts on Outstanding Florida Waters such as the Withlacoochee and Waccasassa Rivers;

   4. Impacts on water quality and the aquatic environment due to alterations and increases in nutrient concentrations caused by the removal of water; and

   5. Impacts on water quality and the aquatic environment due to increased nutrients resulting from destructive wildfires resulting from dewatering.

B. Impacts to wetlands, floodplains, special aquatic sites, and other waters, associated with salt drift and salt deposition resulting from cooling towers (that use salt water) being situated in an inland, freshwater wetland area of the LNP site.

C. As a result of the omissions and inadequacies described above, the Environmental Report also failed to adequately identify, and inappropriately characterizes as SMALL, the proposed project's zone of:

   1. Environmental impacts,

   2. Impact on Federally listed species,

   3. Irreversible and irretrievable environmental impacts, and

   4. Appropriate mitigation measures.[91]

CONTENTION 7: Progress Energy Florida's (PEF's) application is inadequate because the Environmental Report assumes that the class B, C, and greater than

[91] The admission of these portions of Petitioners' original Contention 4 does not render admissible those portions where the Board specifically ruled that the admissibility criteria had not been satisfied.

C low-level radioactive waste (LLW) generated by proposed Levy Units 1 and 2 will be promptly (e.g., within two years) shipped offsite and fails to address the environmental impacts in the event that PEF will need to manage such LLW on the Levy site for a more extended period of time.

CONTENTION 8: Progress Energy Florida's (PEF's) application is inadequate because the Safety Analysis Report assumes that the class B, C, and greater than C low-level radioactive waste (LLW) generated by proposed Levy Units 1 and 2 will be promptly (e.g., within two years) shipped offsite and fails to address compliance with Part 20 and Part 50 Appendix I (ALARA) in the event that PEF will need to manage such LLW on the Levy site for a more extended period of time.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Lawrence G. McDade, Chairman
E. Roy Hawkens
Nicholas G. Trikouros

In the Matter of **Docket No. IA-05-021-EA**
(ASLBP No. 05-839-02-EA)

ANDREW J. SIEMASZKO **July 16, 2009**

The Licensing Board approved a settlement agreement between Andrew Siemaszko and the Nuclear Regulatory Commission. Under the Settlement Agreement, Mr. Siemaszko's 5-year debarment would be effective from the date of the April 21, 2005 Order, which prohibited his involvement in NRC-licensed activities for a period of 5 years, and would terminate on April 21, 2010. All other terms of the Order would remain in effect.

ENFORCEMENT PROCEEDINGS: SETTLEMENT AGREEMENTS

A licensing board must be satisfied that the terms of a proposed Settlement Agreement reflect a fair and reasonable resolution of the matter at hand and is in keeping with the objectives of the NRC's Enforcement Policy and satisfies the requirements of 10 C.F.R. § 2.338(g) and (h).

ORDER
(Approving Proposed Settlement Agreement and Dismissing Proceeding)

1. On April 21, 2005, the Nuclear Regulatory Commission (NRC) Staff

issued an Order to Mr. Andrew J. Siemaszko, a former employee of the Davis-Besse Nuclear Power Plant, that prohibited his involvement in NRC-licensed activities for a period of 5 years. This Order, however, was not made immediately effective[1] and is not yet in force. On April 22, 2005, Mr. Siemaszko filed a timely answer in which he denied the allegations in the NRC Staff's Order and requested a hearing.[2]

2. On May 18, 2005, this Atomic Safety and Licensing Board was established to preside over Mr. Siemaszko's hearing request and, on May 19, 2005, the Board granted his hearing request.[3]

3. At the request of the United States Department of Justice (DOJ), the NRC Staff asked that this proceeding be stayed so it would not interfere with an ongoing criminal investigation.[4] Mr. Siemaszko vigorously opposed the Staff's request for a stay, citing his strong interest in a prompt resolution of this proceeding.[5] On July 22, 2005, over Mr. Siemaszko's objection, the Board granted the NRC Staff's request for a 120-day delay of this enforcement proceeding.[6] Thereafter, the NRC Staff requested an extension of the stay through November 30, 2005, by which time, based on representations from DOJ, it believed that the ongoing criminal investigation would be complete.[7] Mr. Siemaszko also opposed this request for a further delay of the proceeding.[8] On September 29, 2005, by majority vote, the Board granted the NRC Staff's request.[9]

4. On January 19, 2006, a grand jury empaneled by the U.S. District Court for the Northern District of Ohio handed up an Indictment in which Mr. Siemaszko was charged with knowingly and willfully causing material facts to be concealed

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[1] The NRC Staff Order would become effective if Mr. Siemaszko did not request a hearing within 90 days after the Order was issued or, alternatively, if Mr. Siemaszko did request a hearing, the Order would be effective if and when it was upheld at the conclusion of the administrative hearing proceeding. *See* Andrew Siemaszko, Order Barring Participation in NRC-Licensed Activities, 70 Fed. Reg. 22,716 (May 2, 2005).

[2] Request for Hearing in Response to Order Prohibiting Involvement in NRC-Licensed Activities *In the Matter of Andrew Siemaszko, IA-05-021* (Apr. 22, 2005).

[3] *See* 70 Fed. Reg. 29,783 (May 24, 2005); *see also* Licensing Board Order (Granting Licensee's Hearing Request) at 2 (May 19, 2005) (unpublished).

[4] NRC Staff Motion for Delay of Proceeding at 4 (May 17, 2005).

[5] Response of Andrew Siemaszko to NRC Staff Motion for Delay of Proceedings at 1 (May 31, 2005).

[6] Licensing Board Order (Granting the NRC Staff's Motion for a 120-Day Delay of Proceedings and Setting Case Schedule) at 4 (July 22, 2005) (unpublished).

[7] NRC Staff Motion to Extend the Stay of the Proceeding at 1, 4 (Aug. 19, 2005).

[8] *Id.* at 1.

[9] Licensing Board Memorandum and Order (Granting the NRC Staff's Motion for a Stay of This Proceeding Until November 30, 2005) at 6 (Sept. 29, 2005) (unpublished).

in a matter within the jurisdiction of the NRC, an agency of the United States.[10] Based on that felony indictment, the NRC Staff asked that this administrative enforcement proceeding be held in abeyance until the conclusion of the criminal proceeding.[11] Mr. Siemaszko opposed the NRC Staff's request to delay this proceeding and reiterated that he wished to resolve this enforcement proceeding as expeditiously as possible.[12] The majority of the Board concluded that the NRC Staff's Motion to hold this proceeding in abeyance had merit and granted it.[13] Mr. Siemaszko appealed the Board's decision to the Commission,[14] which affirmed the Board's March 2, 2006 Order.[15]

5. On October 17, 2006, the NRC Staff amended the April 21, 2005, Order prohibiting Mr. Siemaszko's involvement in NRC-licensed activities.[16] On October 31, 2006, Mr. Siemaszko answered the amendment, denied the additional allegations in the amendment, and requested consolidation of the pending matters for a hearing on the proposed enforcement action.[17] On November 15, 2006, the Board granted the request for consolidation.[18]

6. On August 26, 2008, Mr. Siemaszko was convicted by a jury empaneled in the United States District Court for the Northern District of Ohio on three felony counts which charged him with making false statements to, and concealing material information from, the NRC, an agency of the United States, in violation of 18 U.S.C. § 1001. On February 9, 2009, Mr. Siemaszko was sentenced to 3 years' probation on each count, to run concurrently, and was fined $4500. As a condition of his probation, without the prior approval of his probation officer Mr.

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[10] *United States v. David Geisen et al.* (Jan. 19, 2006).

[11] NRC Staff Motion to Hold the Proceeding in Abeyance at 7 (Feb. 1, 2006).

[12] Response of Andrew Siemaszko to NRC Staff Motion to Hold the Enforcement Proceeding in Abeyance (Feb. 10, 2006).

[13] Licensing Board Memorandum and Order (Granting the NRC Staff's Motion to Hold This Proceeding in Abeyance) at 2, 4 (Mar. 2, 2006).

[14] Appeal of the Atomic Safety and Licensing Board's March 2, 2006, Order to Hold the Enforcement Proceeding Against Andrew J. Siemaszko in Abeyance (Mar. 10, 2006).

[15] *In the Matter of Andrew Siemaszko,* CLI-06-12, 63 NRC 495, 498 (2006). In affirming the Board's Order, Commissioner (now Chairman) Jaczko stated: "I believe that in the limited instances such as this where the record establishes that moving forward with the NRC's administrative proceeding could potentially damage a criminal proceeding because of the overlapping nature of the issues involved, and the Staff's Order is not made immediately effective, any employment ban, if one is ultimately imposed on Mr. Siemaszko, should be reduced by the amount of time the proceeding was placed in abeyance."*Id.* at 507 (concurring Opinion by Commissioner Gregory B. Jaczko).

[16] Amendment of Order Prohibiting Involvement in NRC-Licensed Activities (NRC Special Inspection Report No. 50-346/2002-08 (DRS)) (Oct. 17, 2006).

[17] Response to NRC Staff's October 17, 2006 Amendment to Order Prohibiting Involvement in NRC-Licensed Activities, Appeal, and Request for Consolidation with Hearing *In the Matter of Andrew Siemaszko, IA-05-021, ASLBP No. 05-839-02-EA* (Oct. 21, 2006).

[18] *See* Licensing Board Order (Granting Consolidation) (Nov. 15, 2006) (unpublished).

Siemaszko is prohibited from working in any capacity in the nuclear industry for a period of 3 years from the date of sentencing.[19]

7. Subsequent to his conviction and sentencing in the United States District Court, the NRC Staff and Mr. Siemaszko engaged in discussions that have resulted in a Settlement Agreement dated June 23, 2009, a copy of which is attached to and incorporated into this Order. Pursuant to the proposed Settlement Agreement, Mr. Siemaszko's 5-year debarment would be effective from the date of the April 21, 2005 Order, terminating on April 21, 2010. All other terms of the Order would remain in effect.

8. Upon review of the Settlement Agreement, and our discussion with the parties at a conference held via telephone on July 10, 2009, the Board is satisfied that the terms of the proposed Settlement Agreement reflect a fair and reasonable resolution of this matter and is in keeping with the objectives of the NRC's Enforcement Policy and satisfies the requirements of 10 C.F.R. § 2.338(g) and (h). Accordingly, the Settlement Agreement is approved pursuant to 10 C.F.R. § 2.338(i). The Enforcement Order issued to Mr. Andrew Siemaszko on April 21, 2005, and amended on October 17, 2006, is hereby modified consistent with the terms of the Settlement Agreement.

9. In addition, the Board is satisfied that no further adjudication of this matter is required in the public interest and, given that all matters required to be adjudicated as part of this proceeding have been resolved, this proceeding is dismissed.[20]

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[19] Judgment and Commitment Order, Case No. 3:06CR712, USDC, ND Ohio, (Feb. 9, 2009).

[20] *See* 10 C.F.R. § 2.203.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[21]

Lawrence G. McDade, Chairman
ADMINISTRATIVE JUDGE

E. Roy Hawkens
ADMINISTRATIVE JUDGE

Nicolas G. Trikouros
ADMINISTRATIVE JUDGE

Dated at Rockville, Maryland,
this 16th day of July 2009.

[21] Copies of this Order were sent on this date by e-mail transmission to: (1) counsel for Mr. Siemaszko; and (2) counsel for the NRC Staff.

ATTACHMENT A

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of **Docket No. IA-05-021**
(ASLBP No. 05-839-02-EA)

ANDREW SIEMASZKO

SETTLEMENT AGREEMENT

1. On April 21, 2005, the Staff issued an Order Prohibiting Involvement in NRC-Licensed Activities ("Order") to Mr. Andrew Siemaszko, a former employee of Davis-Besse Nuclear Power Plant. The NRC Staff alleged that Mr. Siemaszko engaged in deliberate misconduct that caused inaccurate and incomplete information to be provided to the NRC concerning conditions at the Davis-Besse reactor in violation of 10 C.F.R. § 50.5, "Deliberate misconduct," and the Order prohibited Mr. Siemaszko from engaging in NRC-licensed activities for a period of 5 years. By the terms of the Order, the prohibition was to be effective 90 days from the date of the Order unless a hearing request was granted by the Atomic Safety and Licensing Board ("Board").

2. Mr. Siemaszko answered the Order, denied the allegations in the Order, and requested a hearing. On May 19, 2005, the Atomic Safety and Licensing Board established by the Commission to preside over Mr. Siemaszko's enforcement proceeding granted Mr. Siemaszko's hearing request.

3. On October 17, 2006, the NRC Staff amended the Order prohibiting Mr. Siemaszko's involvement in NRC-licensed activities to include additional allegations wherein Mr. Siemaszko caused inaccurate and incomplete information to be provided to the NRC. These instances were cited to provide additional support for the 10 C.F.R. § 50.5, "Deliberate misconduct," violation and the 5-year ban imposed by the original Order. On October 30, 2006, Mr. Siemaszko answered the amendment, denied the additional allegations in the amendment, and requested consolidation of the pending matters for a hearing on the proposed enforcement action. Mr. Siemaszko's request for hearing on the additional charges and consolidation was granted by the Board.

4. Mr. Siemaszko was criminally indicted for making false statements and concealing material information concerning some of the same matters that were the subject of the Order. At the Staff's request, the hearing on the Order was deferred pending the outcome of the criminal proceeding. On August 26, 2008, Mr. Siemaszko was convicted by a federal district court jury of three counts of the indictment and acquitted on two. On February 6, 2009, he was sentenced to 3 years' probation on each count, to run concurrently, and fined $4500. As a condition of his probation, he may not work in any capacity in the nuclear industry for 3 years without prior approval of his probation officer.

5. The Staff and Mr. Siemaszko have engaged in negotiations and determined that it is in the public interest to terminate this proceeding without further litigation subject to the following stipulations.

THE PARTIES AGREE AND STIPULATE AS FOLLOWS:

A. Mr. Siemaszko's 5-year debarment will be effective from the date of the April 21, 2005 Order, terminating on April 21, 2010. All other terms of the Order remain in effect, including the requirement that Mr. Siemaszko notify the Director, Office of Enforcement, U.S. NRC, within 20 days of accepting his first employment offer involving NRC-licensed activities following the termination of the debarment. In this notification, Mr. Siemaszko shall include a statement of his commitment to compliance with regulatory requirements and the basis why the Commission should have confidence that he will now comply with applicable NRC requirements.

B. Mr. Siemaszko has not worked in any capacity, paid or unpaid, in NRC-licensed activities from September 18, 2002, through the date of this Settlement Agreement. Pursuant to this Settlement Agreement, Mr. Siemaszko will continue not working in any capacity, paid or unpaid, in NRC-licensed activities through April 21, 2010.

C. The parties will submit this Settlement Agreement to the Board for approval with a joint motion requesting approval of the settlement and termination of the proceeding with prejudice based on the resolution of matters in this Settlement Agreement. This Settlement Agreement will become effective upon its execution by both parties; however, the agreement is contingent upon approval by the Board pursuant to 10 C.F.R. § 2.203. Upon approval by the Board, this Settlement Agreement will have the same force and effect as an Order made after a full hearing.

D. The parties agree that all further procedural steps before the Licensing Board and any right to challenge or contest the validity of the Order entered into in

accordance with the Settlement Agreement, and all rights to seek judicial review or otherwise to contest the validity of the Order are expressly waived.

IN WITNESS WHEREOF, Mr. Siemaszko and the NRC Staff have caused this Settlement Agreement to be executed by their duly authorized representatives on this 23d day of June 2009.

Kimberly A. Sexton
Counsel for the NRC Staff

Billie Pirner Garde
Counsel for Andrew Siemaszko

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ann Marshall Young, Chair
Paul B. Abramson
R. Bruce Matthews

In the Matter of **Docket Nos. IA-08-023**
IA-08-022
(EA-08-174)
(ASLBP Nos. 09-882-02-EA-BD01,
09-881-01-EA-BD01)

HIMAT SONI
DHIRAJ SONI
EASTERN TESTING AND
INSPECTION, INC. **July 16, 2009**

In this enforcement proceeding the licensing board approves the parties' settlement agreement pursuant to 10 C.F.R. § 2.338(i), finding that its terms reflect a fair and reasonable settlement of the matters at issue, that it satisfies the requirements of 10 C.F.R. § 2.338(g) and (h), and that the public interest requires no further adjudication.

ORDER
(Accepting Proposed Settlement and Dismissing Proceeding)

1. On February 10, 2009, the NRC Staff issued a Notice of Violation and Proposed Imposition of Civil Penalty of $13,000 to Eastern Testing and Inspection, Inc. (ETI). On the same day, the NRC Staff issued Orders (Effective

Immediately) Prohibiting Involvement in NRC-Licensed Activities for a period of 1 year to Mr. Himat Soni, the president of ETI, and Mr. Dhiraj Soni, then vice president of ETI.

2. On March 12, 2009, Mr. Himat Soni and Mr. Dhiraj Soni answered their orders and requested a hearing and consolidation of the proceedings.

3. On May 8, 2009, this Atomic Safety and Licensing Board — which was established by the Commission to preside over Mr. Himat Soni's and Mr. Dhiraj Soni's enforcement proceedings — granted the hearing and consolidation requests for the individual actions.

4. On March 25, 2009, ETI answered the Notice of Violation. Although the Staff has not imposed a civil penalty, the parties included the ETI matter in negotiating settlement of all related matters.

5. The enforcement orders issued on March 12, 2009, to Mr. Himat Soni and Mr. Dhiraj Soni are modified by this Order approving and incorporating the Settlement Agreement.

6. The Staff will not issue an Order Imposing a Civil Penalty against ETI.

7. The Settlement Agreement, attached hereto, is hereby incorporated into this Order.

8. Upon review of the Settlement Agreement, the Licensing Board is satisfied that its terms reflect a fair and reasonable settlement of these matters, in keeping with the objectives of the NRC's Enforcement Policy; that it satisfies the requirements of 10 C.F.R. § 2.338(g) and (h); and that no further adjudication of any matter is required in the public interest. Accordingly, the Settlement Agreement is approved pursuant to 10 C.F.R. § 2.338(i).

9. All matters required to be adjudicated as part of this proceeding having been resolved, the proceedings ASLB-09-882-02-EA-BD01 and ASLB-09-881-01-EA-BD01 are therefore terminated.

IT IS SO ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ann Marshall Young, Chair
ADMINISTRATIVE JUDGE

Paul B. Abramson
ADMINISTRATIVE JUDGE

R. Bruce Matthews
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 16, 2009[1]

[1] Copies of this Order were sent this date by the agency's E-Filing system to counsel for all parties in the above-referenced proceeding.

ATTACHMENT

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	**Docket Nos. IA-08-023** **IA-08-022** **(EA-08-174)** **(ASLBP Nos. 09-882-02-EA-BD01,** **09-881-01-EA-BD01)**

HIMAT SONI
DHIRAJ SONI
EASTERN TESTING AND
INSPECTION, INC.

SETTLEMENT AGREEMENT

Eastern Testing and Inspection, Inc. (ETI), located in Thorofare, New Jersey, is the holder of Byproduct Materials License No. 29-09814-01 issued by the NRC pursuant to 10 C.F.R. Part 30 in 1964. The license authorizes possession and use of sealed radioactive sources for use in radiographic exposure and portable gauge devices, and possession and use of radioactive material for shielding for radiographic and source changer equipment in accordance with the conditions specified in the license.

On February 10, 2009, the NRC Staff issued a Notice of Violation and Proposed Imposition of Civil Penalty of $13,000 (NOV) to ETI. The NOV contained the Staff determination, based on its investigation, that ETI failed to have a prearranged plan with the local law enforcement agency (LLEA) for assistance in response to an actual or attempted theft or sabotage of radioactive material or devices containing radioactive material, contrary to section 2.b of NRC Order Imposing Increased Controls, EA-05-090, Attachment B (IC Order) dated November 14, 2005. The violation occurred from May 13, 2006, to November 17, 2006, when a Department of Energy (DOE) contractor removed all of ETI's NRC-regulated material.

The NOV also contained the Staff determination that ETI submitted information to the NRC in a December 16, 2005, letter that was not complete and

accurate in all material respects, contrary to 10 C.F.R. § 30.9. The Staff concluded that contrary to ETI's submittal in the December 16, 2005, letter, ETI had not had discussions with the LLEA regarding compliance with IC Order § 2.b. ETI, however, maintains that the discussions it had with the LLEA prior to December 16, 2005, were preliminary and notified the LLEA of ETI's desire to meet with LLEA officials, and does not agree with NRC Staff's characterization of its statements.

On February 10, 2009, the NRC Staff issued an Order (Effective Immediately) Prohibiting Involvement in NRC-Licensed Activities to Mr. Himat Soni, the president of ETI. The order prohibited Mr. Himat Soni from engaging in NRC-licensed activities for a period of 1 year. In the order, the Staff concluded that Mr. Himat Soni violated 10 C.F.R. § 30.10 because he knew that the prearranged plan with the LLEA was required by May 13, 2006, that an arrangement to have ETI's radiological materials removed by a DOE contractor was not a substitute for the prearranged plan, and that ETI failed to ensure that the plan was in place. Mr. Himat Soni denies that he violated 10 C.F.R. § 30.10 because he did not deliberately or knowingly violate the IC Order. He maintains that his efforts to have the DOE contractor remove the NRC-regulated material from ETI before the IC Order deadline had, initially, obviated ETI's need for a prearranged plan with the LLEA, but that the DOE contractor removed the material much later than anticipated, through no fault of ETI's, causing the IC Order violation. He furthers maintains that his efforts to comply with the other requirements of the IC Order indicated his intent to come into full compliance.

On February 10, 2009, the NRC Staff issued an Order (Effective Immediately) Prohibiting Involvement in NRC-Licensed Activities to Mr. Dhiraj Soni, the vice president of ETI. The order prohibited Mr. Dhiraj Soni from engaging in NRC-licensed activities for a period of 1 year. In the order, the Staff concluded that Mr. Dhiraj Soni submitted incomplete and inaccurate information that was material to the NRC in conversations with an NRC inspector on September 20, 2006, in violation of 10 C.F.R. § 30.10, by stating that ETI had preliminary discussions with the LLEA when it had not had discussions with the LLEA regarding compliance with IC Order § 2.b. Mr. Dhiraj Soni denies that his statements made at any time to NRC officials were inaccurate, incomplete, false, misleading, or material, and further maintains that his contact with the LLEA simply informed officers that Mr. Himat Soni intended to meet with the LLEA, which meeting in fact subsequently occurred on December 18, 2006.

On March 12, 2009, Mr. Himat Soni and Mr. Dhiraj Soni answered their orders individually, denied the allegations, provided detailed affidavits explaining why they maintained that no inaccurate, misleading, or incomplete material information was knowingly, intentionally, deliberately, or willfully provided to NRC; disputed the conclusion that 10 C.F.R. §§ 30.9 and 30.10 were violated; and asked for a hearing. On May 8, 2009, the Atomic Safety and Licensing Board

established by the Commission to preside over Mr. Himat Soni's and Mr. Dhiraj Soni's enforcement proceedings granted Mr. Himat Soni's and Mr. Dhiraj Soni's hearing requests.

On March 25, 2009, ETI answered the NOV, acknowledged that violations of the IC Order had occurred, but denied that the violations were deliberate or willful, and denied that it had violated 10 C.F.R. § 30.9.

Staff counsel and counsel for ETI, Mr. Himat Soni, and Mr. Dhiraj Soni have engaged in negotiations and determined that it is in the public interest to terminate this proceeding without further litigation subject to the following stipulations.

THE PARTIES AGREE AND STIPULATE AS FOLLOWS:

A. None of the parties to this agreement admit facts or agree to conclusions of law other than those specifically stipulated herein.

B. The parties agree to disagree on the Staff's conclusions.

C. ETI was required to comply with the IC Order, which included the requirement to implement a prearranged plan with the LLEA pursuant to IC Order § 2.b, by May 13, 2006.

D. ETI submitted a letter to the NRC on December 16, 2005, stating with respect to IC Order § 2.b, that ETI had had preliminary discussions with the LLEA and would file a written procedure when finalized, by May 1, 2006.

E. ETI was not in compliance with IC Order § 2.b on the May 13, 2006 compliance date because it did not have a prearranged plan with the LLEA.

F. By September 20, 2006, ETI had not established a prearranged plan with the LLEA. On that date, an NRC inspector discussed this violation with ETI president Mr. Himat Soni and then vice president Mr. Dhiraj Soni.

G. ETI achieved compliance with the IC Order on November 17, 2006, when a DOE contractor removed all remaining NRC-regulated materials from ETI's site.

H. ETI finalized its prearranged plan with the LLEA on January 11, 2007.

IN CONSIDERATION OF THE ABOVE, THE STAFF, ETI, HIMAT SONI, AND DHIRAJ SONI AGREE TO THE FOLLOWING IN SETTLEMENT OF EA-08-174, IA-08-022, AND IA-08-023:

1. NRC Region I will incorporate the Board Order confirming this Settlement Agreement into ETI's license, so that if New Jersey acquires, pursuant to an agreement with the NRC under section 274b of the Atomic Energy Act (AEA), regulatory authority over the license for ETI's New Jersey site, jurisdiction over the Board Order will transfer to the New Jersey Department of Environmental Protection (NJDEP).

2. Upon submitting for approval to work under a reciprocity agreement pursuant to 10 C.F.R. § 150.20 or the New Jersey equivalent, ETI will send a

copy of the Board Order confirming this Settlement Agreement to the regulator processing the reciprocity application at least 2 weeks prior to engaging in activity authorized by the reciprocity agreement, with a copy to the Director, Division of Nuclear Materials Safety, U.S. NRC Region I and the NJDEP.

3. After the Board Order affirming this Settlement Agreement and at least 30 days prior to initially taking possession of AEA materials in New Jersey, which will not occur before November 10, 2009, ETI will develop and implement a required annual training program that describes the requirements in 10 C.F.R. §§ 30.9 and 30.10, or the NJDEP equivalent regulations, to employees using licensed material. This training will also be included in ETI's initial training program. ETI will provide the Director, Division of Nuclear Materials Safety, U.S. NRC Region I and the NJDEP, a copy of the training material and the list of attendees of the first training session within 30 days of the first training session.

4. After the Board Order affirming this Settlement Agreement and at least 30 days prior to initially possessing AEA materials in New Jersey, which will not occur before November 10, 2009, ETI will initiate the use of a commitment tracking system, which will ensure ETI commitments under this Settlement Agreement, NRC or NJDEP reporting requirements, and similar future commitments are tracked and met.

5. If ETI possesses AEA material in New Jersey, ETI will contract with an independent consultant to evaluate the effectiveness of its security and radiation safety programs:

(a) Within 30 days of initially possessing AEA material, ETI will submit to the NRC and NJDEP for approval, the name(s) and qualifications of an independent consultant(s) to review and evaluate ETI's security and radiation safety program in New Jersey.

(b) Within 30 days of approval of the consultant, the consultant will commence an assessment of ETI's security and radiation safety program in New Jersey.

(c) The consultant will review ETI's security and safety programs in New Jersey and provide recommendations for improvement, if necessary.

(d) Within 30 days following completion of his reviews, the consultant will provide ETI a report discussing its findings and recommendations, if any, for program improvements. At the same time the consultant provides its report to ETI, the consultant will send a copy to the Director, Division of Nuclear Materials Safety, U.S. NRC Region I and the NJDEP.

(e) Within 30 days of receiving the consultant's report, ETI will provide in writing, its position on how it will address the consultant's findings to the

Director, Division of Nuclear Materials Safety, U.S. NRC Region I and the NJDEP.

6. The above provisions do not apply to any existing NRC licensee that may purchase ETI. ETI will promptly notify NRC Region I if any existing NRC licensee agrees to purchase ETI. However, should ETI change names and do business as another named company, the provisions of the Board Order confirming this Settlement Agreement will continue to apply.

7. The parties agree to a civil penalty of $4,500. ETI will pay $4,500 to the NRC within 30 days of the Board's confirmation of this Settlement Agreement in accordance with NUREG/BR-0254 and submit to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a statement indicating when and by what method payment was made.

8. The Staff will not issue an Order Imposing a Civil Penalty against ETI.

9. ETI will not possess AEA materials in New Jersey until November 10, 2009.

10. Mr. Himat Soni has not had any involvement in NRC-licensed activities since February 10, 2009, and will continue to have no involvement in NRC-licensed activities until after Board confirmation of this Settlement Agreement, but in any event, no sooner than August 10, 2009.

11. Mr. Dhiraj Soni has not had any involvement in NRC-licensed activities since February 10, 2009, and will continue to have no involvement in NRC-licensed activities until February 10, 2010.

12. The parties will submit this Settlement Agreement to the Board for approval with a joint motion requesting approval of the settlement and termination of the proceeding with prejudice based on the resolution of matters in this Settlement Agreement. This Settlement Agreement will become effective upon its execution by both parties; however, the agreement is contingent upon approval by the Board pursuant to 10 C.F.R. § 2.203. Upon approval by the Board, this Settlement Agreement will have the same force and effect as an Order made after a full hearing.

13. Within 30 days of confirmation of this Settlement Agreement by the Board, the Staff will replace the current discussions of the orders issued to Mr. Himat Soni and Mr. Dhiraj Soni on its website with this Settlement Agreement.

14. The parties agree that all further procedural steps before the Board and any right to challenge or contest the validity of the Board Order entered into in accordance with this Settlement Agreement, and all the rights to seek judicial review or otherwise to contest the validity of the Order, are expressly waived.

IN WITNESS THEREOF, ETI, Mr. Himat Soni, Mr. Dhiraj Soni, and the

NRC Staff have caused this Settlement Agreement to be executed by their duly authorized representatives on this 13th day of July 2009.

Respectfully submitted,

Molly L. Barkman
Kimberly A. Sexton
Counsel for the NRC Staff

Robert M. Andersen
Akerman Senterfitt, LLP
Counsel for ETI, Himat Soni, and
Dhiraj Soni

Dated at Rockville, MD, and Washington, DC,
this 13th day of July 2009.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Alex S. Karlin, Chairman
Dr. Paul B. Abramson
Dr. William M. Murphy

In the Matter of **Docket No. 40-08502-MLR**
(ASLBP No. 09-887-01-MLR-BD01)

COGEMA MINING, INC.
(Irigaray and Christensen Ranch Facilities)

July 23, 2009

RULES OF PRACTICE: STANDING

A petitioner's participation in an NRC licensing proceeding requires that it demonstrate that it has standing as specified in 10 C.F.R. § 2.309(a) and (d).

RULES OF PRACTICE: STANDING

The Commission states that it customarily follows judicial concepts of standing. These require that the party show three elements: injury-in-fact, causation, and redressability.

RULES OF PRACTICE: STANDING; INJURY-IN-FACT

The Supreme Court has defined "injury-in-fact" as an invasion of a legally protected interest which is concrete and particularized and actual or imminent rather than conjectural or hypothetical. An injury-in-fact must go beyond generalized grievances to affect a petitioner "in a personal and individual way." *Lujan v. Defenders of Wildlife,* 504 U.S. 555, 560 n.1 (1992).

RULES OF PRACTICE: STANDING; PLAUSIBLE CHAIN OF CAUSATION

To establish causation, a petitioner must show that there is a causal connection between the injury-in-fact and the conduct complained of. The injury has to be fairly traceable to the challenged action of the defendant. In NRC source materials licensing cases, the petitioner has the burden to show a plausible chain of causation between the challenged licensing activities and the alleged injury. *See USEC Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311-12 (2005). This does not require that the injury flow directly from the challenged action, but only that the chain of causation is plausible. *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 (1994).

RULES OF PRACTICE: STANDING; REDRESSABILITY

Redressablity requires a petitioner to show that its alleged injury-in-fact could be cured or alleviated by some action of the tribunal.

RULES OF PRACTICE: STANDING; ORGANIZATIONS

An organization must satisfy one of two additional criteria in order to establish standing. It must demonstrate either organizational standing or representational standing.

RULES OF PRACTICE: STANDING; ORGANIZATIONAL STANDING

To establish organizational standing under 10 C.F.R. § 2.309(d)(1), an organization must demonstrate that the action at issue will cause an injury-in-fact to the organization's interest. The Supreme Court has stated that an injury-in-fact necessary to establish organizational standing must be more than a "mere interest in a problem," and must go beyond asserting an injury to a generalized interest — i.e., an interest in protecting the environment, an interest in preserving national parks — and instead establish that the organization itself is suffering, or will suffer, from a specific, concrete harm caused by the challenged action. In addition, an organization, like an individual, must satisfy the causation and redressability requirements.

RULES OF PRACTICE: STANDING; REPRESENTATIONAL STANDING

Alternatively, an organization can demonstrate representational standing by

(1) showing that the interests of at least one of its members will be harmed, (2) showing that the member would have standing in his or her own right, (3) identifying that member by name and address, and (4) demonstrating that the organization is authorized to request a hearing on behalf of that member.

RULES OF PRACTICE: STANDING; FEDERALLY RECOGNIZED INDIAN TRIBES; REQUIREMENTS

The Oglala Delegation of the Great Sioux Nation Treaty Council has failed to establish that it is a "Federally-recognized Indian Tribe" within the meaning of 10 C.F.R. §§ 2.309(d)(2)(i) or 2.315(c). These regulations were promulgated to comply with Executive Order 13,084 which defines a "Federally-recognized Indian Tribe" as one that is included on the Bureau of Indian Affairs' list of federally recognized Indian Tribes published in the *Federal Register.*

RULES OF PRACTICE: STANDING; FEDERALLY RECOGNIZED INDIAN TRIBES; REQUIREMENTS

Under 10 C.F.R. §§ 2.309(d)(2)(i) or 2.315(c), a group whose name is included on the Bureau of Indian Affairs list is a "Federally-recognized Indian Tribe," and any organization, tribe, or otherwise, whose name does not appear on the list, is not a "Federally-recognized Indian Tribe."

RULES OF PRACTICE: STANDING; FEDERALLY RECOGNIZED INDIAN TRIBES; REQUIREMENTS

The Bureau of Indian Affairs' list of federally recognized Indian Tribes does not include the names of the "Oglala Lakota" or the "Oglala Delegation of the Great Sioux Nation Treaty Council." Therefore, these groups do not constitute federally recognized Indian Tribes within the meaning of 10 C.F.R. §§ 2.309(d)(2)(i) or 2.315(c).

RULES OF PRACTICE: STANDING; LOCAL GOVERNMENTAL BODY

The Oglala Delegation of the Great Sioux Nation Treaty Council has failed to establish that it is a "local governmental body" within the meaning of 10 C.F.R. §§ 2.309(d)(2)(i). Even assuming that the Delegation has some governmental functions, not all entities with governmental ties are entitled to participate in licensing proceedings as local governmental bodies. *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 412 n.37 (2007). An entity

wishing to participate as a local governmental body must demonstrate that it goes beyond an advisory role and exercises "executive or legislative responsibilities." *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 203 (1998).

RULES OF PRACTICE: STANDING; LOCAL GOVERNMENTAL BODY

The fact that the great-grandfather of one of the members of the Oglala Delegation of the Great Sioux Nation Treaty Council signed several treaties with the United States more than 100 years ago does not establish that the Delegation is a current and official successor to the delegation that signed such treaties, or that the Delegation is a local governmental entity that currently exercises executive or legislative authority over the Oglala Lakota.

RULES OF PRACTICE: STANDING; LOCATED WITHIN TRIBAL OR GOVERNMENTAL BOUNDARIES

The Oglala Delegation of the Great Sioux Nation Treaty Council has failed to establish that the proposed in-situ leach mining activities on the Irigaray and Christensen ranches are "within [the Delegation's] boundaries" within the meaning of 10 C.F.R. § 2.309(d)(2)(i). Although the Irigaray and Christensen mines are located on lands that were once reserved to the Oglala Lakota under the Fort Laramie Treaty of 1868, the Supreme Court has ruled that the 1868 treaty was abrogated by the Fort Laramie Treaty of 1877, and that these lands no longer belong to the Oglala Lakota. *United States v. Sioux Nation of Indians,* 448 U.S. 371 (1980).

RULES OF PRACTICE: STANDING; ORGANIZATIONAL STANDING; NATIONAL HISTORIC PRESERVATION ACT CONSULTATION REQUIREMENTS

The Oglala Delegation of the Great Sioux Nation Treaty Council has failed to establish that it has organizational standing pursuant to 10 C.F.R. § 2.309(d)(1) because it has failed to establish that it has a legal right, under the National Historic Preservation Act, to be consulted with regard to cultural artifacts found on the Cogema sites. Under 36 C.F.R. § 800.16(m), only Indian Tribes that appear on the Department of the Interior's list of federally recognized Indian Tribes have consultation rights under the NHPA. The Delegation is not on this list. As such, any claims of injury as a result of Cogema's or NRC Staff's failure to consult with the Delegation are not cognizable in this proceeding.

RULES OF PRACTICE: STANDING; ORGANIZATIONAL STANDING

The Delegation has failed to establish that it has organizational standing pursuant to 10 C.F.R. § 2.309(d)(1) because even assuming, *arguendo,* that (a) the Cogema mines release contaminants, and (b) there are health problems on the Pine Ridge Indian Reservation, the Delegation provides no plausible chain of causation or connection between the two. The Delegation fails to address how the contamination might migrate 150 miles from the Cogema mines to the Pine Ridge Reservation.

RULES OF PRACTICE: ORGANIZATIONAL STANDING; TRUST RESPONSIBILITY

The Trust Responsibility requires federal agencies to take actions or refrain from taking actions "in fulfillment of [Congress's] duty to protect the Indians." *United States v. Navajo Nation,* 537 U.S. 488 (2003). In the case before us, however, the Board has been presented with no plausible chain of causation whereby the Delegation or its members might be adversely affected by the Cogema mining operation. Without some plausible connection between the Indian people and the mine, we fail to see how the Trust Responsibility is triggered.

RULES OF PRACTICE: STANDING; REPRESENTATIONAL STANDING

The Oglala Delegation of the Great Sioux Nation Treaty Council has failed to establish that it has representational standing pursuant to 10 C.F.R. § 2.309(d)(1) because it has not shown a concrete and particularized injury-in-fact to Chief Oliver Red Cloud (the only individual named in the Delegation's petition) that is plausibly connected to the Cogema mining operations. Absent a showing of standing for Chief Red Cloud in his own right, the Board cannot grant the Delegation representational standing on his behalf.

RULES OF PRACTICE: STANDING; ORGANIZATIONAL STANDING; INJURY-IN-FACT

The Powder River Basin Resource Council has failed to establish organizational standing under 10 C.F.R. § 2.309(d)(1). In order to establish organizational standing, a petitioner must allege "more than an injury to a cognizable interest." *Sierra Club v. Morton,* 405 U.S. 727, 734-35 (1972). The Council listed its interests — clean air, clean water, etc. — but did not demonstrate how these interests would be adversely affected by mining operations. The Council merely

lists interests that we find are too generalized to qualify as injuries-in-fact under *Sierra Club v. Morton.*

RULES OF PRACTICE: STANDING; REPRESENTATIONAL STANDING

The Powder River Basin Resource Council has failed to establish representational standing under 10 C.F.R. § 2.309(d)(1) because it failed to identify a member who has standing in his or her own right and who authorizes the Council to represent him or her in this proceeding.

MEMORANDUM AND ORDER
(Ruling on Petition for Review and Request for Hearing)

This proceeding arises from an application by Cogema Mining, Inc. (Cogema) to the United States Nuclear Regulatory Commission (NRC) for a renewal of its license for two in-situ leach (ISL) uranium mines in Johnson and Campbell Counties, Wyoming.[1] In response to an NRC notice of opportunity to request a hearing, the Oglala Delegation of the Great Sioux Nation Treaty Council (Delegation) and the Powder River Basin Resource Council (Council) filed petitions to intervene and requests for hearing.[2] For the reasons stated in this Memorandum and Order, the Board concludes that neither the Delegation nor the Council has shown that it has standing, as required by 10 C.F.R. § 2.309(a). Therefore, the petitions are denied.

I. BACKGROUND

Cogema, or its predecessors in interest, have held an NRC license for the ISL facilities on the Irigaray and Christensen Ranch sites, located in Johnson and Campbell Counties, Wyoming, since 1978.[3] In 2001, at Cogema's request, the license was modified from a license to operate the ISL mines to a license to restore and to decommission the ISL mines. Cogema Answer to Del. at 2.

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[1] Notice of Request to Renew Source Materials License SUA-1341, Cogema Mining, Inc., Christensen and Irigaray Ranch Facilities, Johnson and Campbell Counties, WY, and Opportunity to Request a Hearing, 74 Fed. Reg. 6436 (Feb. 9, 2009).

[2] Request for Hearing and Petition for Leave to Intervene (Apr. 10, 2009) (Del. Petition); Powder River Basin Resource Council Request for Hearing (Apr. 10, 2009) (Council Petition).

[3] Cogema's Answer Opposing Oglala Delegation of the Great Sioux Nation Treaty Council Request for Hearing and Petition for Leave to Intervene (May 5, 2009) at 2 (Cogema Answer to Del.).

On May 30, 2008, Cogema submitted an application to renew its license for the two mines (Source Material License, SUA-1341). The license, which at that time was still a restoration and decommissioning license, was due to expire on June 30, 2008. Tr. at 53. Because the renewal application was timely filed, however, the license was automatically extended by operation of law pursuant to 10 C.F.R. § 40.42(a)(1), until final agency action is taken on the renewal request.

On February 9, 2009, the NRC issued a notice of opportunity to request a hearing concerning Cogema's renewal application. 74 Fed. Reg. at 6436. In response, on April 10, 2009, the Delegation and the Council each filed a request for a hearing and petition to intervene. *See supra* note 2. On May 5, 2009, Cogema and NRC Staff filed answers to the two petitions.[4] The Delegation filed a consolidated reply to Cogema's and NRC Staff's answers on May 12, 2009.[5] The Council did not file a reply. On May 12, 2009, this Atomic Safety and Licensing Board was established to preside over this proceeding. Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 9113 (May 12, 2009).

In asserting standing, the Delegation states that it is the "only body appointed directly by the Oglala Lakota [Indian people] to decide treaty matters, including most importantly, land claims." Del. Petition at 5. The Delegation claims that, because it is chosen by the Lakota, it is governed by tribal law and not "beholden to the laws of the United States." *Id.* The Delegation distinguishes itself from the Oglala Sioux Tribe (OST), *id.,* which is listed as a federally recognized Indian Tribe by the Bureau of Indian Affairs (BIA) of the U.S. Department of Interior.[6]

The Powder River Basin Resource Council states that it is a nonprofit organization that was formed to "address the impacts of mineral development on rural people and communities." Council Petition at 2. Although it is not stated in the Council's pleading, the Irigarary and Christensen ISL mining operations are apparently located within the Powder River drainage basin.

On May 21, 2009, the Board instructed the Delegation to submit a memorandum documenting and clarifying its claim of standing under 10 C.F.R. § 2.309(d).[7]

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[4] Cogema Answer to Del.; Cogema's Answer Opposing Powder River Basin Resource Council Request for Hearing (May 5, 2009) (Cogema Answer to Council); NRC Staff's Response to Request for Hearing and Petition for Leave to Intervene of the Oglala Delegation of the Great Sioux Nation Treaty Council (May 5, 2009) (Staff Answer to Del.); NRC Staff Response to Request for Hearing Filed by Powder River Basin Resource Council (May 5, 2009) (Staff Answer to Council).

[5] Petitioner's Consolidated Reply to Applicant and NRC Staff Answers to Petition to Intervene of the Oglala Delegation of the Great Sioux Nation Treaty Council (May 12, 2009) (Reply).

[6] Indian Entities Recognized and Eligible to Receive Services from the United States Bureau of Indian Affairs, 73 Fed. Reg. 18,553, 18,555 (Apr. 4, 2008).

[7] Licensing Board Order (Setting Oral Argument and Briefing of Specified Issues) (May 21, 2009) (May 21 Order) (unpublished).

The Delegation submitted its memorandum on May 28, 2009.[8] Cogema and the NRC Staff filed answers to the Delegation's memorandum on June 2, 2009.[9]

In the same May 21, 2009 order, the Board instructed the parties to submit briefs articulating their views concerning how the Commission's May 18, 2009, decision in *Crow Butte*[10] might impact this proceeding. May 21 Order at 5. All parties submitted briefs regarding the Commission's *Crow Butte* decision on June 2, 2009.[11]

The Board heard oral argument concerning the Delegation's and the Council's standing and proposed contentions on June 9, 2009, in Sheridan, Wyoming.

II. LEGAL STANDARDS GOVERNING STANDING

A petitioner's participation in a licensing proceeding hinges on a demonstration of the requisite standing. In this regard, section 189a of the Atomic Energy Act of 1954, 42 U.S.C. §§ 2011-2297h-13 (2006) (AEA), mandates that the NRC provide a hearing "upon the request of any person whose interest may be affected by the proceeding." *Id.* § 2239(a)(1)(A). The Commission's regulations specify that a petition for review and request for hearing must include a showing that the petitioner has standing. 10 C.F.R. § 2.309(a). The regulations also state that, in ruling on a petitioner's standing, the Board should consider (1) the nature of the petitioner's right under the AEA or the National Environmental Policy Act, 42 U.S.C. § 4321 (2006) (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. 10 C.F.R. § 2.309(d)(1)(ii)-(iv).

The Commission states that it customarily follows judicial concepts of standing.[12] In order to establish standing in federal court, a party must show three key elements: injury-in-fact, causation, and redressability. *Lujan v. Defenders of*

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[8] Petitioner's Memorandum Re: Order Dated May 21, 2009 (May 28, 2009) (Del. Memo).

[9] Cogema's Answer to Petitioner's Memorandum Re: Order Dated May 21, 2009 (June 2, 2009) (Cogema Memo); NRC Staff's Response to Oglala Delegation's Memorandum Regarding the Board's Order Dated May 21, 2009 (June 2, 2009) (Staff Memo).

[10] *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331 (2009).

[11] Del. Memo; [Powder River Basin Resource Council's Brief Re:] Legal Significance of *Crow Butte* Decision in This Proceeding (June 2, 2009); Cogema's Brief Regarding the Impact and Significance of CLI-09-09 (June 2, 2009); NRC Staff's Brief Regarding the Impact and Significance of the Commission's Decision in CLI-09-09 (June 2, 2009).

[12] *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998) (citing *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 613-14 (1976)).

Wildlife, 504 U.S. 555, 560-61 (1992). As the Commission has stated, standing requires that a petitioner allege "a particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision." *Quivira,* CLI-98-11, 48 NRC at 6 (citing *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993)).

A. Injury-in-Fact

Under judicial concepts of standing, a petitioner must suffer from, or be in imminent danger of suffering from, an injury-in-fact. The Supreme Court has defined injury-in-fact as "an invasion of a legally protected interest which is . . . concrete and particularized and actual or imminent rather than conjectural or hypothetical." *Lujan,* 504 U.S. at 560 (internal citations omitted). An injury-in-fact must go beyond generalized grievances to affect a petitioner "in a personal and individual way." *Id.* at 560 n.1. As such, standing generally has been denied when the threat of injury is not concrete and particularized.[13]

Additionally, a petitioner's claimed injury must be arguably within the zone of interests protected by the governing statute in the proceeding. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195-96 (1998). In order to determine whether an interest is in the "zone of interests" of a statute, "it is necessary . . . 'first [to] discern the interests "arguably . . . to be protected" by the statutory provision at issue,' and 'then [to] inquire whether the [petitioner's] interests affected by the agency action are among them.'"[14] Generally, the AEA and NEPA are the statutes that govern proceedings before the Licensing Board. In this case, however, interests protected by the National Historic Preservation Act (NHPA) are at issue as well.

B. Causation

To establish causation, a petitioner must show that there is "a causal connection between the injury and the conduct complained of — the injury has to be 'fairly . . . trace[able] to the challenged action of the defendant, and not . . . th[e] result [of] the independent action of some third party not before the court.'"[15] In source materials cases, the petitioner has the burden to show a "specific and plausible

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[13] *See, e.g., Whitmore v. Arkansas,* 495 U.S. 149, 158-59 (1990); *Los Angeles v. Lyons,* 461 U.S. 95, 105-06 (1983).

[14] *U.S. Enrichment Corp.* (Paducah, Kentucky Gaseous Diffusion Plant), CLI-01-23, 54 NRC 267, 272-73 (2001) (citing *National Credit Union Administration v. First National Bank,* 522 U.S. 479, 492 (1998)).

[15] *Lujan,* 504 U.S. at 560 (citing *Simon v. Eastern Kentucky Welfare Rights Organization,* 426 U.S. 26, 41-42 (1976)).

means" of how proposed license activities may affect him or her.[16] Petitioners must therefore demonstrate a plausible chain of causation between the licensed activity and the alleged injury. A Board's determination of standing "does not depend on whether the cause of the injury flows *directly* from the challenged action, but whether the *chain of causation is plausible*."[17]

C. Redressability

The third requirement necessary for a petitioner to demonstrate standing is redressability. Redressability requires a petitioner to show that its alleged injury-in-fact could be cured or alleviated by some action of the tribunal.[18] For example, if a petitioner showed that the modification or denial of Cogema's license renewal application would mitigate or eliminate her alleged injuries, then she would have satisfied the redressability requirement.

In proceedings involving nuclear power reactors a petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if the petitioner lives within 50 miles of the nuclear power reactor.[19] However, no such proximity presumption applies in source materials cases such as this one. *See USEC,* CLI-05-11, 61 NRC at 311-12.

D. Standing of Organizations

While an individual may establish standing by satisfying the foregoing criteria, an organization, such as an environmental group, municipality, or Indian Tribe, must satisfy one of two additional criteria. It must demonstrate either "organizational" standing or "representational" standing.[20]

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[16] *See USEC Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311-12 (2005) ("Where there is no 'obvious potential'" for offsite harm, the petitioner must "'show a specific and plausible means' of how the challenged action may harm him or her").

[17] *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 (1994) (emphasis added). *See also Crow Butte,* CLI-09-9, 69 NRC at 345.

[18] *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 13-14 (2001); *Westinghouse Electric Corp.* (Nuclear Fuel Export License for Czech Republic — Temelin Nuclear Power Plants), CLI-94-7, 39 NRC 322, 331 (1994).

[19] *See, e.g., Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989) (observing that the presumption applies in proceedings for nuclear power plant "construction permits, operating licenses, or significant amendments thereto").

[20] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995) ("An organization may base its standing on either immediate or threatened injury to its organizational interests, or to the interests of identified members. . . . To derive standing

(Continued)

1. Organizational Standing

To establish organizational standing under 10 C.F.R. § 2.309(d)(1), an organization must demonstrate (1) that the action at issue will cause an injury-in-fact to the organization's interests or the interests of its members and (2) that the injury is within the zone of interests protected by NEPA or the AEA.[21] To assert an appropriate injury for organizational standing, an organization "must demonstrate [a palpable] injury in fact to [its] organizational interests."[22] The Supreme Court in *Sierra Club v. Morton,* 405 U.S. 727 (1972), explained that the injury-in-fact necessary to establish organizational standing must be more than "a mere 'interest in a problem,' no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem . . . ." *Id.* at 739. A broadly stated interest in a problem "is not sufficient by itself to render the organization 'adversely affected' or 'aggrieved' . . . ." *Id.* Instead, an organization must go beyond asserting an injury to a generalized interest — i.e., an interest in protecting the environment, an interest in preserving national parks — and establish that it itself is suffering, or will suffer, from a specific, concrete harm caused by a third party. In addition, an organization, like an individual, must satisfy the causation and redressability requirements.

2. Representational Standing

Alternatively, an organization can show standing by asserting "representational" standing, i.e., that it seeks to participate in the proceeding as the authorized representative of one or more of its individual members who themselves have standing. An organization asserting "representational" standing must (1) demonstrate that the interest of at least one of its members will be harmed, (2) demonstrate that the member would have standing in his or her own right, (3) identify that member by name and address, and (4) demonstrate that the organization is authorized to request a hearing on behalf of that member.[23] Representational standing is

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from a member, the organization must demonstrate that the individual member has standing to participate, and has authorized the organization to represent his or her interests") (internal citations omitted).

[21] *See Sierra Club v. Morton,* 405 U.S. at 727; *Georgia Tech,* CLI-95-12, 42 NRC at 115; *Yankee Atomic,* CLI-98-21, 48 NRC at 194-95; *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-952, 33 NRC 521, 530 (1991).

[22] *Turkey Point,* ALAB-952, 33 NRC at 530. *See also Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261, 269 (1998), *rev'd on other grounds,* CLI-98-16, 48 NRC 119 (1998).

[23] *See GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 194 (2000); *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000).

based on an alleged harm to an organization's members, whereas organizational standing involves an alleged harm to the organization itself.

III. STANDING OF THE OGLALA DELEGATION OF THE GREAT SIOUX NATION TREATY COUNCIL

A. Arguments Related to Delegation's Standing

1. Delegation's Arguments

The Delegation states that it is "the unbroken traditional entity established by the Oglala Lakota to negotiate and enter into treaties between the Oglala Lakota and the United States," Del. Memo at 1, and identifies Chief Oliver Red Cloud as its single representative for the hearing. Del. Petition at 12. No address is provided for Chief Red Cloud except that he lives somewhere on the Pine Ridge Indian Reservation. This reservation stretches approximately 90 miles (east to west) and 60 miles (north to south), Tr. at 55, and is located in the state of South Dakota, at least 150 miles distant (as the crow flies) from the Irigarary and Christensen mines. Tr. at 55-56. The Delegation states that Chief Oliver Red Cloud's great-grandfather is the famous Chief Red Cloud who signed certain treaties with the United States in the late 1800s. Reply at 38.

The Delegation posits four arguments to support its claim of standing. First, the Delegation claims that it has standing because the Cogema facilities are located on land which belongs to the Oglala Lakota under the 1868 Fort Laramie Treaty with the United States government. Del. Petition at 6. This, the Delegation argues, gives it an interest in this proceeding under 10 C.F.R. § 2.309(d)(2), which states, in pertinent part:

> [A] State, local governmental body or affected Federally-recognized Indian Tribe that wishes to be a party in a proceeding for a facility located within its boundaries need not address the standing requirements under this paragraph.

Moreover, the Delegation contends that any artifacts found on the mine sites are most likely Lakota artifacts. *Id.* at 5. The Delegation claims that these artifacts are not being adequately addressed or investigated, in violation of NEPA and section 106 of the NHPA. *Id.* at 54.

The Delegation's second argument is that the ISL mining activities at the Irigaray and Christensen Ranch facilities deplete and contaminate the aquifers used by the Oglala Lakota and negatively impact the groundwater. *Id.* at 7-8. The Delegation asserts that, due to mining operations, "the water table has gone down resulting in a loss in total available water." *Id.* at 8. The water that is left, it argues, is of a lesser quality due to both mine spills and increased concentrations

of arsenic. *Id.* at 7, 10-11. The Delegation asserts that mine spills empty into Willow Creek, which flows to the Powder River, which, they further assert, flows west toward Pine Ridge Reservation. *Id.* at 7. Mining operations, the Delegation states, contribute to increased concentrations of arsenic in the aquifer. *Id.* at 11. The Delegation avers that arsenic causes health problems, including pancreatic cancer and diabetes, to Lakota people who live on the Pine Ridge Reservation. *Id.*

The Delegation's third argument in favor of standing is related to its argument that mining activities negatively impact the water quality. The Delegation states that wildlife on the Lakota ancestral land provides food for the Lakota people, is being harmed by mining activities, and must be protected by the Lakota people and the Delegation. Del. Petition at 8. Indeed, the Delegation claims that it has a duty to protect this wildlife, and to protect "*Unci Maka,*" or "Grandmother Earth," within their lands. Del. Memo at 10-11. In particular, the Delegation asserts that eagles are sacred to the Lakota people and that they "are adversely affected by the operation of the Mine through the bioaccumulation of radioactive materials from the surrounding environment." Del. Petition at 8. The Delegation explains that bioaccumulation of radionuclides "can be especially harmful to animals [such as eagles] at the top of the food chain because the concentrations of radionuclides are much higher." *Id.* at 8 n.1.

Finally, the Delegation argues that the NRC owes a special fiduciary duty, or "Trust Responsibility" to the Lakota people. *Id.* at 6-7. This duty, it says, requires the federal government to support "tribal self-government and economic prosperity." Reply at 8. As such, "[a]ny action taken by the Nuclear Regulatory Commission, a federal agency, must be done with consideration of this duty owed to the Oglala Delegation." Del. Petition at 7.

After making these arguments, the Delegation requested that, if the Board does not agree that the Delegation qualifies for standing under 10 C.F.R. § 2.309(d)(2) (i.e., because the mines are within the territory given to the Oglala Lakota pursuant to the 1868 Fort Laramie Treaty), then the Delegation be given reasonable additional time to demonstrate standing. *Id.* at 12. As stated in Section III.A.4, the Board granted this request.

2. Cogema's Answer to Delegation Arguments

Cogema first argues that the Delegation is not entitled to standing under 10 C.F.R. § 2.309(d)(2). Cogema asserts that the Delegation is not a "federally recognized Indian Tribe" as required by this regulation because the Delegation is not on the BIA's list of recognized Indian Tribes. Cogema Answer to Del. at 9. Furthermore, Cogema argues that 10 C.F.R. § 2.309(d)(2) is inapplicable because the Irigaray and Christensen Ranch facilities are not located within the boundaries of Oglala Lakota land. *Id.* at 9-10. Accordingly, says Cogema, the Delegation fails the test of 10 C.F.R. § 2.309(d)(2) and therefore must demonstrate it has

organizational or representational standing under 10 C.F.R. § 2.309(d)(1). *Id.* at 10.

Cogema also asserts that the Delegation fails to identify any cultural resources on the mine sites that might be harmed by mining operations. *Id.* at 11-13. Cogema claims that a survey of the mine site has been done, and that the one area that may contain cultural resources is enclosed in a fence so as not to be disturbed by mining operations. *Id.* at 12. Any new sites, Cogema says, will be evaluated in accordance with applicable rules and regulations. *Id.* at 13.

Regarding the Delegation's claim of harm to water quality and wildlife, Cogema argues that the Delegation has made no showing that the mining operations will affect water quality on the Pine Ridge Reservation, or that any wildlife will be harmed as a result of mining. *Id.* at 14-17. Cogema states that the Pine Ridge Reservation is 150 miles away from the ISL mining operations. *Id.* at 14. Cogema argues that, due to the foregoing deficiencies in its petition, the Delegation has not demonstrated a "discrete institutional injury to itself"[24] and therefore does not have organizational standing. *Id.* at 10.

Finally, Cogema argues that the Delegation has not met the requirements for representational standing under 10 C.F.R. § 2.309(d)(1) because it failed to demonstrate that at least one identified member of the Delegation has standing in his or her own right and that the Delegation is authorized to represent that individual. *Id.* at 18. Cogema asserts that Chief Oliver Red Cloud is the only individual named in the Delegation's petition, but that it does not provide the information showing that he has standing in his own right. *Id.*

3. NRC Staff's Answer to Delegation Arguments

NRC Staff asserts that the Delegation is not "a qualifying local governmental body of a Federally-recognized Indian tribe" under 10 C.F.R. § 2.309(d)(2). Staff Answer to Del. at 11. Further, Staff argues that the mines are not within Lakota territory because the 1868 Fort Laramie Treaty was abrogated in 1877. *Id.* at 13. Like Cogema, Staff contends that the Delegation does not provide information to support their claims that cultural resources, water quality, and wildlife will be harmed by mining activities. *Id.* at 8-10.

Finally, Staff opposed the Delegation's request for additional time to demonstrate standing if the Board determines that 10 C.F.R. § 2.309(d)(2) is inapplicable. The Staff argued that this request for additional time should be denied because the Delegation gave no reason why all standing claims were not included in the Petition. *Id.* at 17.

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[24] *International Uranium (USA) Corp.* (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001).

4. Opportunity to Provide Additional Information Concerning Delegation's Standing

On May 21, 2009, pursuant to the request by the Delegation that it be given an additional opportunity to demonstrate that it has standing, the Board instructed that the Delegation:

1. Submit a memorandum, that documents or demonstrates that the Oglala Delegation:
   a. Is a "local governmental body" duly elected, appointed or established by the relevant procedures within its Nation;
   b. Is a "federally recognized Indian tribe" as that term is used in 10 C.F.R. §§ 2.309(d) or 2.315(c), or any other relevant Federal law or regulation;
   c. Is an entity which *must* be consulted under the National Historic Preservation Act pursuant to 36 C.F.R. § 800.2(c)(2); and
   d. Is an "Indian Tribe" within the meaning of 36 C.F.R. § 800.16(m).[25]
2. Submit whatever "additional information" (assuming 10 C.F.R. § 2.309(d)(2) is inapplicable) that documents and demonstrates that the Oglala Delegation has standing as required by 10 C.F.R. § 2.309(d)(1).
3. Submit an affidavit or declaration from Chief Oliver Red Cloud, authorizing the Oglala Delegation to represent him *in this proceeding.*[26]

May 21 Order at 3-4 (emphasis in original).

The Delegation submitted its memorandum on May 28, 2009, and responses were filed by Cogema and the Staff on June 2, 2009. *See supra* notes 8 & 9.

In its memorandum, the Delegation claims that it is a federally recognized Indian Tribe because it signs treaties. Del. Memo at 3. By this, the Delegation is apparently referring to the fact that Chief Red Cloud, the great-grandfather of Chief Oliver Red Cloud, was part of a delegation of Oglala Lakota leaders

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[25] The May 21 Order included the following footnote at this point in the text: "In this context, it would be helpful, but not required, to explain whether the Oglala Delegation would satisfy the definition of 'Indian tribe' specified in Section 2(15) of the Nuclear Waste Policy Act of 1982. 42 U.S.C. § 10101(15) (1982)."

[26] The May 21 Order included the following footnote at this point in the text: "*See Crow Butte,* CLI-09-9, 69 NRC at [343] (slip op. at 14-15) (establishing a bright line rule requiring affidavits authorizing organizational representation to be filed with specific reference to the proceeding in which standing is sought and providing the petitioners the opportunity to cure such defects in their affidavits). The subpart 3 question is not an opportunity for Chief Oliver Red Cloud to supplement or change the substance of his affidavit, but merely an opportunity to reference this specific proceeding, rather than the Crow Butte proceeding."

and that he signed various treaties, including the 1868 and 1877 Fort Laramie Treaties, with the United States. The Delegation should be recognized as the lawful representative of a sovereign entity, it asserts, because the United States entered into treaties with the Oglala Lakota through the Delegation, and the United States only makes treaties with sovereign nations. *Id.* at 8. As a signatory to treaties, the Delegation claims that it is entitled to "special services from the United States due to their status as Indians." *Id.* at 9. According to the Delegation, this makes it an Indian Tribe for the purposes of the BIA regulations at 36 C.F.R. § 800.16(m). *Id.*

The Delegation later concedes that it is not itself an Indian Tribe because "it is not a stand-alone band or nation," but asserts that it represents an Indian Tribe, i.e., the Oglala Lakota. *Id.* at 8. The Delegation differentiates itself from the OST by asserting that it is "the only entity [selected by the Oglala Lakota people] and maintained through the traditional governing mechanisms of the Oglala Lakota." *Id.* at 2. In comparison, the Delegation says, the "Oglala Sioux Tribe is a creation of Section 16 of the Indian Reorganization Act," a law of the United States. *Id.*

Furthermore, the Delegation asserts that it should be recognized by the Board as the proper representative of the Oglala Lakota because not one Oglala Lakota has come forth to dispute that the Delegation is the Oglala Lakota's proper representative. *Id.* at 4; Tr. at 80-81. According to its argument, denying the Delegation status as an Indian Tribe strains the Trust Responsibility owed to the Lakota by the United States and cannot be explained to the Lakota in their language. Del. Memo at 4.

With regard to the consultation requirement under the NHPA, the Delegation asserts that because the OST, which is on the BIA's list of federally recognized Indian Tribes, has taken no steps to become involved in the NHPA process with Cogema, the Delegation is not excluded from taking on the consultation responsibility itself. *Id.* at 5. Even if the OST were playing an active role in assessing cultural resources found on the site, the Delegation asserts that it "would still be entitled to consultation due to its unique relationship with the U.S. government and its traditional representative capacity with the Oglala Lakota." *Id.*

Cogema responds to the Delegation's memorandum by reiterating that the Delegation is not a federally recognized Indian Tribe because it does not appear on the BIA's list and that it therefore is not entitled to consultation under the NHPA. Cogema Memo at 4, 8. Cogema also argues that the Delegation does not qualify as a "local governmental body" under 10 C.F.R. § 2.309(d)(2) because it did not claim that it was a "county, municipality, or other subdivision." *Id.* at 2. Further, Cogema states that the Delegation is not a local governmental body because it is not local to the Irigaray and Christensen mines, which are 150 miles away from the Pine Ridge Reservation. *Id.* at 3. Cogema also argues that the

Delegation has failed to further demonstrate that it has standing under 10 C.F.R. § 2.309(d)(1). *Id.* at 9.

The NRC Staff, like Cogema, reasserts its argument that the Delegation does not show that it is a federally recognized Indian Tribe and does not demonstrate that it is an entity that must be consulted under the NHPA. Staff Memo at 8, 10. Additionally, the Staff argues that the Delegation does not qualify as a "local governmental body" under 10 C.F.R. § 2.309(d)(2) because it has not shown that it exercises any legislative or executive powers over the OST. *Id.* at 5. Finally, the Staff argues that the Delegation has failed to provide any additional information to show that it qualifies for standing under 10 C.F.R. § 2.309(d)(1). *Id.* at 15.

B. Ruling and Analysis Regarding Delegation's Standing

The Board concludes that the Delegation has failed to establish standing to participate in this proceeding. First, the Delegation does not meet the criteria of 10 C.F.R. § 2.309(d)(2)(i) because it is a neither a "federally recognized Indian Tribe" nor a "local governmental body." In addition, given that the Supreme Court has ruled that the Oglala Lakota no longer own the land upon which these ISL mines are located, *United States v. Sioux Nation of Indians,* 448 U.S. 371 (1980), it is plain that the mining operations are not occurring within the "boundaries" of the Delegation or Oglala Lakota, as required by 10 C.F.R. § 2.309(d)(2)(i). Second, the Delegation has not demonstrated that it meets the requirements for either organizational or representational standing under 10 C.F.R. § 2.309(d)(1). Accordingly, as discussed below, the Board denies the Delegation's Petition to Intervene and its Request for Hearing.

1. 10 C.F.R. § 2.309(d)(2)(i)

Section 2.309(d)(2)(i) exempts certain governmental entities from the requirement to show standing concerning activities that occur within their borders. The regulation states, in pertinent part:

> [A] State, local governmental body or affected Federally-recognized Indian Tribe that wishes to be a party in a proceeding for a facility located within its boundaries need not address the standing requirements under this paragraph.

10 C.F.R. § 2.309(d)(2)(i). The Delegation claims that it qualifies under this regulation and therefore need not demonstrate that it has standing. Del. Petition at 12. We disagree.

First, the Delegation is not a "federally recognized Indian Tribe" within the

meaning of 10 C.F.R. §§ 2.309(d)(2)(i) or 2.315(c).[27] NRC regulations do not define this term. However, when the NRC promulgated these regulations it stated that the phrase "federally recognized Indian Tribe" was added to the regulation in order to comply with Executive Order 13,084 (EO 13084).[28] The Executive Order defines "Indian Tribe" as "an Indian or Alaska Native tribe, band, nation, pueblo, village or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. § 479(a)." Exec. Order No. 13,084, 63 Fed. Reg. 27,655 (May 14, 1998). Under EO 13084, an Indian Tribe is one that is recognized and listed by the BIA. Further, the BIA is required, under 25 U.S.C. § 479(a), to publish its list of federally recognized Indian Tribes in the *Federal Register.*[29] Under NRC regulations, a group whose name is included on the BIA's list is a "federally recognized Indian Tribe," and any organization, tribe, or otherwise, whose name does not appear on the list, is not a "federally recognized Indian Tribe."

Federal recognition by the BIA is "a formal political act confirming the tribe's existence as a distinct political society, and institutionalizing the government-to-government relationship between the tribe and the federal government." Cohen's Handbook of Federal Indian Law § 3.02[3], at 138 (2005 ed.).[30] To qualify for recognition on the BIA's list as an Indian Tribe, a petitioning group must establish, *inter alia,* that it has historically been recognized as an American Indian entity since 1900, that it is comprised of a cohesive group of individuals that share a distinct community and an autonomous government, and that its members are descended from a historic Indian Tribe or Tribes. 25 C.F.R. § 83.7. Further, the membership of the petitioning group must be "composed principally of persons who are not members of any [other] acknowledged North American Indian tribe." *Id.* § 83.7(f).

The Oglala Sioux Tribe of the Pine Ridge Reservation has met the above criteria and appears on the BIA list. 73 Fed. Reg. at 18,555. In contrast, and of material import to our decision, the BIA list does *not* include the names of the "Oglala Lakota" or the "Oglala Delegation of the Great Sioux Nation Treaty

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[27] Section 2.315(c) states, in pertinent part, that the Board "will afford an interested State, local governmental body (county, municipality or other subdivision), and affected, Federally-recognized Indian Tribe, which has not been admitted as a party under § 2.309, a reasonable opportunity to participate in a hearing."

[28] Direct Final Rule: "Formal and Informal Adjudicatory Hearing Procedures; Clarification of Eligibility to Participate," 64 Fed. Reg. 29,212 (June 1, 1999).

[29] *See* BIA regulations, 25 C.F.R. § 83.1: "Indian tribe, also referred to herein as tribe, means any Indian or Alaska Native tribe, band, pueblo, village, or community within the continental United States that the Secretary of the Interior presently acknowledges to exist as an Indian tribe."

[30] *See also California Valley Miwok Tribe v. United States,* 515 F.3d 1262, 1264 (D.C. Cir. 2008). Counsel for the Delegation had access to all these resources and failed to address (let alone controvert) the proposition/interpretation therein set forth.

Council." Thus, by the laws and regulations that govern this proceeding, the latter two groups do not qualify as federally recognized Indian Tribes.

The Delegation asserts that it is "maintained through the traditional governing mechanisms of the Oglala Lakota," Del. Memo at 2, and has described a separate and distinct function from that of the OST. *Id.*; Del. Petition at 5. But the Delegation has not provided any *documentation or demonstration* (as we requested in the May 21 Order) supporting these assertions, nor has it established that it is an entity duly authorized by the Oglala Lakota or the OST to represent them in any current matters, external or internal. Moreover, the Delegation is comprised of OST members, making the Delegation ineligible for recognition by the BIA under 25 C.F.R. § 83.7(f). Del. Petition at 6.

In short, because neither the Oglala Delegation of the Great Sioux Nation Treaty Council, nor the Oglala Lakota (the entity that the Delegation claims to represent) is named on the BIA's list, neither is a "federally recognized Indian Tribe" for purposes of 10 C.F.R. §§ 2.309(d)(2)(i) or 2.315(c).

Second, the Board finds that the Delegation is not a "local governmental body" within the meaning of 10 C.F.R. § 2.309(d)(2)(i). Even assuming that the Delegation has some governmental functions, the Commission has held that not all entities with governmental ties are entitled to participate in licensing proceedings as local governmental bodies under section 2.309(d)(2)(i).[31] An entity wishing to participate as a governmental body must demonstrate that it goes beyond an advisory role and exercises "executive or legislative responsibilities." *Yankee Atomic,* CLI-98-21, 48 NRC at 203. In the face of the fact that the OST is the federally recognized Indian Tribe representing the Oglala Lakota on the Pine Ridge Reservation, the Delegation claims that it represents the Oglala Lakota in "treaty matters." Del. Memo at 3. But the Delegation has provided no documentation or affidavits from the Oglala Lakota, the OST, or any other entity to support this proposition. The Delegation described itself as "the unbroken traditional entity established by the Oglala Lakota to negotiate and enter into treaties between the Oglala Lakota and the United States, and to ensure the enforcement of the same." *Id.* at 1. This is the only description that the Delegation provides in the pleadings regarding its role within the Tribe. And the fact that Chief Oliver Red Cloud's great-grandfather signed several treaties more than 100 years ago does not establish that the Delegation is some sort of current and official successor to that 1868 delegation, or that the Delegation is a governmental entity that exercises executive or legislative authority over the Oglala Lakota people. The Board has not been provided, despite our explicit request, with a basis to conclude that the Delegation is involved in the promulgation or enforcement of tribal laws, or is otherwise the responsible entity for legislative or executive

[31] *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 412 n.37 (2007).

governance of the Oglala Lakota. As such, the Board cannot recognize the Delegation as a local governmental body under 10 C.F.R. § 2.309(d)(2)(i).

Finally, the Board rejects the assertion that Cogema's Irigaray and Christensen ISL mines are located within the "boundaries" of land belonging to the OST, the Oglala Lakota, or the Delegation, within the meaning of 10 C.F.R. § 2.309(d)(2)(i). Even though these mines are located on lands that were once reserved to the Oglala Lakota under the Fort Laramie Treaty of 1868, the Supreme Court has ruled that the 1868 treaty was abrogated by the Fort Laramie Treaty of 1877, and that these lands no longer belong to the Oglala Lakota. *United States v. Sioux Nation of Indians,* 448 U.S. at 371. The Court confirmed that Congress's plenary power with respect to Native Americans entitles it to abrogate treaties with Native American nations.[32] Therefore, the United States is no longer bound by the terms of the 1868 Fort Laramie Treaty. *Sioux Nation of Indians,* 448 U.S. at 382-83. This decision is controlling and plainly requires us to reject the Delegation's claim that the OST or the Delegation own the land on which the Cogema mines are located, or that these mines are somehow within their "boundaries," as that term is used in 10 C.F.R. § 2.309(d)(2)(i).

Accordingly, the Board concludes that the Delegation does not fall within the exception to 10 C.F.R. § 2.309(d)(2)(i). The Delegation is not a federally recognized Indian Tribe, has not established that is a local governmental body, and is not entitled to participate in this proceeding as an interested Indian Tribe pursuant to 10 C.F.R. § 2.315(c).[33] The Delegation must therefore demonstrate it has standing to participate in this proceeding under 10 C.F.R. § 2.309(d)(1).

2. 10 C.F.R. § 2.309(d)(1)

Because it is unclear whether the Delegation intended to assert organizational or representational standing in this proceeding, we address both in our ruling. We find that the Delegation has failed to establish standing under either theory, and therefore do not admit it as a party in this proceeding.

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[32] *Id.* at 410-12. *See also Lone Wolf v. Hitchcock,* 187 U.S. 553, 565 (1903) ("Plenary authority over the tribal relations of the Indians has been exercised by Congress from the beginning, and the power has always been deemed a political one, not subject to be controlled by the judicial department of the government").

[33] We recognize that the Board in the Crow Butte Resources License Renewal proceeding recently allowed the Delegation to participate in that proceeding as an interested Indian Tribe under 10 C.F.R § 2.315(c). *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 760 (2008). That ruling is not binding on us. Further, in that proceeding the Delegation's status under 10 C.F.R. § 2.315(c) was not contested. *Id.* at 715 n.120. Here, the Delegation's claim was opposed by the Staff and Applicant. Cogema Answer to Del. at 9; Staff Answer to Del. at 11-13. For the reasons stated, it is clear to us that the Delegation is not a "federally recognized Indian Tribe" within the meaning of 10 C.F.R. § 2.315(c).

a. Organizational Standing

The Delegation has not shown a concrete and particularized injury-in-fact, either to itself or to its members and can therefore not claim organizational standing. The Delegation also has failed to establish a plausible causal chain between its asserted injuries and the Cogema mining operations. As noted, *supra,* the Delegation alleges four injuries upon which they claim standing. We will address each in turn.

First, the Delegation claims that the land upon which the mines sit is owned by the Oglala Lakota pursuant to the 1868 Fort Laramie Treaty. Del. Petition at 6. As discussed above, the Board is bound by the Supreme Court ruling in *United States v. Sioux Nation of Indians* and cannot recognize this claim as an injury-in-fact.

In addition, the Delegation has not established that they have a legal right under the NHPA to consultation with regard to cultural artifacts found on the Cogema sites. Under 36 C.F.R. § 800.16(m), only Indian Tribes that appear on the Department of the Interior's list of recognized tribes have consultation rights under the NHPA. As noted, *supra,* the Delegation is not on this list. As such, any claims of injury as a result of Cogema's or NRC Staff's failure to consult with the Delegation are not cognizable in this proceeding.

Second, the Delegation argues that the ISL mining activities at the Irigaray and Christensen Ranch facilities deplete and contaminate the aquifers used by the Oglala Lakota, thereby negatively affecting the health of those living on Pine Ridge Reservation. Even assuming, *arguendo,* that (a) the mines release contaminants, and (b) there are health problems on the Pine Ridge Reservation, the Delegation has provided no support for any plausible chain of causation or connection between the two. The Delegation fails to address how the contamination might migrate from the Cogema mines to the Pine Ridge Reservation, a distance of about 150 miles. Tr. at 56. Nor did the Delegation provide any plausible theory as to how the groundwater at the Irigaray and/or Christensen ISL mines is connected to the drinking water or other water on the Pine Ridge Reservation.[34] No other support is offered here. Beyond asserting that Cogema's mining activities will increase arsenic concentrations in the groundwater at the mines, and that increased human exposure to arsenic at the Pine Ridge Reservation would lead to adverse health impacts on the people on the reservation, the Delegation has failed to describe a plausible scenario in which groundwater under the mine will travel to the Pine Ridge Reservation and be ingested by residents there. Absent this showing of a plausible chain of causation, the Board cannot find that the Delegation has standing on this claim in this proceeding.

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[34] This stands in stark contrast to the *Crow Butte* proceeding, where the Intervenors provided an expert affidavit to support the assertion that the groundwater under the Crow Butte mine was connected to the ground and surface water on Pine Ridge Reservation. LBP-08-24, 68 NRC at 705-06.

The Delegation's third argument in favor of standing is that mining activities negatively impact the water quality, thereby negatively affecting the wildlife that drinks that water. This wildlife, they claim, is then ingested by residents of the Pine Ridge Reservation. Del. Petition at 8. But, even assuming that ingestion by the wildlife occurs, the Delegation has not explained how or why the wildlife will be harmed by it (even assuming bioaccumulation), or provided any logic or suggested any physical link (other than an assertion of ingestion of that wildlife by the Oglala) indicating that the Delegation or the Oglala Lakota will be harmed."

Finally, the Delegation argues that the NRC owes a Trust Responsibility, or fiduciary duty, to the Lakota people. *Id.* at 6-7. The Trust Responsibility requires federal agencies to take actions or refrain from taking actions "in fulfillment of [Congress's] duty to protect the Indians."[35] In the case before us, however, the Board has been presented with no plausible chain of causation whereby the Delegation or its members might be adversely affected by the Cogema mining operation. Without some plausible connection between the Indian people and the mine, we fail to see how the Trust Responsibility is triggered.

b. Representational Standing

Despite the fact that the Board granted the Delegation's request to be allowed to submit additional information in support of its standing, the Delegation failed to establish representational standing. In order to establish representational standing, it is essential for an organization to identify at least one member of the organization who is shown to have standing in his or her own right and to present an affidavit or declaration from that person wherein he or she authorizes the organization to represent him or her in the proceeding.[36] Though Chief Oliver Red Cloud is mentioned as an individual in this proceeding — indeed, as the individual through whom the Delegation filed its petition — the Delegation does not specify where, on the 90- by 60-mile Pine Ridge Reservation, Chief Red Cloud lives or in what way he, as an individual, would be impacted by the mine. Because the Delegation does not show a concrete and particularized injury-in-fact to Chief Red Cloud that is plausibly connected to the Cogema mining operations, the Board cannot find

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[35] *United States v. Navajo Nation,* 537 U.S. 488, 515 (2003) (citing *Sunderland v. United States,* 266 U.S. 226, 233 (1924)). *See also Tiger v. Western Investment Co.,* 221 U.S. 286 (1911).

[36] For purposes of analysis of representational standing, we assume, *arguendo,* that the Delegation is a proper representative of the Oglala Lakota people. But the fundamental inquiry for a representational standing analysis is whether the Delegation has demonstrated that a named individual has standing in his or her own right. The sole individual put forward in that context is Chief Oliver Red Cloud, and, as we discuss above, the Delegation has failed to provide information which would enable us to conclude that he would have standing in his own right.

he has standing to participate in this proceeding in his own right. Accordingly, the Board cannot grant representational standing to the Delegation.[37]

V. STANDING OF POWDER RIVER BASIN RESOURCE COUNCIL

A. Arguments Regarding the Council's Standing

1. Council's Arguments

The Council asserts that it is a nonprofit organization located in Sheridan, Wyoming. The Council claims its interest in this proceeding stems from its "long standing history of advocacy working to protect people and places in the Powder River Basin" and its recent "activ[ity] in uranium issues." Council Petition at 2. It states it has over 1,000 members and that it brings its petition on behalf of those members "who live, work, and/or recreate near Cogema's past and planned facilities." *Id.* The Council posits that its interests in clean air, clean water, protecting the ecology and wildlife, and ensuring that energy development follows applicable regulations, will be affected by Cogema's license renewal. *Id.* at 2-3.

2. Cogema's Answer to Council Arguments

Cogema asserts that the Council sets forth generalized interests and policy statements as its basis for standing in this proceeding. Cogema Answer to Council at 8. Cogema argues that generalized environmental interests and organizational policy statements are insufficient to confer organizational standing on a petitioner. *Id.* Furthermore, Cogema argues, the Council has not demonstrated that it has representational standing to intervene in this proceeding because it fails to identify at least one specific member who has standing in his or her own right and who authorizes the Council to represent him or her. *Id.* at 9.

[37] While we recognize that there may be some schism between the OST and the Delegation regarding authority to represent the Oglala Lakota in external matters, we are not in a position to assess which of these entities possess which governance rights and duties to their people. As we discussed at oral argument, we encourage the Delegation and OST to work together for the benefit of the Oglala Lakota. For the present, the OST is the federally recognized Indian Tribe and it, or its duly authorized representatives, would seem to have been the proper party to participate, or petition to participate, in this proceeding.

3. NRC Staff's Answer to Council Arguments

First, the Staff argues that the Council has not demonstrated how it will suffer an institutionalized injury as a result of Cogema's license renewal. Staff Answer to Council at 6-7. Like Cogema, the Staff asserts that the Council's interests are too generalized to support a finding of organizational standing. *Id.* Further, the Staff, like Cogema, states that representational standing cannot be granted to the Council because it failed to identify at least one specific member that has authorized the Council to represent him or her in this proceeding. *Id.* at 7. The Staff states that the Council has not disclosed the location of any of its members, thereby precluding it from claiming likely injury due to proximity to the facilities. *Id.* Thus, the Staff argues that the Council has no standing to participate in this proceeding.

B. Ruling on the Council's Standing

The Council fails to demonstrate that it has organizational or representational standing to participate in this proceeding. Accordingly, the Board denies the Council's Petition to Intervene and its Request for Hearing.

The Council has not demonstrated that it has standing as an organization to intervene in this proceeding. In order to establish organizational standing, a petitioner must allege "more than an injury to a cognizable interest." *Sierra Club v. Morton,* 405 U.S. at 734-35. The Council listed its interests — clean air, clean water, etc. — but did not demonstrate how these interests would be adversely affected by mining operations. In other words, the Council does not establish what its injuries are or might be, or how these injuries are caused by mining operations. The Council merely lists interests that we find are too generalized to qualify as injuries under *Sierra Club v. Morton.*

Furthermore, the Council does not attempt to show that it has representational standing. The Council alludes to its 1,000 members that "live, work, and/or recreate near Cogema's past and planned facilities," Council Petition at 2, but does not identify a single member or individual members who may be harmed as a result of Cogema's activities. The Council's attorney asserts that members of the Council drink water from the "Wasatch formation," which may or may not be adversely impacted by the mines. Tr. at 115. However, the Council does not name these members or provide us with their location. The Council's attorney conceded at oral argument that the Council failed to include any information in the pleadings that would allow the Board to grant representational standing to the

Council. *Id.* at 117. Accordingly, we find that the Council has not demonstrated that it has representational standing to participate in this proceeding.[38]

VI. ORDER

For the foregoing reasons, we conclude that

A. The Request for Hearing and Petition to Intervene of the Oglala Delegation of the Great Sioux Nation Treaty Council is denied.

B. The Request for Hearing and Petition to Intervene of the Powder River Basin Resource Council is denied.

C. This Order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.311. Any petitions for review meeting applicable requirements set forth in that section must be filed within ten (10) days of service of this Memorandum and Order.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[39]

Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

Dr. Paul B. Abramson
ADMINISTRATIVE JUDGE

Dr. William M. Murphy
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 23, 2009

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[38] Due to the Board's finding that neither the Delegation nor the Council have standing to participate in this proceeding under sections 2.309(d)(1) or 2.309(d)(2), the Board need not address whether the various contentions proffered by the Delegation and the Council satisfy the requirements of 10 C.F.R. § 2.309(f)(1).

[39] Copies of this Order were sent this date by the agency's E-Filing system to the counsel/representatives for (1) Cogema Mining, Inc.; (2) the NRC Staff; (3) the Oglala Delegation of the Great Sioux Nation Treaty Council; and (4) the Powder River Basin Resource Council.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
Alan S. Rosenthal
Michael F. Kennedy

In the Matter of **Docket No. 55-62335-SP**
(ASLBP No. 09-891-01-SP-BD01)

DAVID B. KUHL, II
(Denial of Senior Reactor Operator License) **July 28, 2009**

The Licensing Board concludes that because Mr. Kuhl no longer works for the facility for which he seeks a senior reactor operator license, there is no possible remedy for his claim. Therefore the Board dismisses Mr. Kuhl's claim as moot.

SENIOR REACTOR OPERATOR LICENSE: CRITERIA

Any senior reactor operator (SRO) license is "limited to the facility for which it is issued." 10 C.F.R. § 55.53(b).

SENIOR REACTOR OPERATOR LICENSE: EXPIRATION

Any SRO license automatically expires "upon termination of employment with the facility licensee." 10 C.F.R. § 55.55(a).

RULES OF PRACTICE: MOOTNESS

The Commission has recognized that, despite not being constitutionally limited

by the case or controversy requirement of Article III, common sense counsels against proceeding with an adjudication where no effective relief can be granted. *See, e.g., Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-10, 37 NRC 192, 204 (1993) (dismissing appeal as moot where "[n]o effective relief can be granted the Petitioners even if they were to prevail on their claim"). In similar circumstances, where an applicant had proposed that an SRO license be both issued and cancelled retroactively, the Commission declined to engage in such "an empty exercise." *Alfred J. Morabito* (Senior Operator License for Beaver Valley Power Station, Unit 1), CLI-88-4, 28 NRC 5, 6 (1988).

MEMORANDUM AND ORDER
(Regarding Request for Hearing)

Before the Licensing Board is a request for hearing filed by David B. Kuhl, II. His hearing request concerns the denial of his application for a senior reactor operator (SRO) license for the Beaver Valley Power Station (BVPS). For the reasons set forth below, the Board dismisses Mr. Kuhl's hearing request as moot because he no longer is employed at BVPS.

I. BACKGROUND

The material facts are not in dispute.

On December 15, 2008, Mr. Kuhl completed an examination to receive an SRO license for BVPS in accordance with 10 C.F.R. Part 55.[1] On January 2, 2009, before the NRC completed grading the examination, Mr. Kuhl voluntarily resigned from his position at BVPS, for personal reasons that were not related to his job performance.[2] The NRC subsequently concluded that Mr. Kuhl passed the SRO examination.[3] Indeed, but for his resignation, Mr. Kuhl would have satisfied all requirements for an SRO license for BVPS.[4]

Under NRC regulations, however, any SRO license is "limited to the facility

[1] *See* Letter from David Kuhl, to Office of the Secretary, U.S. NRC, at 1 (May 28, 2009) (ADAMS Accession No. ML091600242) [hereinafter Hearing Request]; NRC Staff Response to David B. Kuhl's Request for Hearing (June 22, 2009) at 1 [hereinafter NRC Staff Answer].

[2] *See* Hearing Request at 1; NRC Staff Answer at 1; Tr. at 16-19.

[3] *See* NRC Staff Answer at 1.

[4] Tr. at 5.

for which it is issued."[5] Similarly, any SRO license automatically expires "upon termination of employment with the facility licensee."[6]

On May 13, 2009, NRC headquarters staff informed Mr. Kuhl by letter that it was denying his application for an SRO license for BVPS, sustaining NRC Region I's earlier decision not to issue such a license. Mr. Kuhl filed a request for hearing on May 28, 2009, challenging the denial of his application.[7] Upon referral from the Commission, this Board was established to preside over the proceeding.[8] The NRC Staff filed an answer on June 22, 2009, that did not oppose Mr. Kuhl's hearing request but stated that the Staff intended to file a motion to dismiss or motion for summary disposition at a later time.[9]

By order dated July 1, 2009, the Board expressed concern that there might be no possible remedy for Mr. Kuhl's claim, regardless of its merit, and convened a teleconference to hear argument on whether Mr. Kuhl's request for hearing should be dismissed as moot.[10] At that teleconference, the NRC Staff asserted that Mr. Kuhl's hearing request should be dismissed as moot without further proceedings.[11] Mr. Kuhl argued to the contrary.

II. ANALYSIS

Federal courts are constitutionally limited by the case or controversy requirement of Article III.[12] This jurisdictional limitation restricts "the business of federal courts to questions presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process."[13]

Federal administrative agencies such as the NRC are not, strictly speaking, so limited. "The limitations imposed by article III on what matters federal courts may hear affect administrative agencies only indirectly."[14] Nonetheless, federal agencies (especially when an agency acts through the adjudicatory process) and state courts (which also are not bound by Article III) have recognized that similar

[5] 10 C.F.R. § 55.53(b).

[6] *Id.* § 55.55(a).

[7] *See* Hearing Request at 1-2.

[8] *See* Commission Referral Memorandum (June 11, 2009) (unpublished); Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 29,243 (June 19, 2009).

[9] *See* NRC Staff Answer at 2-3.

[10] *See* Licensing Board Order (Regarding Telephone Conference) (July 1, 2009) at 1-3 (unpublished).

[11] Tr. at 6-7.

[12] U.S. Const. art. III.

[13] *Flast v. Cohen,* 392 U.S. 83, 95 (1968).

[14] *Tennessee Gas Pipeline Co. v. Federal Power Commission,* 606 F.2d 1373, 1380 (D.C. Cir. 1979).

policy considerations counsel against proceeding with an adjudication if there is no possibility of awarding the petitioner meaningful relief.[15]

The Commission has likewise recognized that, despite not being bound by the case or controversy requirement, common sense counsels against proceeding with an adjudication where no effective relief can be granted.[16] Indeed, in circumstances not unlike those at issue, where an applicant had proposed that an SRO license be both issued and cancelled retroactively, the Commission declined to engage in such "an empty exercise."[17]

The Board concludes that there is no possible remedy for Mr. Kuhl's claim, regardless of its merit. Any SRO license is "limited to the facility for which it is issued,"[18] and Mr. Kuhl no longer works at BVPS. No SRO license for BVPS that Mr. Kuhl might be awarded could be active, as (not having been at the facility for more than 6 months) Mr. Kuhl could not have performed the functions of an operator or senior operator for the necessary minimum number of hours during each calendar quarter.[19] Any SRO license for BVPS that Mr. Kuhl might be awarded would necessarily have expired by reason of his resignation.[20] To proceed with a hearing on the agency's failure to award Mr. Kuhl an SRO license for BVPS, in these circumstances, would be "an empty exercise."

Accordingly, Mr. Kuhl's request for hearing is dismissed as moot.

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[15] *See, e.g., Brown v. Navajo Regional Director,* 41 IBIA 314, 2005 I.D. LEXIS 99, at *11 (Bureau of Indian Affairs, Dep't of Interior, Oct. 26, 2005) (declining to conduct a proceeding because "nothing turned on [its] outcome"); *Pueblo of Tesuque v. Acting Southwest Regional Director,* 40 IBIA 273, 2005 I.D. LEXIS 27, at *4 (Bureau of Indian Affairs, Dep't of Interior, Mar. 7, 2005) (recognizing that executive branch "is not bound by the same constitutional constraints [as Article III courts]," but stating that "it has consistently followed the same principles of declining to consider moot cases, in the interest of administrative economy"); *Integrated Systems Analysts, Inc.,* SBA No. 1944, 1984 SBA LEXIS 19, at *4-5 (Small Business Administration Office of Hearings & Appeals, May 1, 1984) (dismissing appeal of business size assessment for contract bid eligibility as moot because contract had already been awarded); *Meyer v. Strouse,* 221 A.2d 191, 192 (Pa. 1966) (dismissing as moot defendant's appeal of ouster from office of tax collector because during pendency of appeal term of office had expired); *Wagner v. City of Cleveland,* 574 N.E.2d 533, 536-37 (Ohio Ct. App. 1988) (dismissing appeal as moot and concluding that the lower court's decision on a moot issue was "a vain act and a nullity").

[16] *See, e.g., Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-10, 37 NRC 192, 204 (1993) (dismissing appeal of denial of requests for hearing on proceeding involving extension of construction permit as moot when construction deemed substantially complete and operating license issued, reasoning that "[n]o effective relief can be granted the Petitioners even if they were to prevail on their claim that further extension of the permit should be denied, because no further extension is required").

[17] *Alfred J. Morabito* (Senior Operator License for Beaver Valley Power Station, Unit 1), CLI-88-4, 28 NRC 5, 6 (1988).

[18] 10 C.F.R. § 55.53(b).

[19] *See id.* § 55.53(e).

[20] *See id.* § 55.55(a).

In accordance with the provisions of 10 C.F.R. § 2.311, any appeal to the Commission from this Memorandum and Order must be taken within ten (10) days after it is served.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[21]

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

Alan S. Rosenthal
ADMINISTRATIVE JUDGE

Michael F. Kennedy
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 28, 2009

[21] Copies of this Order were sent this date by the agency's E-filing system to (1) David B. Kuhl, II; and (2) counsel for the NRC Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

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

In the Matter of **Docket No. 52-016-COL**
(ASLBP No. 09-874-02-COL-BD01)
(Combined License Application)

CALVERT CLIFFS 3 NUCLEAR PROJECT, LLC, and UNISTAR NUCLEAR OPERATING SERVICES, LLC
(Calvert Cliffs Nuclear Power Plant, Unit 3) **July 30, 2009**

COMBINED LICENSES: DECOMMISSIONING FUNDING; FINANCIAL TEST; MATERIALITY

We conclude that the financial test for a parent company guarantee is a material issue because the Staff must decide whether the test is satisfied in order to grant the COL.

RULES OF PRACTICE: MOOTNESS

The mootness doctrine derives from the Constitution's limitation of federal courts' jurisdiction to "cases" or "controversies." The Commission has explained that, although it "is not strictly bound by the doctrine, the agency's adjudicatory tribunals have generally adhered to the principle." *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-8, 37 NRC 181, 185 (1993)

(citing *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 54 (1978)).

RULES OF PRACTICE: CONTENTIONS OF OMISSION

The Commission has further stated that a contention alleging that a license application omits material information becomes moot when the applicant cures the omission. *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).

RULES OF PRACTICE: MOOTNESS; MERITS DECISION

In general, when a claim becomes moot in federal court, the court loses jurisdiction to decide the merits of that claim. But, as noted in a leading treatise on federal court practice and procedure, a decision on the merits "may be appropriate if the same basic dispute is likely to recur in the future, unless it seems sufficient to await the event or better to defer to another court." 13A Charles Alan Wright et al., Federal Practice and Procedure § 3533.2 (2nd ed. 1984) (footnote omitted); *see also In re Campbell,* 628 F.2d 1260, 1262 (9th Cir. 1980); *Kodiak Oil Field Haulers, Inc. v. Teamsters Union Local No. 959,* 611 F.2d 1286, 1290 (9th Cir. 1980).

RULES OF PRACTICE: ADHERANCE TO ARTICLE III CONCEPTS

We are not invariably required to avoid consideration of a legal issue in circumstances where a federal court would do so. When a federal court dismisses a claim as moot and avoids any further consideration of the merits of that claim, it does so because the claim no longer satisfies the case or controversy requirement of Article III, a requirement rooted in the separation of powers. Although the Commission commonly looks to Article III concepts for guidance, we are not required to automatically follow them in all respects because NRC proceedings are not subject to Article III. *See Envirocare of Utah v. NRC,* 194 F.3d 72, 75 (D.C. Cir. 1999); *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 n.2 (1998); *International Uranium (USA) Corp.* (Receipt of Material from Tonawanda, New York), CLI-98-23, 48 NRC 259, 264 (1998).

RULES OF PRACTICE: MOOTNESS

A finding of mootness does not necessarily preclude all consideration of the merits in NRC proceedings, even if it would have that effect in federal court,

and that we may consider the merits to the extent doing so will promote the fair and expeditious resolution of the case before us and there are no significant countervailing concerns.

RULES OF PRACTICE: CONTENTIONS OF OMISSION

A finding that a license applicant has cured an omission does not preclude litigation concerning the adequacy of the information the applicant has supplied.

RULES OF PRACTICE: NEW OR AMENDED CONTENTIONS

NRC regulations permit the filing of new or amended contentions based on new information, and the filing of late contentions if sufficient justification is provided. 10 C.F.R. § 2.309(f)(2) and (c).

COMBINED LICENSES: DECOMISSIONING FUNDING; APPLICATION REQUIREMENTS

We find sufficient basis in both the text and structure of the regulations and the administrative history to show that a COLA must provide reasonable assurance of adequate decommissioning funding, that this assurance must identify the method or methods of funding the applicant plans to use, and that the assurance must provide the information required by 10 C.F.R. § 50.75(e)(1)(iii)(B) if the applicant plans to use a parent company guarantee.

COMBINED LICENSES: DECOMMISSIONING FUNDING; FINANCIAL ASSURANCE

For COLs, the final signed documents providing the financial assurance are not due until 30 days after the notice issued pursuant to 10 C.F.R. § 52.103(a).

COMBINED LICENSES: DECOMMISSIONING FUNDING; DECOMMISSIONING REPORT; REQUIREMENTS

The requirement that the decommissioning report specify not only the amount of financial assurance but the method of providing such assurance follows from the language and structure of 10 C.F.R. § 50.75(b). That section both requires that power reactor applicants submit a decommissioning report and, in section 50.75(b)(1)-(4), specifies information that the report must include. We must construe the four numbered paragraphs of section 50.75(b) in light of their

placement in the regulatory scheme. *Bailey v. United States,* 516 U.S. 137, 145 (1995).

RULES OF PRACTICE: STATUTORY CONSTRUCTION

The most natural way to read a provision that sets forth a general obligation (in this instance, the obligation to submit the decommissioning report) followed by a set of specific requirements is that the specific requirements provide the details necessary to fulfilling the general obligation. That is how we read section 50.75(b) in its entirety. *See Textron Lycoming Reciprocating Engine Division, Avco Corp. v. United Automobile, Aerospace, Agricultural Implement Workers of America, International Union,* 523 U.S. 653, 657 (1998) ("[I]t is a 'fundamental principle of statutory construction . . . that the meaning of a word cannot be determined in isolation, but must be drawn from the context in which it is used.'" (quoting *Deal v. United States,* 508 U.S. 129, 132 (1993))).

COMBINED LICENSES: DECOMMISSIONING FUNDING; APPLICATION REQUIREMENTS

Under the plain meaning of the regulations, the requirement that the designated amount of financial assurance be "covered by" an acceptable method arises concurrently with the requirement that the applicant submit a decommissioning report to the NRC. It cannot plausibly be construed as remaining inchoate for years after the report is submitted, and only springing into life after the license is issued and the licensee is ready to load fuel.

COMBINED LICENSES: DECOMMISSIONING FUNDING; DECOMMISSIONING REPORT

Since the requirement of section 50.75(b)(3) applies to the amount of financial assurance specified in the decommissioning report, we think it readily apparent that the report must explain how that requirement will be fulfilled.

COMBINED LICENSES: DECOMMISSIONING FUNDING; DECOMMISSIONING REPORT; REQUIREMENTS

Section 50.75(b)(3) requires that the decommissioning amount be covered by a method acceptable to the NRC. Section 50.75(b)(3) appears within a section of the regulations that lists the requirements for the decommissioning report. That context means that the report must explain how the requirement of section 50.75(b)(3) will be satisfied. The report must do so for the NRC Staff to determine

whether the amount of financial assurance stated in the decommissioning report is in fact covered by a method acceptable to the NRC, as section 50.75(b)(3) states that it must be.

COMBINED LICENSES: DECOMMISSIONING FUNDING; DECOMMISSIONING REPORT; REQUIREMENTS

The decommissioning report must identify the method of providing financial assurance if the report is to "indicat[e] how reasonable assurance will be provided that funds will be available to decommission the facility," as required by 10 C.F.R. § 50.33(k)(1).

The fact that the Commission included language deferring the obligation that would otherwise apply to COL applicants in section 50.75(b)(4), but included no equivalent provision in section 50.75(b)(3), confirms that the Commission did not intend to defer the requirement of section 50.75(b)(3) until after the license is issued. We interpret the failure to include such a deferral in section 50.75(b)(3) as deliberate, not inadvertent. Accordingly, the requirement imposed upon COL applicants by section 50.75(b)(3), which on its face applies concurrently with the duty to submit a decommissioning report, may not be deferred until after the COL is issued.

COMBINED LICENSES: DECOMMISSIONING FUNDING; DECOMMISSIONING REPORT; REQUIREMENTS

The report itself must explain "how reasonable assurance will be provided." 10 C.F.R. § 50.33(k)(1). This means that the COL applicant must identify the method of decommissioning funding assurance it proposes to use and show that the method complies with any applicable financial test. If the applicant merely stated the method of funding but failed to show that an applicable financial test is satisfied, it would fail to demonstrate that the amount of financial assurance is "covered by" one or more of the funding methods identified in section 50.75(e) as acceptable to the NRC. 10 C.F.R. § 50.75(b)(3). A parent company guarantee, standing alone, is not a funding method identified in section 50.75(e) as acceptable to the NRC. A parent company guarantee is only an acceptable method of providing financial assurance "if the guarantee and test are as contained in appendix A to 10 CFR part 30." 10 C.F.R. § 50.75(e)(1)(iii)(B). Compliance with section 50.75(b)(3) therefore requires that the applicant demonstrate compliance with any applicable financial test.

COMBINED LICENSES: DECOMMISSIONING FUNDING; STATUS REPORTS

The holder of a COL must begin filing biannual reports on the status of decommissioning funding once the Commission has made a finding that all acceptance criteria in the license have been met. 10 C.F.R. § 50.75(f)(1) (citing 10 C.F.R. § 52.103(g)). The reports must include the information specified in section 50.75(f)(1), including "any modification occurring to a licensee's current method of providing financial assurance since the last submitted report." *Id.*

COMBINED LICENSES: DECOMMISSIONING FUNDING; CHANGE IN METHOD OF FUNDING; EFFECT ON FINANCIAL TEST

We recognize that the Commission provided flexibility to licensees to change their method of decommissioning funding during the many years that will elapse before decommissioning actually takes place. But this in no way alters the requirement that the amount of financial assurance certified in the decommissioning report must be covered by a method acceptable to the NRC. If the licensee changes its method of decommissioning funding assurance, the new method will also have to pass any applicable financial test.

COMBINED LICENSES: DECOMMISSIONING FUNDING; FINANCIAL INSTRUMENT; TIMING OF SUBMISSION

The Commission allows COL applicants to delay submission of the financial instrument until after licensing, reasoning that "requiring the combined license applicant to comply with the current requirement in § 50.75(b)(4) . . . would place a more stringent requirement on the combined license applicant, inasmuch as that applicant would be required to fund decommissioning assurance at an earlier date as compared with the operating license applicant." Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,406-7, 49,502-3 (Aug. 28, 2007).

COMBINED LICENSES: DECOMMISSIONING FUNDING; APPLICATION REQUIREMENTS

The Commission did not change the requirement of section 50.75(b)(3) that decommissioning funding must be covered by one of several methods as set forth in section 50.75(e); nor did it modify section 50.75(e)(1)(iii)(B), which precludes an applicant from relying on a parent company guarantee unless the parent meets the financial test in Appendix C to 10 C.F.R. Part 30. Thus, the Commission did not excuse a COL applicant from identifying in its license application the

funding mechanism it has chosen, or from showing that it is eligible to rely on that decommissioning funding mechanism.

COMBINED LICENSES: DECOMMISSIONING FUNDING; APPLICATION REQUIREMENTS

These requirements do not force applicants to actually fund decommissioning assurance, but only to explain how it will be funded and to show that the funding mechanism can satisfy any applicable financial test.

COMBINED LICENSES: DECOMMISSIONING FUNDING; APPLICATION REQUIREMENTS; MATERIALITY

The applicant's compliance with these requirements is a material factor in the COL proceeding and, as such, may properly be challenged in an adjudicatory hearing.

RULES OF PRACTICE: MOOTNESS

Contention 2 is moot because the Applicant has shown that it provided the information required by Appendix A to Part 30, and because the Intervenors have not set forth facts sufficient to create a genuine dispute on that issue as required to survive a motion for summary disposition.

MEMORANDUM AND ORDER
(Granting Motion for Summary Disposition of Contention 2)

This case arises from an Application by UniStar Nuclear Operating Services, LLC, and Calvert Cliffs 3 Nuclear Project, LLC (Applicant) for a combined license (COL) for one U.S. Evolutionary Power Reactor (U.S. EPR) to be located at the Calvert Cliffs site in Lusby, Calvert County, Maryland. Before the Board is the legal issue that we admitted in our ruling of March 24, 2009, concerning Contention 2: the timing of the financial test for a parent company guarantee of funds for decommissioning a nuclear power plant. The parties have filed briefs on that issue, as we requested. In addition, the NRC Staff has moved for summary disposition of Contention 2 because, it contends, the financial test need not be met until after the COL is issued, and therefore it is not a material issue and is not within the scope of this proceeding. The Applicant has joined in the Motion for Summary Disposition. In addition to supporting the Staff's argument for summary disposition, the Applicant argues in the alternative that Contention 2 is

moot because the COL Application (COLA) includes the information necessary to satisfy the financial test, assuming the information is required.

We resolve the timing of the financial test issue in favor of the Intervenors.[1] We conclude that the financial test for a parent company guarantee is a material issue because the Staff must decide whether the test is satisfied in order to grant the COL. We therefore deny the Motion for Summary Disposition on the ground argued by the Staff. We agree, however, with the Applicant's alternative argument for summary disposition. We will therefore grant the Motion for Summary Disposition of Contention 2 on that ground.

I. BACKGROUND

On July 13, 2007, and March 14, 2008, pursuant to Subpart C of 10 C.F.R. Part 52, the Applicant filed a COLA to construct and operate a U.S. EPR at its existing Calvert Cliffs site.[2] On September 26, 2008, the NRC published a notice of opportunity for hearing on the Application, requiring that any contentions be filed within 60 days.[3] The Intervenors filed a Petition to Intervene on November 19, 2008.[4] The Applicant and the NRC Staff filed answers to the Intervenors' Petition to Intervene on December 15, 2008.[5] The Intervenors filed their reply on December 22, 2008.[6]

The Board held oral argument on February 20, 2009. The Board issued a Memorandum and Order on March 24, 2009, in which it found that the Intervenors had standing, admitted their first contention as pleaded, and admitted their second and seventh contentions as modified by the Board.[7] The Board also determined

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[1] Intervenors are the Nuclear Information and Resource Service, Beyond Nuclear, Public Citizen Energy Program, and Southern Maryland Citizens Alliance for Renewable Energy Solutions.

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

[3] *Id.*

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

[5] *See* NRC Staff's Answer to Petition to Intervene in Docket No. 52-016, Calvert Cliffs 3 Nuclear Power Plant Combined Construction and License Application (Dec. 15, 2008) (Staff Ans.); Applicant's Answer to Petition to Intervene (Dec. 15, 2008) (App. Ans.).

[6] *See* Joint Petitioners' Reply to NRC Staff's Answer to Petition to Intervene and Applicant's Answer to Petition to Intervene (Dec. 22, 2008) (Reply).

[7] *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170 (2009).

that the Intervenors' remaining contentions were inadmissible, admitted the Intervenors as parties, and granted their request for a hearing.[8]

The Intervenors' second contention, the subject of this ruling, concerns decommissioning funding assurance, the process through which a COL applicant assures the NRC that funds will be available to decommission a site or facility.[9] In their second contention, the Intervenors alleged:

> The Decommissioning Funding Assurance described in the Application is inadequate to assure sufficient funds will be available to fully decontaminate and decommission Calvert Cliffs-3. Applicants must use the prepayment method of assuring decommissioning funding.

Pet. at 8. In support of Contention 2, the Intervenors argued that the method of funding the decommissioning of Calvert Cliffs Unit 3 selected by the Applicant, which includes a parent-company guarantee from Constellation Energy, would be inadequate to ensure that funding will be available at the time of decommissioning. *Id.* at 9. According to the Intervenors, Constellation Energy's responsibility for five other reactors will lead to high decommissioning liabilities that it may not be able to cover due to current loss of share value.[10] The Intervenors argued on this basis that the Applicant should not be allowed to use a parent company guarantee from Constellation Energy, and that we should require the Applicant to use the prepayment method of decommissioning funding assurance. *Id.* at 8.

The Applicant opposed admission of this contention. It explained that it plans to use a combination of the parent guarantee, a sinking fund, and letters of credit to cover decommissioning costs. App. Ans. at 28-29. The Applicant argued that the parent company guarantee test need not be satisfied during the COL process. Instead, the Applicant maintained it was required to file with its COLA only the decommissioning report that contained a certification that financial assurance for decommissioning will be provided no later than 30 days after the Commission publishes notice of initial fuel loading in the *Federal Register* under 10 C.F.R. § 52.103(a). App. Ans. at 31. The Applicant explained that the notice under

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[8] *Id.*

[9] 10 C.F.R. § 50.75(a). "Decommission" is defined in Part 50 as meaning

> to remove a facility or site safely from service and reduce residual radioactivity to a level that permits —
>
> (1) Release of the property for unrestricted use and termination of the license; or
>
> (2) Release of the property under restricted conditions and termination of the license.

Id. § 50.2.

[10] Appendix A to Part 30 allows an applicant to provide reasonable assurance of the availability of decommissioning funds from a parent guarantee by demonstrating that the parent company passes a financial test set forth in that section. The Applicant asserts that Constellation Energy, who would be providing the parent guarantee, passes this financial test. *See* App. Ans. at 30.

section 52.103(a) occurs after the COL is issued, when the licensee is ready to load fuel in the reactor. *Id.* at 31-32. Thus, the Applicant asserted that, although the certification that financial assurance will be provided must be included in the report accompanying the COLA, the actual completed and signed financial documents need not be submitted to the NRC until after the license is issued. According to the Applicant, there is no legal requirement that a parent guarantee be authorized, or that the financial test for such a guarantee be satisfied, during the COL process. *Id.* The Applicant further asserted that, contrary to the Intervenors' position, "neither market capitalization nor share price are variables to be used in the financial test" set forth in Appendix A to 10 C.F.R. Part 30. *Id.* at 30.

The NRC Staff also opposed admission of Contention 2. The Staff agreed with the Applicant that, although a COL application is required to have a decommissioning report, certification of financial assurance is not required until 30 days after the Commission publishes notice pursuant to section 52.103(a). Staff Ans. at 22. Thus, Staff contended that Contention 2 is not material to the findings the NRC must make to support this action.[11]

The Board admitted Contention 2 in part. We concluded that it is beyond our authority to require the Applicant to choose a particular method of decommissioning funding, and therefore we did not admit the request that we direct the Applicant to use the prepayment method.[12] However, we found that the contention required resolution of a legitimate issue of law: the proper timing for an applicant to demonstrate that a parent company guarantee complies with the financial test. We stated that, if the Intervenors were correct that the test must be satisfied during the licensing process rather than after the section 52.103(a) notice, then the Intervenors would have proposed a viable contention of omission. This was based on our understanding that the COLA did not include the information necessary to demonstrate that the Applicant's parent company guarantee from Constellation Energy complies with the financial test. On the other hand, if the financial tests need not be satisfied until after the license has been issued, then the contention would be inadmissible.[13]

The Board concluded that the legal issue should be segregated from the other contentions and immediately briefed.[14] After issuance of the Order, the Board convened a telephone scheduling conference, and then issued a scheduling order that, among other things, provided for simultaneous briefing of the decommissioning

[11] 10 C.F.R. § 2.309(f)(1)(iv).

[12] *Calvert Cliffs,* LBP-09-4, 69 NRC at 200.

[13] *Id.*

[14] *Id.*

funding issue.[15] The scheduling order also allowed the parties to file replies to the other parties' briefs on the issue.[16]

The parties have filed the briefing authorized by our scheduling order, and the matter is now ready for decision. However, the briefs now before us present an additional issue that we did not anticipate. In a footnote to its brief on Contention 2, the Applicant for the first time informed the Board that, although it still contends it was not required to do so, it had submitted with its Application a letter to show that Constellation Energy could pass the financial test in Appendix A to Part 30 for a parent company guarantee.[17] Thus, even if the financial test must be satisfied during the COL process, as the Intervenors argue, the Applicant had submitted the information necessary to show that the test is met. Accordingly, the Applicant for the first time argued that Contention 2 is moot. App. Br. at 3 n.2.

In addition to filing briefs on the timing of the financial test, the NRC Staff moved for summary disposition of Contention 2.[18] The Staff argued that summary disposition should be granted because the purely legal issue admitted by the Board is outside of the scope of the COL proceeding and not material to the findings the NRC must make to grant the license.[19] The Motion was based on the arguments presented in the Staff's Brief on Decommissioning Funding Assurance.[20] The Staff did not argue that Contention 2 is moot. However, the Applicant filed a response to the Staff's Motion, which not only agreed with the Staff's argument for summary disposition but also repeated its assertion that the COLA includes the information necessary to satisfy the financial test for a parent company guarantee, and that as a result Contention 2 is now moot.[21] The Board permitted the Intervenors to file a response to this new basis for summary disposition.[22]

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[15] Licensing Board Order (Establishing Schedule to Govern Further Proceedings) (Apr. 22, 2009) (unpublished) (Scheduling Order).

[16] *Id.* at 2.

[17] Applicant's Brief on Contention 2 (May 15, 2009) at 3 n.2 (App. Br.). The letter is dated June 18, 2007, and is signed by John R. Collins, Constellation Energy's Chief Financial Officer. It is included as Appendix A-6 to Revision 0 of the Applicant's COLA, and is also referred to in Revisions 2, 3, and 4. The letter includes a one-page enclosure reporting various items of financial data that, according to Mr. Collins, demonstrate Constellation Energy's qualifications under NRC Regulatory Guide 1.159, Alternative II, to provide a parent company guarantee. The enclosure reports that Constellation Energy's tangible net worth was approximately $4.7 billion, its total U.S. assets were valued at about $21.8 billion, and its most recent bond rating (by Standard & Poor's) was "BBB." The letter states that the estimated decommissioning cost for Calvert Cliffs Unit 3 is $378 million.

[18] NRC Staff Motion for Summary Disposition of Contention 2 (May 15, 2009) (Staff Motion).

[19] *Id.* at 2.

[20] NRC Staff's Brief on Decommissioning Funding Assurance (May 15, 2009) at 1-2 (Staff Br.).

[21] Applicant's Response to Motion for Summary Disposition of Contention 2 (May 26, 2009) at 3 (App. Response).

[22] Licensing Board Order (Permitting Intervenor Response to Applicant's New Basis for Summary Disposition) (May 28, 2009) (unpublished).

The Intervenors filed that response on June 4, 2009, disputing the Applicant's argument that the Application includes the information necessary to satisfy the financial test.[23]

II. ANALYSIS

We will first consider whether the Applicant's mootness argument concerning Contention 2 precludes us from addressing the legal issue on which we requested briefing, the timing of the financial test for a parent company guarantee. Having concluded that it does not, we address that legal issue on the merits. Finally, we evaluate the Applicant's alternative argument for summary disposition, that Contention 2 is moot because its COLA contains the information required to satisfy the financial test.

A. The Effect of the Applicant's Mootness Argument on the Scope of Our Ruling

No party has suggested that the Applicant's mootness argument compels us to avoid the legal issue concerning the timing of the financial test. Nevertheless, we address that question on our own initiative in order to ensure that we do not exceed the scope of our authority in this case. We conclude that we may consider the legal question regarding the timing of the financial test even if Contention 2 is moot because the legal question is likely to recur in this proceeding, it has been thoroughly briefed and is ready for decision, our ruling will provide guidance to the parties concerning matters that fall within the scope of the proceeding, and there is no practical advantage in deferring our ruling to a later date.

The mootness doctrine derives from the Constitution's limitation of federal courts' jurisdiction to "cases" or "controversies."[24] The Commission has explained that, although it "is not strictly bound by the doctrine, the agency's adjudicatory tribunals have generally adhered to the principle."[25] The Commission has further stated that a contention alleging that a license application omits material informa-

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[23] Joint Intervenors' Response to UniStar's Assertion That Contention 2 Is Moot (June 4, 2009) at 3 (Response).

[24] *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-8, 37 NRC 181, 185 (1993) (citing *Flast v. Cohen,* 392 U.S. 83, 94 (1968)). *See also Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-10, 37 NRC 192, 200 (1993).

[25] *Advanced Medical Systems, Inc.,* CLI-93-8, 37 NRC at 185 (citing *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 54 (1978), *remanded on other grounds sub nom. Minnesota v. NRC,* 602 F.2d 412 (D.C. Cir. 1979)).

tion becomes moot when the applicant cures the omission.[26] The Applicant argues that Contention 2 is moot for that reason. *See* App. Response at 3.

In general, when a claim becomes moot in federal court, the court loses jurisdiction to decide the merits of that claim.[27] But, as noted in a leading treatise on federal court practice and procedure, a decision on the merits "may be appropriate if the same basic dispute is likely to recur in the future, unless it seems sufficient to await the event or better to defer to another court."[28]

Furthermore, we are not invariably required to avoid consideration of a legal issue in circumstances where a federal court would do so. When a federal court dismisses a claim as moot and avoids any further consideration of the merits of that claim, it does so because the claim no longer satisfies the case or controversy requirement of Article III,[29] a requirement rooted in the separation of powers.[30] Although the Commission commonly looks to Article III concepts for guidance, we are not required to automatically follow them in all respects because NRC proceedings are not subject to Article III.[31] In NRC cases, the finding that a contention is moot does not implicate constitutional constraints, which permits greater flexibility to weigh practical considerations in our cases.

That we may take practical considerations into account is suggested by *Prairie Island,*[32] in which the Appeal Board considered the extent to which it could consider the merits of issues that had become moot while on appeal. It observed:

> Because we are not subject to the jurisdictional limitations placed upon the Federal courts by the "case or controversy" provision in Article III of the Constitution, there would appear to be no insuperable barrier to our rendition of an advisory opinion on issues which have been indisputably mooted by events occurring subsequent to licensing board decision.[33]

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[26] *See 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).

[27] *See Steel Co. v. Citizens for a Better Environment,* 523 U.S. 83, 101-02 (1998); *Iron Arrow Honor Society v. Heckler* 464 U.S. 67, 70 (1983) (per curiam).

[28] 13A Charles Alan Wright et al., Federal Practice and Procedure § 3533.2 (2d ed. 1984) (footnote omitted); *see also In re Campbell,* 628 F.2d 1260, 1262 (9th Cir. 1980); *Kodiak Oil Field Haulers, Inc. v. Teamsters Union Local No. 959,* 611 F.2d 1286, 1290 (9th Cir. 1980).

[29] "The doctrines of standing, ripeness, and mootness . . . all derive from the 'case or controversy' requirement of Article III." *Spirit of the Sage Council v. Norton,* 411 F.3d 225, 230 (D.C. Cir. 2005) (citations omitted).

[30] *See Steel Co.,* 523 U.S. at 101 ("The . . . constitutional elements of jurisdiction are an essential ingredient of separation and equilibration of powers").

[31] *See Envirocare of Utah v. NRC,* 194 F.3d 72, 75 (D.C. Cir. 1999); *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 n.2 (1998); *International Uranium (USA) Corp.* (Receipt of Material from Tonawanda, New York), CLI-98-23, 48 NRC 259, 264 (1998).

[32] *Prairie Island,* ALAB-455, 7 NRC at 54.

[33] *Id.*

The Appeal Board cautioned that it would not render such an opinion "in the absence of the most compelling cause" because of the crowded "state of [its] docket — among other considerations,"[34] but this confirms that pragmatic concerns, not just Article III's case or controversy requirement, should guide our determination. We therefore conclude that a finding of mootness does not necessarily preclude all consideration of the merits in NRC proceedings, even if it would have that effect in federal court, and that we may consider the merits to the extent doing so will promote the fair and expeditious resolution of the case before us and there are no significant countervailing concerns.

Applying the factors we have discussed, we conclude that even if Contention 2 is moot we should resolve the legal issue concerning the timing of the financial test. The first reason for doing so is that the issue is likely to recur. A finding that a license applicant has cured an omission does not preclude litigation concerning the adequacy of the information the applicant has supplied. Instead, such a finding means only that a contention based on the omission is moot and that "Intervenors must timely file a new or amended contention that addresses the factors in [10 C.F.R. § 2.309(f)(1)] in order to raise specific challenges regarding the new information."[35] It is not unusual in our practice for a new or amended contention to be filed in response to information that cures an omission. In addition, NRC regulations permit the filing of new or amended contentions based on new information, and the filing of late contentions if sufficient justification is provided. 10 C.F.R. § 2.309(f)(2) and (c). If Petitioners file new, amended, or late contentions concerning the information submitted by the Applicant to satisfy the financial test, then the legal issue concerning the timing of the test will be before us again because we will have to decide if the test is material to the NRC's decision to issue the COL.

That legal issue has already been fully briefed, and there is no apparent advantage in delaying its resolution to a later date. Resolution of the question depends solely upon interpreting the relevant agency regulations, and that analysis can be conducted just as easily now as after the filing of a new or amended contention. Moreover, it will better serve the fair and efficient handling of this case if we resolve the legal issue concerning the timing of the financial test now rather than postponing it. In fact, we must decide the legal issue now in order to determine whether we should grant summary disposition on the basis argued by the Staff, that the financial test for a parent company guarantee is not material to the findings the NRC must make and is outside the scope of a COL proceeding.[36]

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[34] *Id.*

[35] *McGuire/Catawba,* CLI-02-28, 56 NRC at 383.

[36] To decide summary disposition motions in Subpart L proceedings such as this, licensing boards apply the standards of Subpart G, which are set forth in 10 C.F.R. § 2.710(d)(2). *See* 10 C.F.R.

(Continued)

And it is important to the future course of this proceeding whether we grant summary disposition on the basis argued by the Staff. If the Staff's argument for summary disposition is correct, then the Intervenors would be precluded from filing a new or amended contention challenging the adequacy of the financial information supplied by the Applicant because that issue would be outside the scope of the proceeding. But if we dismiss Contention 2 solely on the alternative ground of mootness, then the Intervenors would not be so precluded. The parties would be better served by knowing now whether the financial test for a parent company guarantee is material to issuing the COL so that they can devote their efforts to issues that fall within the scope of this proceeding.

In addition, the same legal issue is pending in another COL proceeding.[37] The participants in that case have filed the same briefs that are before us concerning the timing of the financial test. As a result, if we were to decline to rule on that issue we would simply be passing the question on to another board to decide based on the same briefs that are now before us. We see no advantage to such a procedure. Furthermore, given the number of COL proceedings pending before the agency, we can realistically expect the same issue to arise in other proceedings. Thus, the legal issue before us "might very well be of importance in the disposition of a number of present and future licensing proceedings."[38] Our decisions "have no precedential effect beyond the immediate proceeding in which they were issued,"[39] and therefore other boards will be free to reach their own conclusions. But other boards may benefit from having the opportunity to review our analysis of the legal issue, even though they are not bound by it.

Thus, unlike many cases in which a contention becomes moot, this is not an instance where an analysis of the merits would be an "'an empty exercise.'"[40] We therefore turn to the question whether a COL applicant must show that the financial test for a parent company guarantee is satisfied. If it must, we will then consider the Applicant's alternative ground for summary disposition — that it submitted the required information.

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§ 2.1205(c). A motion for summary disposition must be granted "if the filings in the proceeding . . . together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law." 10 C.F.R. § 2.710(d)(2).

[37] *PPL Bell Bend LLC* (Bell Bend Nuclear Power Plant), Docket No. 52-039-COL.

[38] *Prairie Island,* ALAB-455, 7 NRC at 55.

[39] *Sequoyah Fuels Corp.,* CLI-95-2, 41 NRC 179, 190 (1995).

[40] *David B. Kuhl, II* (Denial of Senior Reactor Operator License), LBP-09-14, 69 NRC 193, 196 (2009) (quoting *Alfred J. Morabito* (Senior Operator License for Beaver Valley Power Station, Unit 1), CLI-88-4, 28 NRC 5, 6 (1988)).

B. The Timing of the Financial Test

We find sufficient basis in both the text and structure of the regulations and the administrative history to show that a COLA must provide reasonable assurance of adequate decommissioning funding, that this assurance must identify the method or methods of funding the applicant plans to use, and that the assurance must provide the information required by 10 C.F.R. § 50.75(e)(1)(iii)(B) if the applicant plans to use a parent company guarantee.

1. Summary of the Parties' Arguments

Sections 50.33(k)(1) and 50.75 of the Part 50 regulations require that COLAs contain certain information about decommissioning funding assurance. The question here is whether the regulations require the COL applicant to identify in the application its chosen method or methods of providing financial assurance and to show that any applicable financial test is satisfied. The Intervenors argue that the information must be provided in the COLA, and the test must be satisfied before the COL is issued.[41] They contend that "the plain language and the regulatory context of NRC regulations unambiguously show that COL applicants must provide sufficient information in their COLAs to demonstrate reasonable assurance of adequate decommissioning funding, including the financial test required by 10 C.F.R. § 50.75(e)(1)(iii)(B)."[42] Interveners assert that, although the COL applicant need not provide the fully executed financial assurance documents at the COL stage, the applicant must provide sufficient information to support a finding of reasonable assurance. The Intervenors further argue that the regulatory interpretation offered by the Applicant and the NRC Staff would effectively eliminate or render meaningless other related provisions of NRC regulations, and would conflict with the public hearing requirement of section 189a of the Atomic Energy Act (AEA), 42 U.S.C. § 2239(a).[43]

The NRC Staff argues that NRC regulations do not even require a COL applicant to specify the method it plans to use to provide financial assurance of decommissioning funding, much less demonstrate that the method passes NRC financial tests. Staff Br. at 1-2. According to the Staff, "under Section 50.75(b)(1) and (4), all that is required is that the combined license application contain a certification that decommissioning funding financial assurance will be provided no later than 30 days after the NRC publishes notice in the Federal Register under Section 52.103(a)." *Id.* at 7-8. The certification of the method of financial

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[41] Joint Intervenors' Brief Regarding Decommissioning Funding Questions Raised in LBP-09-04 (May 15, 2009) at 6 (Inter. Br.).

[42] *Id.*

[43] *Id.*

assurance and the executed financial instrument are not due until after that notice is published, the Staff argues. The Applicant in fact identified its planned method of financial assurance in its COLA, but according to the Staff it did more than was required. *Id.* at 1-2. Therefore, the Staff maintains, issues pertaining to the Applicant's method of funding assurance are not material to the COL and do not create a genuine dispute with the Application.

The Applicant's arguments are similar to those of the NRC Staff. The Applicant notes that it is not required to have the financial assurance mechanism in place at the time of its COLA, but rather just prior to fuel loading. According to the Applicant, "[r]equiring passage of the financial test in conjunction with a COL application, years before the decommissioning funding assurance could be needed, has no basis in the regulation, would serve no purpose, and would not advance any legitimate regulatory objective." App. Br. at 7. The Applicant further contends that "the Commission intended for licensees to demonstrate passage of the financial test only at the time when decommissioning financial assurance is required to be in place (i.e., prior to fuel load), and then annually from that point forward, as a routine operational and regulatory matter." *Id.*

2. Summary of the NRC Regulations Governing Decommissioning Funding Assurance

In order to resolve the parties' conflicting interpretations, we must begin with the language and structure of the relevant regulations.

> As is the case with statutory construction, interpretation of any regulation must begin with the language and structure of the provision itself. 1A Sutherland, Statutory Construction § 31.06 (4th ed. 1984); *Lewis v. United States,* 445 U.S. 55, 60 (1980). Further, the entirety of the provision must be given effect. 2A Sutherland, Statutory Construction § 46.06 (4th ed. 1984). Although administrative history and other available guidance may be consulted for background information and the resolution of ambiguities in a regulation's language, its interpretation may not conflict with the plain meaning of the wording used in that regulation. *Abourezk v. Reagan,* 785 F.2d 1043, 1053 (D.C. Cir. 1986), *aff'd,* [484 U.S. 1] (1987); *GUARD v. NRC,* 753 F.2d 1144, 1146 (D.C. Cir. 1985).[44]

Section 50.33(k)(1) provides that the COLA must include "information in the form of a report, as described in § 50.75, indicating how reasonable assurance will be provided that funds will be available to decommission the facility." Section 50.75(b) describes the contents of the required report. The first paragraph of that

[44] *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 288 (1988).

section requires that "[e]ach power reactor applicant for . . . an operating license," and each COL applicant for a power reactor of the type and power level specified in section 50.75(c), submit to the NRC "a decommissioning report, as required by § 50.33(k)."

The general requirement to submit a decommissioning report is followed by a series of four numbered paragraphs, section 50.75(b)(1)-(4), each of which describes a specific requirement pertaining to the report or the amount of financial assurance set forth in the report. Section 50.75(b)(1) states that the report "must contain a certification that financial assurance for decommissioning will be provided no later than 30 days after the Commission publishes notice in the *Federal Register* under § 52.103(a)" in an amount not less than that calculated using the table found in section 50.75(c)(1), adjusted as required by section 50.75(c)(2).[45] Section 50.75(b)(2) directs that the amount of financial assurance be adjusted annually, using a rate calculated pursuant to section 50.75(c)(2).[46]

Section 50.75(b)(3) requires that the amount of financial assurance be "covered by" one or more of the funding methods identified in section 50.75(e) as acceptable to the NRC.[47] The acceptable methods of decommissioning funding are set forth in 10 C.F.R. § 50.75(e)(1). They include a sinking fund,[48] prepayment of the entire decommissioning amount,[49] and a "surety method, insurance, or other guarantee method."[50] The regulations state that "[a] parent-company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to 10 CFR part 30."[51]

Section 50.75(b)(4) requires that the applicant's certification include a copy of the financial instrument obtained to satisfy the requirements of section 50.75(e). However, it expressly exempts a COL applicant from that requirement. Instead, a COL applicant must obtain the financial instrument and submit a copy to the Commission as provided in section 50.75(e)(3). Under the latter provision, 2 years and 1 year before the scheduled loading of fuel, the holder of a COL (i.e.,

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[45] 10 C.F.R. § 50.75(b)(1).

[46] *Id.* § 50.75(b)(2).

[47] *Id.* § 50.75(b)(3).

[48] *Id.* § 50.75(e)(1)(ii). An external sinking fund is "a fund established and maintained by setting funds aside periodically in an account segregated from licensee assets and outside the administrative control of the licensee and its subsidiaries or affiliates in which the total amount of funds would be sufficient to pay decommissioning costs at the time permanent termination of operations is expected." *Id.*

[49] *Id.* § 50.75(e)(1)(i). "Prepayment is the deposit made preceding the start of operation . . . into an account segregated from licensee assets and outside the administrative control of the licensee and its subsidiaries and affiliates of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs at the time permanent termination of operations is expected." *Id.*

[50] *Id.* § 50.75(e)(1)(iii).

[51] *Id.* § 50.75(e)(1)(iii)(B).

a licensee) must "submit a report to the NRC containing a certification updating the information described under [10 C.F.R. § 50.75(b)(1)], including a copy of the financial instrument to be used."[52] The final documents must be submitted to the NRC 30 days after the notification in the *Federal Register* pursuant to 10 C.F.R. § 52.103(a) that the licensee has set a date to load fuel.[53] At that time, the licensee must submit "a report containing a certification that financial assurance for decommissioning is being provided in an amount specified in the licensee's most recent updated certification, including a copy of the financial instrument obtained to satisfy the requirements of [10 C.F.R. § 52.75(e)]."[54]

3. The COL Applicant Must Identify the Method of Funding and Show That Any Applicable Financial Test Is Satisfied

All the parties agree that, for COLs, the final signed documents providing the financial assurance are not due until 30 days after the notice issued pursuant to section 52.103(a).[55] This means the final signed documents are not due until after the COL is issued. But this does not answer the question whether the COL applicant's decommissioning report submitted pursuant to section 50.75(b) must identify the method or methods of financial assurance it intends to use and show that any applicable financial test is satisfied. An applicant can provide this information during the licensing process even though the final signed documents providing the financial assurance are not due until after the license is issued. We conclude that is what the regulations require of a COL applicant.

The requirement that the decommissioning report specify not only the amount of financial assurance but the method of providing such assurance follows from the language and structure of section 50.75(b). As we have explained, that section both requires that power reactor applicants submit a decommissioning report and, in section 50.75(b)(1)-(4), specifies information that the report must include. We must construe the four numbered paragraphs of section 50.75(b) in light of their placement in the regulatory scheme.[56] The most natural way to read a provision that sets forth a general obligation (in this instance, the obligation to submit the decommissioning report) followed by a set of specific requirements is that

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[52] *Id.* § 50.75(e)(3).

[53] *Id.*

[54] *Id.*

[55] Inter. Br. at 5; Staff Br. at 6; App. Br. at 6.

[56] *See Bailey v. United States,* 516 U.S. 137, 145 (1995) ("We consider not only the bare meaning of the word but also its placement and purpose in the statutory scheme").

the specific requirements provide the details necessary to fulfilling the general obligation. That is how we read section 50.75(b) in its entirety.[57]

The specific requirements mandate not only that the decommissioning report state the amount of financial assurance to be provided,[58] but also that the amount of financial assurance be "covered by" one or more of the funding methods identified in section 50.75(e) as acceptable to the NRC.[59] Under the plain meaning of the regulations, the requirement that the designated amount of financial assurance be "covered by" an acceptable method arises concurrently with the requirement that the applicant submit a decommissioning report to the NRC. It cannot plausibly be construed as remaining inchoate for years after the report is submitted, and only springing into life after the license is issued and the licensee is ready to load fuel.

Since the requirement of section 50.75(b)(3) applies to the amount of financial assurance specified in the decommissioning report, we think it readily apparent that the report must explain how that requirement will be fulfilled. Although section 50.75(b)(3) does not expressly mandate that the acceptable method of financial assurance be identified in the report, we can think of no purpose for requiring that the amount specified in the report be covered by an acceptable method if the applicant is not required to say anything in the report about the acceptable method it proposes to use. "Statutory language must be read in context and a phrase 'gathers meaning from the words around it.'"[60] Here, section 50.75(b)(3) requires that the decommissioning amount be covered by a method acceptable to the NRC. Section 50.75(b)(3) appears within a section of the regulations that lists the requirements for the decommissioning report. That context means that the report must explain how the requirement of section 50.75(b)(3) will be satisfied. The report must do so for the NRC Staff to determine whether the amount of financial assurance stated in the decommissioning report is in fact covered by a method acceptable to the NRC, as section 50.75(b)(3) states that it must be. We doubt the Commission would impose an obligation on a COL applicant if the Staff would not to be able to verify compliance with that obligation until years later, after the COL is issued. Furthermore, the decommissioning report must identify the method of providing financial assurance

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[57] *See Textron Lycoming Reciprocating Engine Division, Avco Corp. v. United Automobile, Aerospace, Agricultural Implement Workers of America, International Union,* 523 U.S. 653, 657 (1998) ("[I]t is a 'fundamental principle of statutory construction . . . that the meaning of a word cannot be determined in isolation, but must be drawn from the context in which it is used'" (quoting *Deal v. United States,* 508 U.S. 129, 132 (1993))).

[58] 10 C.F.R. § 50.75(b)(1).

[59] *Id.* § 50.75(b)(3).

[60] *Jones v. United States,* 527 U.S. 373, 389 (1999) (quoting *Jarecki v. G.D. Searle & Co.,* 367 U.S. 303, 307 (1961)).

if the report is to "indicat[e] how reasonable assurance will be provided that funds will be available to decommission the facility," as required by section 50.33(k)(1).

This reading gains further support from the proviso of section 50.75(b)(4). As described previously, that proviso defers until after the license is issued the obligation that would otherwise apply to a COL applicant to include in its certification under section 50.75(b)(1) a copy of the financial instrument obtained to satisfy the requirements of section 50.75(e). By contrast, the regulations contain no deferral of the obligation that section 50.75(b)(3) imposes upon COL applicants (or any other applicants). The fact that the Commission included language deferring the obligation that would otherwise apply to COL applicants in section 50.75(b)(4), but included no equivalent provision in section 50.75(b)(3), confirms that the Commission did not intend to defer the requirement of section 50.75(b)(3) until after the license is issued. In a case that involved a similar question of statutory interpretation, the Supreme Court refused to read an exemption into a statute when it was clear from other provisions of the same law that Congress was fully capable of drafting an exemption when it saw fit to do so.[61] Similarly, section 50.75(b)(4) shows that the Commission was fully capable of drafting a provision deferring an obligation that would otherwise apply to COL applicants. Following the Supreme Court's reasoning, we interpret the failure to include such a deferral in section 50.75(b)(3) as deliberate, not inadvertent. Accordingly, the requirement imposed upon COL applicants by section 50.75(b)(3), which on its face applies concurrently with the duty to submit a decommissioning report, may not be deferred until after the COL is issued.

Thus, contrary to the position of the NRC Staff, the Applicant's decommissioning report pursuant to section 50.75(b) must be something more than a certification that the required information concerning the method of decommissioning funding will be provided after the license is issued. The report itself must explain "how reasonable assurance will be provided."[62] This means that the COL applicant must identify the method of decommissioning funding assurance it proposes to use and show that the method complies with any applicable financial test. If the applicant merely stated the method of funding but failed to show that an applicable financial test is satisfied, it would fail to demonstrate that the amount of financial assurance is "covered by" one or more of the funding methods identified in section 50.75(e) as acceptable to the NRC.[63] A parent company guarantee, standing alone, is not a funding method identified in section 50.75(e) as acceptable to the NRC. A parent company guarantee is only an acceptable method of providing financial

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[61] *City of Chicago v. Environmental Defense Fund,* 511 U.S. 328, 337 (1994) ("We agree with respondents that this provision 'shows that Congress knew how to draft a waste stream exemption in RCRA when it wanted to'").

[62] 10 C.F.R. § 50.33(k)(1).

[63] *Id.* § 50.75(b)(3).

assurance "if the guarantee and test are as contained in appendix A to 10 CFR part 30."[64] Compliance with section 50.75(b)(3) therefore requires that the applicant demonstrate compliance with any applicable financial test.

The Staff notes that the regulations contain requirements for biannual updates of the status of decommissioning funding, which means the Commission contemplated that the information might change over time. Staff Br. at 9. The holder of a COL must begin filing biannual reports on the status of decommissioning funding once the Commission has made a finding that all acceptance criteria in the license have been met.[65] The reports must include the information specified in section 50.75(f)(1), including "any modification occurring to a licensee's current method of providing financial assurance since the last submitted report."[66] We recognize that the Commission provided flexibility to licensees to change their method of decommissioning funding during the many years that will elapse before decommissioning actually takes place. But this in no way alters the requirement that the amount of financial assurance certified in the decommissioning report must be covered by a method acceptable to the NRC. If the licensee changes its method of decommissioning funding assurance, the new method will also have to pass any applicable financial test.

4. The Administrative History

The administrative history provides further support for our reading of the regulations.

In 2007, the Commission made various revisions to its regulations governing the licensing and approval processes for nuclear power plants.[67] Concerning section 50.75, the Commission stated:

> The requirements of § 50.75 are intended to ensure that entities who construct and operate a nuclear power plant will have sufficient funds at the end of the operational life of the plant to complete the decommissioning of the plant. Section 50.75 requires a nuclear power plant operating license application to address the predicted costs of decommissioning, provide financial assurance by one of the means specified in the regulations, and submit evidence that one or more of these means has been established.[68]

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[64] *Id.* § 50.75(e)(1)(iii)(B).

[65] *Id.* § 50.75(f)(1) (citing 10 C.F.R. § 52.103(g)).

[66] *Id.*

[67] Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352 (Aug. 28, 2007).

[68] *Id.* at 49,406.

As this statement indicates, the Part 50 regulations then in effect required that the funding assurance documentation be included in the operating license application. In the 2007 rulemaking, the Commission decided that some of the requirements directed at applicants under the two-phase licensing process in Part 50 "are not well suited to the combined license process under part 52."[69] The Commission therefore allowed COL applicants to delay submission of the financial instrument until after licensing, reasoning that "requiring the combined license applicant to comply with the current requirement in § 50.75(b)(4) . . . would place a more stringent requirement on the combined license applicant, inasmuch as that applicant would be required to fund decommissioning assurance at an earlier date as compared with the operating license applicant."[70] Thus, the Commission revised section 50.75(b)(4) to allow COL licensees to wait until 2 years before and 1 year before the scheduled fuel load date to file a copy of the financial instrument "to be used" (i.e., an unexecuted copy of the instrument).[71] The Commission also revised section 50.75(b)(1) to allow COL licensees to wait until 30 days after publication of the *Federal Register* notice regarding fuel loading to submit an executed financial instrument (i.e., the financial instrument "obtained to satisfy the requirements of paragraph (e) [of 10 C.F.R. § 50.75]").[72]

However, the Commission did not alter the timing of any of the other requirements section 50.75 imposes upon license applicants. It did not change the requirement of section 50.75(b)(3) that decommissioning funding must be covered by one of several methods as set forth in section 50.75(e); nor did it modify section 50.75(e)(1)(iii)(B), which precludes an applicant from relying on a parent company guarantee unless the parent meets the financial test in Appendix C to 10 C.F.R. Part 30. Thus, the Commission did not excuse a COL applicant from identifying in its license application the funding mechanism it has chosen, or from showing that it is eligible to rely on that decommissioning funding mechanism. Unlike the requirements that the Commission did modify, these unchanged requirements do not force applicants to actually fund decommissioning assurance, but only to explain how it will be funded and to show that the funding mechanism can satisfy any applicable financial test. They therefore do not impose the more stringent funding burdens on COL applicants that the Commission sought to prevent.

Thus, the single aspect in which the Commission stated it intended to relax the decommissioning funding regulations for COLAs was the timing of the submission of the executed version of the financial instrument. Given that the Commission made a deliberate effort to explain the changes it did intend to make

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[69] *Id.* at 49,406-07, 49,502-03.

[70] *Id.*

[71] *Id.* at 49,503.

[72] *Id.*

to section 50.75, the failure to mention any other changes is a telling indication that none were intended.

The Commission also stated in the 2007 *Federal Register* notice that it had modified the final rule by eliminating the requirement that a combined license holder submit annual reports during the construction period, and instead requiring the "updating reports 2 years and 1 year before the date scheduled for initial loading of fuel . . . ."[73] The Commission explained that its objective was to allow

> sufficient time to evaluate the projected costs of decommissioning, and any licensee-proposed changes in the financial assurance mechanism for funding before fuel is loaded into the reactor and operation commences. This will allow the Commission to take any necessary regulatory action before fuel loading and commencement of operation.[74]

The Staff states we should give this explanation "'special weight'" in interpreting the regulations.[75] But we fail to see how the Commission's explanation aids the Staff's position. By stating that it will evaluate any "licensee-proposed changes in the financial assurance mechanism for funding," the Commission made clear its expectation that, by the time the post-license reports are submitted, the applicant will have already reported to the NRC its financial mechanism for funding. If an applicant were allowed to wait until just before loading fuel to identify its financial assurance mechanism, there would be nothing to "change."

5. AEA Section 189(a)

The interpretation of the NRC regulations supported by the NRC Staff and the Applicant is inconsistent with the requirements of section 189(a) of the AEA. Section 189(a) grants a hearing in any licensing proceeding to "any person whose interest may be affected by the proceeding." This provision has been interpreted to mean that the hearing "must encompass all material factors bearing on the licensing decision."[76]

As we have explained above, the COLA must demonstrate that the amount of financial assurance stated in the applicant's decommissioning report is "covered by" one or more of the funding methods identified in section 50.75(e) as acceptable to the NRC, which includes showing that any applicable financial test is satisfied.[77]

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[73] *Id.* at 49,406-07.

[74] *Id.* at 49,407.

[75] Staff Br. at 8 (quoting *Connecticut Yankee Atomic Power Co.* (Haddam Neck Plant), LBP-01-21, 54 NRC 33, 47 (2001)).

[76] *Union of Concerned Scientists v. NRC,* 735 F.2d 1437, 1443 (D.C. Cir. 1984).

[77] 10 C.F.R. § 50.75(b)(3).

The Applicant's compliance with these requirements is a material factor in the COL proceeding and, as such, may properly be challenged in an adjudicatory hearing. The Staff's and the Applicant's interpretations of the regulations, however, would allow the Applicant to postpone submitting the information necessary to making those determinations until just before fuel is loaded into the reactor. Thus, by the time the Applicant has provided the information upon which the hearing request could be based, the license will already have been issued. This would effectively prevent Intervenors from raising in the licensing hearing the "material" issue of whether the company has provided information sufficient to determine whether it has complied with the adequate assurance requirements of 10 C.F.R. §§ 50.33(k)(1) and 50.75(a) and (b).

The NRC Staff and the Applicant both acknowledge that under their regulatory interpretation an intervenor would not be able to obtain an adjudicatory hearing on whether the Applicant's method of financial assurance complies with NRC requirements; the only available remedy after the license is issued would be a request to the Executive Director of Operations pursuant to 10 C.F.R. § 2.206.[78] Because *Union of Concerned Scientists* requires that all issues material to the licensing decision be subject to a hearing, it would be inconsistent with the AEA to allow COL applicants to wait until after the COL is issued to identify the method of funding assurance they intend to use and show that it meets any applicable financial test.

The Board in the *Vermont Yankee* relicensing proceeding faced a similar issue.[79] That Board concluded that the NRC could not award a license while deferring a required metal fatigue analysis until after the license was issued because, among other things, such a procedure would violate the intervenor's right under AEA § 189(a) to have a hearing on an issue material to the licensing decision. "To defer determining such a significant safety issue until after the license has already been issued," the Board held, "would impermissibly remove it from the opportunity to be reviewed in the hearing process."[80] For the same reason, the NRC Staff may not allow a COL applicant to wait until after the license is issued to submit the information necessary to show that it will use a decommissioning funding method identified in section 50.75(e) as acceptable to the NRC. For a method that requires a financial test, this means the applicant must submit the information required to pass the test before, not after, the license is issued.

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[78] Tr. at 60, 63; Applicant's Reply Brief on Contention 2 (May 26, 2009) at 4-5 (App. Reply).

[79] *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-08-25, 68 NRC 763, 824 (2008).

[80] *Id.*

6. Conclusion

For these reasons, we hold that a COL applicant that intends to rely upon a parent company guarantee as a method of financial assurance must provide the information required by 10 C.F.R. § 50.75(e)(1)(iii)(B) in the COLA. The financial test is material to the findings the NRC must make in order to issue the COL, in particular, the finding that the amount of financial assurance is covered by one or more of the funding methods identified in section 50.75(e) as acceptable to the NRC.[81] We will therefore deny the Staff's Motion for Summary Disposition on the ground that the issue is not material to the licensing decision.

C. Mootness

Because we have ruled that the Intervenors' interpretation of the regulations is correct, we must determine whether Contention 2 is moot because the Applicant submitted the information Intervenors contend is required. We believed at the time we partially admitted Contention 2 that if the Intervenors were correct that the financial test for a parent company guarantee must be satisfied during the licensing process — as we have concluded it must be — then the Intervenors would have proposed a viable contention of omission because the COLA did not include the information to show that Constellation Energy's guarantee passes the financial test. But the Applicant has since pointed out that a Constellation Energy letter dated June 18, 2007, from John R. Collins, Constellation Energy's Chief Financial Officer, included the information required under 10 C.F.R. Part 30, Appendix A, and NRC Regulatory Guide 1.159, Alternative II, to demonstrate Constellation's qualification to provide a parent company guarantee.[82]

Thus, in order to successfully oppose the Applicant's argument for summary disposition, the Intervenors must establish a dispute of material fact concerning whether the omission is cured by the June 18, 2007 letter.[83] We conclude that the Intervenors have not met that burden.

On its face, the June 18, 2007 letter includes the information required by Appendix A to Part 30 for use of a parent company guarantee. App. Br. at 3 n.2. Appendix A includes two alternative tests, and Constellation Energy's letter provides the information required by paragraph A.2 of Appendix A, the second alternative, which requires:

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[81] 10 C.F.R. § 50.75(b)(3).

[82] *See supra* note 17.

[83] It is not our role to decide whether the financial test is satisfied. We need only decide whether there is any genuine dispute of material fact concerning whether the Applicant supplied the required information to the NRC.

(i) A current rating of its most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's, or AAA, AA, A, or BAA as issued by Moody's; and

(ii) Tangible net worth is at least $10 million and at least six times the current decommissioning cost estimate or guarantee amount (or prescribed amount if a certification is used); and

(iii) Assets located in the United States amounting to at least 90 percent of its total assets or at least six times the current decommissioning cost or guarantee amount (or prescribed amount if certification is used).

The Intervenors do not allege that the enclosure to the June 18, 2007 letter omitted any specific item of information required by this regulation. Their response to the Applicant's claim that Contention 2 is moot is limited to reiterating the arguments they made in the contention itself that Constellation Energy is not qualified to provide a parent company guarantee. Response at 3. The Intervenors argued that because of a decrease in the total market capitalization of Constellation Energy, the Applicant cannot rely on the parent guarantee method. Pet. at 10. They also claimed that the combination of decommissioning liabilities from other proposed reactors, such as Nine Mile Point Unit 3 and existing reactors, would prevent use of a parent guarantee. *Id.* According to the Intervenors, "[w]hile UniStar has revised its COLA four times since submitting the June 2007 Letter, it has never updated the information in the letter to address the question of how the drastic change in Constellation Energy's financial circumstances have affected its ability to satisfy the financial test in Appendix A to Part 30." Response at 3.

This is insufficient to establish a dispute of material fact. The Applicant correctly argued that neither market capitalization nor share price are variables to be used in the financial test, nor are these values related to tangible net worth or other financial parameters that are used in the test. App. Ans. at 30. The Intervenors have provided no other information to call into question the use of the parent guarantee on its own or in combination with the other methods referred to in the latest revisions of the COLA (i.e., external sinking fund and letter of credit). We agree with the Applicant that the contention is inadmissible as a challenge to the information provided to demonstrate compliance with the financial test, because Intervenors "'ha[ve] offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation'" regarding the Applicant's ability to use a parent guarantee.[84]

The Intervenors' two additional arguments also fail to demonstrate any dispute of material fact. They note that in COLA Revision 3, submitted in August

[84] App. Ans. at 31-32 (quoting *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003) (quoting *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000))).

2008, the Applicant states that it intends to use "'a parent company guarantee and/or letter of credit, in combination with ongoing contributions to an external sinking fund.'"[85] The Intervenors restate their claim that neither a parent company guarantee nor an external sinking fund would satisfy NRC regulations, and that therefore the Applicant must finance decommissioning through the prepayment method. Response at 2. This argument, however, is not based on any factual information other than the assertions described above. It is therefore not sufficient to keep Contention 2 alive.

Finally, the Intervenors fault Constellation Energy's June 2007 letter because it only addresses the financial qualifications of Constellation Energy but not those of Électricité de France (EDF). According to the Intervenors, the Applicant is 50% owned by Constellation Energy Group, Inc. and 50% owned by EDF. They argue that "[i]f UniStar chooses to rely on a parent company guarantee, it should provide information sufficient to show the amount of money expected from each parent guarantor and that the parent corporation satisfies the test in Appendix A to Part 30." *Id.* at 4. However, the Intervenors have not shown that the Applicant in fact intends to rely on a guarantee from EDF. Accordingly, the Applicant is not required to show that EDF passes the financial test in Appendix A to Part 30.

We therefore conclude that Contention 2 is moot because the Applicant has shown that it provided the information required by Appendix A to Part 30, and because the Intervenors have not set forth facts sufficient to create a genuine dispute on that issue as required to survive a motion for summary disposition.

Contention 2 is therefore no longer viable as a contention of omission.[86] We will therefore grant the Motion for Summary Disposition of Contention 2 for the alternative reason argued by the Applicant.

III. CONCLUSION

Contention 2 is dismissed as moot.

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[85] Response at 2 (quoting COLA Rev. 3 at 1-18).

[86] *McGuire/Catawba,* CLI-02-28, 56 NRC at 383.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD[87]

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Dr. William W. Sager
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 30, 2009

[87] Copies of this Order were sent this date by the agency's E-Filing system to the counsel/representatives for: (1) Joint Petitioners Nuclear Information and Resource Services, Beyond Nuclear, Public Citizen Energy Program, and Southern Maryland Citizens Alliance for Renewable Energy Solutions; (2) UniStar Nuclear Operating Services, LLC and Calvert Cliffs-3 Nuclear Project, LLC; (3) NRC Staff; and (4) State of Maryland.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ronald M. Spritzer, Chairman
Michael F. Kennedy
Randall J. Charbeneau

In the Matter of **Docket No. 52-033-COL**
(ASLBP No. 09-880-05-COL-BD01)

DETROIT EDISON COMPANY
(Fermi Nuclear Power Plant,
Unit 3) **July 31, 2009**

This 10 C.F.R. Part 52 proceeding concerns the application of Detroit Edison Company (DTE) to construct and to operate a new boiling water reactor on its existing Fermi nuclear facility site near Newport City in Monroe County, Michigan. The proposed reactor is designated Unit 3 and would employ the GE-Hitachi Economic Simplified Boiling Water Reactor (ESBWR) design. The Licensing Board ruled that all the Petitioners met the necessary prerequisites for the Board to grant a hearing request by establishing standing to intervene in the proceeding and advancing, in part, four admissible contentions.

RULES OF PRACTICE: STANDING; 50-MILE PROXIMITY PRESUMPTION

NRC's proximity presumption does not disregard contemporaneous judicial concepts of standing, as suggested by the Applicant, but rather the Commission applied its expertise to determine that persons living within a 50-mile radius of a nuclear reactor "face a realistic threat of harm if a release of radioactive material were to occur from the facility." *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert

Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 183 (2009). It is for this reason that the Commission has chosen not to require independent showings of injury, causation, and redressibility. *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150 (2001). The nontrivial increased risk constitutes injury-in-fact, is traceable to the challenged action (the NRC's licensing of a new nuclear reactor), and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners. *Lujan v. Defenders of Wildlife,* 504 U.S. 555, 560-61 (1992).

RULES OF PRACTICE: STANDING; "NEXUS" BETWEEN STANDING AND CONTENTIONS

In *Yankee Rowe* the Commission ruled that "once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing." *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996). The Commission recently confirmed that, rather than requiring a "nexus" between the claimed injury and the contention, "*Yankee Rowe* requires a nexus between the injury and the relief." *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 340 (2009). When the denial of a license would alleviate a petitioner's asserted potential injury, the Commission held that any admissible contention with such a result can be prosecuted by a petitioner, regardless of whether that contention is directly related to that petitioner's articulated injury. *Crow Butte Res., Inc.,* CLI-09-9, 69 NRC at 340.

RULES OF PRACTICE: STANDING; "NEXUS" BETWEEN STANDING AND CONTENTIONS

Petitioners state that they are concerned that the construction and operation of Fermi Unit 3 might adversely affect their health and safety and the environment in which they live. The safety-related contentions the Petitioners raise, if successful, will afford relief from the asserted injuries by requiring denial or modification of the license.

RULES OF PRACTICE: STANDING; "NEXUS" BETWEEN STANDING AND CONTENTIONS

Because NEPA is a procedural statute, the Petitioners need not show that favorable rulings on their NEPA contentions will require denial of the license, but rather that favorable rulings will require that procedures intended for protection of their members' concrete interests will be observed. *Lujan v. Defenders of Wildlife,* 504 U.S. at 573 n.7. Favorable rulings on the Petitioners' NEPA contentions would ensure that procedures are observed that require adequate analysis of potential impacts to their members' health and safety and to the environment where the members reside. Thus, all of the Petitioners' contentions, if proved, will afford relief from the injuries relied upon for standing.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; NEPA VS. SAFETY CONTENTIONS

The Petition refers to safety and security issues only in the context of discussing the environmental effects that must be evaluated under NEPA. The Petition fails to identify any NRC safety regulations requiring that the COLA be supplemented with additional information concerning LLRW management. Only in their reply brief did the Petitioners claim that Contention 3 includes a separate safety contention and provide citations to NRC safety regulations that they claim require the Applicant to provide updated information concerning LLRW management. But "a reply cannot expand the scope of the arguments set forth in the original hearing request." *Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 568 (2009).

DECOMMISSIONING FUNDING: COST ESTIMATE

The portion of a contention disputing the cost estimate for decommissioning is an indirect challenge to 10 C.F.R. § 50.75(c). The Applicant developed the cost estimate using the formula required by the regulation, which includes, among other things, an escalation factor for waste burial. The Petitioners do not claim that the Applicant used the formula incorrectly. Rather, they appear to argue that the cost estimate should be increased above the estimate developed pursuant to the regulation because of the alleged need to permanently store or dispose of LLRW onsite during decommissioning. 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. *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), LBP-83-76, 18 NRC 1266, 1273 (1983).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; IMPERMISSIBLE CHALLENGE TO NRC REGULATIONS

A licensing board may not admit a contention that directly or indirectly challenges Table S-3 of 10 C.F.R. § 51.51. *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 75 (2009). Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and concludes that this kind of disposal will not result in the release of any "significant effluent to the environment." *Bellefonte,* CLI-09-3, 69 NRC at 75 n.30. We may not admit a contention that directly or indirectly challenges that assumption or conclusion. Thus, the Applicant must rely upon Table S-3 to evaluate the environmental consequences of the permanent disposal of LLRW from Fermi Unit 3, as it did, and we may not require it to reexamine issues resolved by Table S-3.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; ONSITE STORAGE OF LOW-LEVEL WASTE

A petitioner could proffer an application-specific contention suitable for litigation on the subject of onsite storage of low-level radioactive waste. *Bellefonte,* CLI-09-3, 69 NRC at 77 n.42. The questions of the safety and environmental impacts of onsite low-level waste storage are largely site- and design-specific, and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions. *Bellefonte,* CLI-09-3, 69 NRC at 76-77.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; ONSITE STORAGE OF LOW-LEVEL WASTE

A Licensing Board may, without creating a conflict with Table S-3, admit an application-specific contention concerning the environmental and public health consequences of the need for extended onsite storage of LLRW, assuming that contention satisfies the requirements of 10 C.F.R. § 2.309(f)(1).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; REFORMULATED CONTENTIONS

Boards may reformulate contentions to "eliminate extraneous issues or to consolidate issues for a more efficient proceeding." *North Trend,* CLI-09-12, 69 NRC at 552.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; MATERIALITY

NEPA requires that an EIS provide a detailed statement concerning among other things, "the environmental impact of the proposed action," "any adverse environmental effects which cannot be avoided should the proposal be implemented," and "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented." 42 U.S.C. § 4332(C)(i), (ii), (v). The NRC regulations governing preparation of the ER require that it discuss the same subjects. 10 C.F.R. § 51.45(b)(1), (2), (5). In addition, the NRC regulations provide that the information submitted in the ER pursuant to these requirements "should not be confined to information supporting the proposed action but should also include adverse information." *Id.* § 51.45(e). In substance, Contention 3 alleges that the discussion of LLRW management in the ER does not reflect current conditions but rather those that existed when Michigan reactors could ship LLRW to an offsite disposal facility, and therefore the ER fails to accurately describe the proposed action and its impact on the environment. Contention 3 thus alleges omissions from the analysis required by NEPA and 10 C.F.R. § 51.45(b) and (e). Accordingly, it is material to the ER's compliance with the NRC's Part 51 regulations and to the Agency's compliance with NEPA.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; NEPA AND PART 51 REQUIREMENTS

Even if the text of Part 51 does not conclusively resolve a question concerning the content of the ER, we may resort to case law and regulations construing the NEPA requirements for the EIS that correspond to the requirements section 51.45(b) imposes upon the ER.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; NEPA AND PART 51 REQUIREMENTS

Section 51.45(b)(2) requires that the ER discuss "[a]ny adverse environmental effects which cannot be avoided should the proposal be implemented," the same subject that NEPA § 102(2)(C)(ii) requires be covered in the EIS. Because the NRC regulation repeats verbatim the NEPA language that the Supreme Court construed to require "a detailed discussion of possible mitigation measures," and because the analysis in the ER is the foundation upon which the Agency's EIS will be prepared, the ER should also discuss the measures the Applicant intends to use to mitigate adverse environmental consequences. If it did not, it would not

provide the Staff with the information it needs to prepare the EIS in compliance with NEPA.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; NEPA

NEPA case law and CEQ regulations concerning NEPA § 102(2)(C)(i)-(v) provide useful guidance in interpreting the corresponding provisions in 10 C.F.R. § 51.45(b)(1)-(5). 40 C.F.R. §§ 1500-1517. "'[A] regulation must be interpreted so as to harmonize with and further [ ] not to conflict with the objective of the statute it implements. [Courts] must construe [regulations] in light of the statute[s they] implement [ ], keeping in mind that where there is an interpretation of an ambiguous regulation which is reasonable and consistent with the statute, that interpretation is to be preferred.'" *Western Fuels-Utah, Inc.,* 900 F.2d 318, 320 (D.C. Cir. 1990).

COMBINED LICENSE APPLICATIONS: NEPA AND PART 51 REQUIREMENTS; ENVIRONMENTAL REPORT

Given that the ER provides the foundation upon which the EIS is built, the environmental considerations the applicant must address in the ER pursuant to section 51.45(b)(1)-(5) should be construed consistently with the environmental issues the Staff must address in the EIS pursuant to NEPA § 102(2)(C)(i)-(v). The Commission has made it clear that issues arising under NEPA, not just those arising under Part 51, are a material basis for challenging the ER.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; CONTENTION OF OMISSION

For a contention of omission, the petitioner's burden is to show the facts necessary to establish that the application omits information that should have been included.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; ONSITE STORAGE OF LOW-LEVEL WASTE

For purposes of a NEPA contention, the crucial question is not merely whether the Applicant has a plan for managing its Class B and C wastes but whether that plan, and any onsite environmental impacts it may produce, is disclosed in the ER. NEPA § 102(2)(C) requires a "detailed statement" from the agency of the environmental consequences of the planned federal action. Similarly, section

51.45(b) directs that the ER "discuss" the environmental consequences that will be the subject of the agency's detailed statement.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; GENUINE DISPUTE WITH THE APPLICANT ON A MATERIAL ISSUE

Under section 2.309(f)(1)(vi), when an application is alleged to be deficient, the petitioner must identify the deficiencies and provide supporting reasons for its position that such information is required.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; PROPERLY PLEADED CONTENTION OF OMISSION

Contention 5 properly asserts a contention of omission with regard to on-site measurements of distribution coefficients, retardation factors, and porosity from the COLA. The Petitioners provide a regulatory citation to 10 C.F.R. § 100.20(c)(3), which states that "[f]actors important to hydrological radionuclide transport (such as soil, sediment, and rock characteristics, adsorption and retention coefficients, ground water velocity, and distances to the nearest surface body of water) must be obtained from on-site measurements." 10 C.F.R. § 100.20(c)(3). The Petitioners contend that the Applicant itself acknowledges in its response to the RAI that the COLA does not present site-specific measurements of adsorption and retention coefficients. Thus, this is a properly pleaded contention of omission and we admit it as such.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; PROPERLY PLEADED CONTENTION

The Petitioners identify an exceedance of regulatory limits in the Applicant's radionuclide transport in groundwater as documented in the FSAR. The Applicant stated in its FSAR that its proposed mitigating design features preclude an accidental release of liquid effluents, and thus an accidental release to ground and surface water was not assessed in the FSAR. Even though the Applicant asserts that this issue is not material because of forthcoming data and analysis, a Licensing Board must analyze issues based on information currently at hand. Thus, the Petitioners have correctly demonstrated a dispute with the Applicant on a material issue of law. *See* 10 C.F.R. § 2.309(f)(1)(vi).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

A bare assertion without the requisite support for those claims is inadequate

to support the admission of a contention. *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003).

RULES OF PRACTICE: CONTENTION ADMISSIBILITY; IMPERMISSIBLE CHALLENGE TO NRC REGULATIONS

Issues associated with the Applicant's compliance, or lack thereof, with NRC facility decommissioning regulations are outside of the scope of this proceeding. This issue addresses a concern that is purely speculative at this juncture, and will more appropriately be addressed at the license termination stage. Thus, the claims related to the decommissioning of the facility are not currently ripe for review and outside the scope of this proceeding. 10 C.F.R. § 2.309(f)(1)(iii).

RULES OF PRACTICE: CONTENTIONS; TIMING

We deny the Petitioners' request for an opportunity to modify this contention. The rules for filing of new or amended contentions based on previously unavailable information, as well as untimely contentions, 10 C.F.R. § 2.309(f)(2)(c), allow procedural opportunities for the Petitioners to raise these concerns at a time more appropriate for addressing them.

NATIONAL ENVIRONMENTAL POLICY ACT: ABDICATING ENVIRONMENTAL IMPACTS ANALYSIS ENTIRELY TO OTHER AGENCIES

The fact that an environmental impact is regulated by another federal agency or by a state does not justify the exclusion of the analysis in the Applicant's ER or the NRC's EIS. *See* 10 C.F.R. § 51.71(d) n.3 and Part 51, Appendix A, § 5. *See also* 40 C.F.R. § 1502.14(c); *Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 834-36 (D.C. Cir. 1972). Thus, we are not persuaded by the Staff's argument that the impact to water quality from effluent discharge at the proposed Fermi Unit 3 is outside the scope of this proceeding simply because FWPCA prohibits federal agencies other than EPA from imposing their own effluent limits. While NEPA requires the consideration of information regarding other regulatory requirements and permits, the fact that the applicant is subject to and complying with them "does not obviate the NEPA mandate that the federal agency perform an EIS covering these topics." *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 179 (2006). We thus hold that the impacts raised by the Petitioners speak precisely to the mandates of NEPA, and thus these issues are material to findings the NRC must make prior to issuance of the COL for Fermi Unit 3.

RULES OF PRACTICE: CONTENTION ADMISSIBILITY

A presentation of excerpts from the COLA without further explanation does not provide sufficient support for a contention. *See USEC Inc.* (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 597 (2005), *aff'd,* CLI-06-10, 63 NRC 451, 472 (2006).

COMBINED LICENSE APPLICATIONS: NEPA AND PART 51 REQUIREMENTS

Neither NEPA nor Part 51 requires applicants to eliminate adverse environmental impacts. Courts have consistently interpreted NEPA as a procedural statute that requires disclosure and analysis of environmental impacts, not one that imposes substantive obligations for the protection of natural resources. *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 350 (1989). Thus, to the extent Contention 8 asks that we require the Applicant to adopt additional mitigation measures for the protection of the eastern fox snake, it exceeds our authority under NEPA and Part 51.

EMERGENCY PLANNING ZONE (EPZ): CONTENTIONS CHALLENGING EPZ

NRC regulations require that procedures be established to provide for early notification and clear instructions to the populace within the plume exposure pathway EPZ. *See* 10 C.F.R. § 50.47(b)(5). In accordance with the regulations, the plume exposure pathway EPZ shall generally consist of an area covering a radius of "about 10 miles." *See* 10 C.F.R. § 50.47(c)(2). As pled, the Petitioners provide no basis for the assertion that the EPZ should be increased to a 50-mile radius. 10 C.F.R. § 2.309(f)(1)(ii). In addition, the Petitioners provide no alleged facts or expert opinion to support their assertion that the EPZ should be increased. 10 C.F.R. § 2.309(f)(1)(v).

NEPA AND PART 51 REQUIREMENTS: ALTERNATIVES ANALYSIS; SCOPE

Under the NRC's Part 51 regulations, the ER must "contain a description of the proposed action, a statement of its purposes, [and] a description of the environment affected," 10 C.F.R. § 51.45(b), and it must also discuss "[a]lternatives to the proposed action. . . ." *Id.* § 51.45(b)(3). The requirement to discuss alternatives in the ER parallels NEPA's requirement that an EIS provide a detailed statement of reasonable alternatives to a proposed action. 42 U.S.C. § 4332(2)(C)(iii). The alternatives discussion in the ER or EIS, however, need not include "every

possible alternative, but every *reasonable* alternative." *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 71 (1991) (emphasis added). Reasonable alternatives do not include alternatives that are "impractical[;] . . . that present unique problems; or that cause extraordinary costs." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-30, 58 NRC 454, 479 (2003). Thus, an alternative need not be considered in detail if it is technologically unproven, unsafe, too costly, or otherwise impracticable. *See Kelley v. Selin,* 42 F.3d 1501, 1521 (6th Cir. 1995).

NEPA AND PART 51 REQUIREMENTS: ALTERNATIVES ANALYSIS; COST

If the Applicant disqualified an environmentally preferable alternative on the ground that it was too costly compared to the cost of the proposed new reactor, then the reasonableness of the Applicant's cost estimate for the new reactor could be a material issue under NEPA.

NEPA AND PART 51 REQUIREMENTS: ALTERNATIVES ANALYSIS; NEED FOR POWER

The NRC's NEPA regulations mandate balancing the economic and other benefits of the proposed new reactor against the environmental and other costs that the project might incur. The need for power is therefore a material issue under NEPA when the Applicant claims, as it does here, that the benefit of the project is satisfying the need for power. 68 Fed. Reg. 55,905, 55,905 (Sept. 29, 2003). This implies that the NRC must analyze the need for additional power when it relies upon such a benefit in performing the balancing of benefits and costs required by 10 C.F.R. § 51.107(a)(3). The issue of the need for power may therefore fall within the scope of the findings the NRC must make under NEPA when reviewing an application for a new reactor, and a petitioner may obtain a hearing on the issue if it satisfies the other requirements of section 2.309(f)(1).

MEMORANDUM AND ORDER
(Ruling on Hearing Requests)

I. INTRODUCTION

The Detroit Edison Company ("DTE" or "Applicant") has applied to the Nuclear Regulatory Commission (NRC) for a combined license (COL) under 10 C.F.R. Part 52 that would authorize DTE to construct and to operate a new

boiling water reactor, designated Unit 3, employing the GE-Hitachi Economic Simplified Boiling Water Reactor (ESBWR)[1] on its existing Fermi nuclear facility site near Newport City in Monroe County, Michigan.[2] By hearing petition received March 9, 2009, Petitioners — Beyond Nuclear, Citizens for Alternatives to Chemical Contamination (CACC), Citizens Environmental Alliance of Southwestern Ontario (CEASO), Don't Waste Michigan (DWM), the Sierra Club, and numerous individuals ("Petitioners" or "Beyond Nuclear et al.") — jointly seek to intervene and to challenge various aspects of the DTE COL application (COLA) and the NRC regulatory process for reviewing that application.

In this decision, we address the Petitioners' standing to intervene and the admissibility of the Petitioners' thirteen proffered contentions.[3] For the reasons set forth below, we find that all of the Petitioners have established standing to intervene in this proceeding. We further find that the Petitioners have advanced, in part, four admissible contentions, specifically Contentions 3, 5, 6, and 8. The Petitioners have therefore met the necessary prerequisites for the Board to grant a hearing request.[4]

II. BACKGROUND

Under the Part 52 licensing process that governs the DTE application for the Fermi Nuclear Power Plant Unit 3 ("Fermi Unit 3"), an entity may apply for a single license that authorizes both new reactor construction and operation. Specifically, Subpart C of Part 52 establishes procedures for the issuance of a combined construction permit and operating license for a nuclear power plant and the conduct of the hearing that is afforded for a COL. The COL is "essentially a construction permit which also requires consideration and resolution of many of the issues currently considered at the operating license stage."[5] The general requirements for the contents of a COLA are set forth in 10 C.F.R. §§ 52.79-52.80.

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[1] The ESBWR design is the subject of an ongoing rulemaking proceeding under Docket No. 52-010. *See* General Electric Company; Notice of Acceptance of Application for Final Design Approval and Standard Design Certification of the ESBWR Standard Plant Design, 70 Fed. Reg. 73,311 (Dec. 9, 2005).

[2] 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).

[3] The Petitioners formerly withdrew Contention 10 during oral argument on May 5, 2009. *See* Tr. at 142.

[4] *See* 10 C.F.R. § 2.309(a), (f)(1).

[5] Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors, 53 Fed. Reg. 32,060, 32,062 (Aug. 23, 1988).

In addition, Subpart B of Part 52 allows a COL applicant to reference a certified reactor design for the facility it proposes to construct and operate. If a certified design is referenced in a COL proceeding, in the absence of a petition under 10 C.F.R. § 2.335 seeking a waiver, the Commission will treat the certified design as resolving all matters that could have been raised during the rulemaking process in which the certified design was reviewed and approved.

DTE submitted a COLA to the NRC on September 18, 2008. The NRC accepted and docketed the application on November 25, 2008, and December 2, 2008, respectively. On January 8, 2009, the Commission published in the *Federal Register* a notice of hearing and opportunity to petition for leave to intervene on the COL application for Fermi 3.[6] The notice provided that any person whose interest would be affected by the proposed COL may file, in accordance with 10 C.F.R. § 2.309, a request for a hearing and petition for leave to intervene within 60 days of the notice. The notice also included an "Order Imposing Procedures for Access to Sensitive Unclassified Non-Safeguards Information [SUNSI] and Safeguards Information [SGI] for Contention Preparation."[7]

On March 9, 2009, the Petitioners timely filed a request for a Hearing and Petition to Intervene,[8] and on March 19, this Board was established to preside over the proceeding.[9] Timely answers were filed by the Applicant and the NRC Staff on April 3, 2009,[10] and a reply was received from the Petitioners on April 10, 2009.[11] Because the Petitioners' original petition was submitted in five separate,

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[6] *See* 74 Fed. Reg. 836.

[7] *See id.* at 838.

[8] *See* Petition of 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 for Leave to Intervene in Combined Operating License Proceedings and Request for Adjudication Hearing (Mar. 9, 2009).

[9] *See* [DTE]; Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 12,913 (Mar. 25, 2009).

[10] *See* Applicant's Answer to Petition to Intervene (Apr. 3, 2009) [hereinafter App. Ans.]; NRC Staff Answer to Petition of 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 for Leave to Intervene in Combined Operating License Proceedings and Request for Adjudication Hearing (Apr. 3, 2009) [hereinafter NRC Ans.].

[11] *See* Combined Reply of Petitioners 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

(Continued)

unnumbered, documents, the Board ordered the Petitioners to submit a newly filed petition consolidated into one final document,[12] which was refiled on April 21, 2009.[13] The Board held a 1-day prehearing conference in Monroe, Michigan, on May 5, 2009, during which it heard oral presentations from the participants on the issues of standing and the admissibility of their contentions.[14]

III. STANDING OF PETITIONERS TO PARTICIPATE IN THIS PROCEEDING

A. Legal Requirements for Standing

A petitioner's participation in a licensing proceeding hinges on a demonstration of the requisite standing. This requirement is derived from section 189a of the Atomic Energy Act of 1954 (AEA),[15] which instructs the NRC to provide a hearing "upon the request of any person whose interest may be affected by the proceeding."[16] 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 (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.[17] 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

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Mandeville, Frank Mantei, Marcee Meyers, and Shirley Steinman to NRC Staff and DTE Answers to Petition for Leave to Intervene (Apr. 10, 2009) [hereinafter Reply].

[12] *See* Licensing Board Order (Regarding Oral Argument) (Apr. 9, 2009) at 2.

[13] *See* REFILED Petition of Beyond Nuclear *et al.,* for Leave to Intervene in Combined Operating License Proceedings and Request for Adjudication Hearing (Apr. 21, 2009) [hereinafter Pet. and Cont.]. The Petitioners combined the multiple parts of their original petition into one filing. As directed by the Board, the Petitioners included a page numbering system that coincided with that used by the Staff and the Applicant in their answers to the Petition. The first eight pages of the filing constitute the Petition proper, which bears the signature of counsel, contains the standing argument, and incorporates the contentions by reference. The remaining pages in the filing are the Petitioners pleaded contentions. These two parts will be referred to herein as "Petition" and "Contentions," respectively.

[14] *See* Tr. at 1-196.

[15] 42 U.S.C. § 2011 *et seq.* (1954).

[16] *Id.* § 2239(a)(1)(A).

[17] 10 C.F.R. § 2.309(d)(1)(ii)-(iv).

likely to be redressed by a favorable decision."[18] In proceedings involving nuclear power reactors, the Commission has adopted a proximity presumption that allows a petitioner living within 50 miles of a nuclear power reactor to establish standing without the need to make an individualized showing of injury, causation, and redressability.[19] The proximity presumption applies to COL proceedings.[20]

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.[21] Where 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 by name and address. Moreover, the organization must show that the members would have standing to intervene in their own right, and that the identified members have authorized the organization to request a hearing on their behalf.[22] 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 required relief must require an individual member to participate in the organization's legal action.[23]

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[18] *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 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).

[19] *See, e.g., Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989) ("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").

[20] *See Duke Energy Carolinas, LLC* (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431, 438 (2008); *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 378 (2008).

[21] *See Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 183 (2007).

[22] *See id. Accord Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 72 (1994) (citing *Houston Lighting and Power Co.* (Allens Creek Nuclear Generating Station, Unit 1), ALAB-535, 9 NRC 377, 389-400 (1979)) ("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").

[23] *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409 (2007).

B. Licensing Board's Ruling on Petitioners' Standing

1. Organizational Petitioners

For reasons set forth below, we conclude that the five organizational petitioners — Beyond Nuclear, CACC, Sierra Club, DWM, and CEASO — have established representational standing to participate in this proceeding on behalf of one or more of their members. In addition, the individuals that have authorized the five organizational petitioners to represent them in this proceeding have established standing in their own right. The NRC Staff agrees that the Petitioners have standing. *See* NRC Ans. at 9-16. We are not persuaded by the Applicant's arguments to the contrary.

Beyond Nuclear, CACC, Sierra Club, DWM, and CEASO have each demonstrated that one or more of their members would have standing to intervene and have provided names and addresses for each of the identified members. All of the organizational petitioners represent at least one member living within 50 miles of the proposed new reactor.[24] Thus, under the 50-mile proximity presumption, the identified members could have brought this action on their own behalf. Further, the identified members have authorized Beyond Nuclear, CACC, Sierra Club, DWM, or CEASO to represent their interests in any licensing proceeding that concerns the safety and environmental impacts of Fermi Unit 3. The organizations have described their purposes, which are germane to the health, safety, and environmental interests asserted by their members. *See* Pet. at 2-4. Finally, neither the asserted claims nor the requested relief requires an individual member to participate in this action. Therefore, Beyond Nuclear, CACC, Sierra Club, DWM, and CEASO have established representational standing.

2. Applicant's Challenge to the 50-Mile Presumption

The Applicant asserts that none of the Petitioners demonstrate the requisite standing to intervene in this proceeding. *See* App. Ans. at 11. Principally, the Applicant argues that the Commission's 50-mile proximity presumption is "obsolete," and thus the Board "must assess the Petitioners' standing claims against contemporaneous standing principles rather than a rote 'proximity presumption.'"[25] It cites recent developments in judicial concepts of standing which it claims demonstrate that the proximity presumption is "outdated and should be abandoned." App. Ans. at 15.

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[24] The Petition includes affidavits from authorized officials of Beyond Nuclear, CACC, CEASO, and the Sierra Club, describing their interest in this proceeding. The Petitioners also provide member affidavits in support of representational standing for those organizations and for DWM. Seven other individuals also filed affidavits in support of the Petition.

[25] *See* App. Ans. at 16; *see also id.* at 11-18.

The same argument was recently rejected by the licensing board in *Calvert Cliffs.* The board held that is was not at liberty to abandon the Commission's 50-mile proximity presumption. It also observed that the NRC's proximity presumption does not disregard contemporaneous judicial concepts of standing, as suggested by the Applicant, but rather the Commission applied its expertise to determine that persons living within a 50-mile radius of a nuclear reactor "face a realistic threat of harm if a release of radioactive material were to occur from the facility."[26] It is for this reason that the Commission has chosen not to require independent showings of injury, causation, and redressibility.[27] The nontrivial increased risk constitutes injury-in-fact, is traceable to the challenged action (the NRC's licensing of a new nuclear reactor), and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners.[28] We reject the Applicant's argument here for the reasons given by the *Calvert Cliffs* board.

3. "Nexus" Between Standing and Contentions in NRC Proceedings

The Applicant asserts that the Petitioners' contentions are further limited "to those that will afford relief from the injuries asserted as a basis for standing." App. Ans. at 11. In *Yankee Rowe* the Commission ruled that "once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing."[29] The Commission recently confirmed that, rather than requiring a "nexus" between the claimed injury and the contention, "*Yankee Rowe* requires a nexus between the injury and the relief."[30] When the denial of a license would alleviate a petitioner's asserted potential injury, the Commission held that any admissible contention with such a result can be prosecuted by a petitioner, regardless of whether that contention is directly related to that petitioner's articulated injury.[31]

The Applicant cites this general principle of law but fails to explain in any detail

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[26] *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 183 (2009).

[27] *See Calvert Cliffs,* LBP-09-4, 69 NRC at 183 (citing *St. Lucie,* CLI-89-21, 30 NRC at 329; *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150 (2001)).

[28] *Calvert Cliffs,* LBP-09-4, 69 NRC at 183 (citing *Lujan v. Defenders of Wildlife,* 504 U.S. at 560-61).

[29] *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

[30] *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 340 (2009).

[31] *Crow Butte Resources, Inc.,* CLI-09-9, 69 NRC at 339.

how it should apply to any of the contentions in this case. App. Ans. at 9-11. We have no difficulty in concluding that the Petitioners' contentions, if proved, will afford them relief from the injuries they have relied upon for standing. Members of each of the five organizational Petitioners state that they are concerned that the construction and operation of Fermi Unit 3 might adversely affect their health and safety and the environment in which they live.[32] The safety-related contentions the Petitioners raise, if successful, will afford relief from the asserted injuries by requiring denial or modification of the license. The same principle also applies to the Petitioners' NEPA contentions. Because NEPA is a procedural statute, the Petitioners need not show that favorable rulings on their NEPA contentions will require denial of the license, but rather that favorable rulings will require that procedures intended for protection of their members' concrete interests will be observed.[33] Here, favorable rulings on the Petitioners' NEPA contentions would ensure that procedures are observed that require adequate analysis of potential impacts to their members' health and safety and to the environment where the members reside.[34] Thus, all of the Petitioners' contentions, if proved, will afford relief from the injuries relied upon for standing.

IV. STANDARDS FOR ADMISSIBILITY OF CONTENTIONS

A. Regulatory Standards for Contention Admissibility

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)(1).[35] 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

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[32] *See, e.g.,* Declarations of Colan Keith Gunter, Edward McCardle, Harold L. Stokes, Derek Coronado, and Michael J. Keegan.

[33] *See Lujan v. Defenders of Wildlife,* 504 U.S. at 573 n.7 ("Thus, under our case law, one living adjacent to the site for proposed construction of a federally licensed dam has standing to challenge the licensing agency's failure to prepare an environmental impact statement, even though he cannot establish with any certainty that the statement will cause the license to be withheld or altered, and even though the dam will not be completed for many years").

[34] *See Calvert Cliffs,* LBP-09-4, 69 NRC at 187.

[35] *See* 10 C.F.R. § 2.309(a), (f)(1).

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.[36]

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."[37] 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."[38] The Commission has emphasized that the rules on contention admissibility are "strict by design."[39] Further, contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications. 10 C.F.R. § 2.335(a). Failure to comply with any of these requirements is grounds for not admitting a contention.

Several of the contentions we address below are contentions of omission. A 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 the petitioner's belief."[40] To satisfy section 2.309(f)(1)(i)-(ii), the contention of omission must describe the information that should have been included in the ER and provide the legal basis that requires the omitted information to be included. The petitioner must also demonstrate that the contention is within the scope of the proceeding. 10 C.F.R. § 2.309(f)(1)(iii).

Section 2.309(f)(1)(v) requires the petitioner to provide a concise statement of the alleged facts that support its position and upon which the petitioner intends to rely at the hearing. However, "the 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."[41] Thus, for a contention of omission, the petitioner's burden is only to show the facts necessary to establish that the application omits information that should have been included. The facts relied on need not show that the facility cannot be safely operated, but only that the

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[36] 10 C.F.R. § 2.309(f)(1).

[37] Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

[38] *Id.*

[39] *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).

[40] 10 C.F.R. § 2.309(f)(1)(vi).

[41] *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 317 (2008) (quoting *Pa'ina Hawaii, LLC,* LBP-06-12, 63 NRC 403, 414 (2006)).

application is incomplete. If an applicant cures the omission, the contention will become moot.[42]

Finally, if the contention makes a prima facie allegation that the application omits information required by law, "it necessarily presents a genuine dispute with the Applicant on a material issue in compliance with 10 C.F.R. § 2.309(f)(1)(vi) [and] . . . raises an issue plainly material to an essential finding of regulatory compliance needed for license issuance"[43] in accordance with section 2.309(f)(1)(iv).

V. BOARD ANALYSIS AND RULINGS ON PETITIONERS' CONTENTIONS

A. Contention 1

The Petitioners state in Contention 1:

> The Environmental Report is unacceptably deficient because it omits an adequate analysis of the significance of Fermi 3 environmental impacts and its contribution to cumulative and additive persistent toxic discharges into Lake Erie and the Great Lakes Basin from the nuclear industry.[44]

The Petitioners challenge the adequacy of the Applicant's analysis of cumulative environmental effects in its Environmental Report (ER). Cont. at 1. Specifically, the Petitioners contend that by analyzing the "small segment of western Lake Erie 'immediately adjacent to Fermi'" for its quantitative analysis of water impacts, the Applicant is unreasonably narrowing the significance determination of "the new reactor's cumulative and additive impact on health, safety and environment."[45] Instead, referencing the Council on Environmental Quality (CEQ) guidance regarding cumulative effects, the Petitioners assert that NEPA requires a review process that takes into consideration cumulative effects "on a regional scope," and therefore, the Applicant is required to consider the thirty-three reactors licensed to operate, and the up to twelve newly proposed reactor units, on the Great Lakes Basin.[46] Moreover, the Petitioners point to a

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[42] *North Anna,* LBP-08-15, 68 NRC at 317; *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).

[43] *Pa'ina,* LBP-06-12, 63 NRC at 414.

[44] Cont. at 1.

[45] Cont. at 7; *id.* at 1.

[46] Cont. at 4. Of the thirty-three reactors, six units are in Michigan and Wisconsin along Lake Michigan; eight reactors are in Ontario, Canada, along Lake Huron; three units are in Michigan and Ohio along Lake Erie; and four units are in New York along Lake Ontario, and twelve units are in *(Continued)*

U.S. Supreme Court decision holding that the environmental consequences of proposals being considered by an agency within a region must be considered together to determine the synergistic and cumulative environmental effects.[47] The Petitioners point out, while citing to several excerpts from the ER, that the Applicant considers only the cumulative and additive chemical and radiological impacts from the existing Fermi Unit 2 site, and fail to analyze how "persistent toxic chemical and radiological discharges" from this source and the proposed Fermi Unit 3 might cycle into a region beyond those waters immediately adjacent to the Fermi site. Cont. at 8.

In support of Contention 1, the Petitioners reference several sections of the ER (primarily Chapters 2 and 5) to note the Applicant's acknowledgment of the regional topography, the shallow nature of Lake Erie, and the interconnectedness of all the lakes in the Great Lakes Basin. *Id.* at 2-7. In addition, citations are provided to the International Joint Commission (IJC) on the Great Lakes to support the proposition that point source pollution remains a threat,[48] and the Petitioners contend their concerns with regard to point source pollution are heightened by the use of the federal radiation protection standard of "Reference Man" to determine average lifetime exposure. Cont. at 13.

Both the Applicant and the Staff maintain that Contention 1 is not admissible because the Applicant's ER addresses cumulative impacts and the effects of other nuclear reactor activity in the region, and because this contention is not adequately supported with factual or expert support indicating that further analysis is necessary or would lead to any different conclusions.[49] The Applicant notes that the geographical area analyzed for cumulative impacts in the ER was supported by results of ongoing monitoring programs for Fermi Unit 2, which has indicated that the water discharged from this unit has not had a measurable water quality impact. App. Ans. at 20. Fermi Unit 3 operations are assumed in the COLA ER to have similar impacts to those from Unit 2, and the Applicant avers that the discharge water from the new facility is expected to scarcely affect Lake Erie because of the large volume of Lake Erie water. App. Ans. at 21. Moreover, the Applicant highlights that with respect to radiological effluents, "the ESBWR

Ontario, Canada, along Lake Ontario. *Id.* at 4-5. The newly proposed reactors are equally dispersed among these three areas in the Great Lakes including the new reactor at issue in this proceeding. Of these sites, the units at Davis-Besse and Fermi Unit 2 are the only two units within 50 miles of the proposed Fermi Unit 3. *Id.* at 9.

[47] Cont. at 15 (citing *Kleppe v. Sierra Club,* 427 U.S. 390 (1976)).

[48] Cont. at 9. Canada and the United States created the International Joint Commission through recognition that actions affecting the Great Lakes and associated river systems concern both countries, and therefore an agreement is necessary to protect and manage these waters wisely. *See id.; see also* http://www.ijc.org/php/publications/html/invrep/index.html.

[49] NRC Ans. at 17; App. Ans. at 19-20.

design is capable of being operated as a zero liquid effluent discharge facility," which is how the Applicant intends to operate the new facility. *Id.*

The Staff adds that the Applicant's radiological environmental monitoring program (REMP) supports the Applicant's reasoning for limiting the cumulative impacts analysis in the ER to the area immediately adjacent to the Fermi plant, and that the Petitioners have not asserted any inadequacies in this approach.[50] Moreover, the Staff maintains that the Petitioners have not provided alleged facts or expert opinion to support their claim that the nuclear power plants in the Great Lakes region will have cumulative or synergistic environmental impacts with Fermi Unit 3.[51]

Discussion

In Contention 1, the Petitioners claim that the Applicant has "omitted any analysis in its [ER] that would provide reasonable assurance that there is or is not an anticipated cumulative and additive environmental impact on Lake Erie and the Great Lakes Basin from the proposed construction and operation of Fermi [Unit] 3." Cont. at 1. As set forth below, we agree with the arguments advanced by the Applicant and the Staff, and find Contention 1 inadmissible.

As noted by the Staff, Contention 1 is similar to a contention recently considered and rejected in the Calvert Cliffs COL proceeding.[52] In *Calvert Cliffs,* that licensing board found that, although the applicant's description of existing water quality conditions did not "separately evaluate the contributions of specific sources," it nonetheless formed "an environmental baseline against which to measure the cumulative impact of the proposed new reactor."[53] The *Calvert Cliffs* Board concluded that the environmental baseline reflected the effects of all currently existing pollution sources in the relevant watershed, including contributions

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[50] In its ER, the Applicant notes that "discharge of water from Fermi [Unit] 2 to Lake Erie has not had a measureable water quality impact, based on ongoing monitoring programs, and states that Fermi [Unit] 3 is expected to have impacts similar to those of Fermi [Unit] 2." NRC Ans. at 19 (citing Fermi: Combined License Application; Part 3, Environmental Report (Rev. 0) (Sept. 2008) [hereinafter ER] at 5-202).

[51] NRC Ans. at 20. The Staff notes that all but two of the Canadian plants mentioned by the Petitioners are located on the north shore of Lake Erie and are a considerable distance from the proposed Fermi Unit 3 location. *Id.* at 21. The closest operating plant is Davis-Besse, which the Petitioners argue falls within the 50-mile Emergency Planning Zone. Cont. at 8-9. The Staff notes that the Emergency Planning Zone is established based on safety considerations and is not intended for use as a boundary for assessing environmental impacts. NRC Ans. at 20 (citing 10 C.F.R. §§ 50.33(g), 50.47(c)(2)).

[52] *Calvert Cliffs,* LBP-09-4, 69 NRC at 203.

[53] *Id.* at 202.

of all nuclear power plants, and that the petitioners had failed to provide information indicating that this "aggregate" analysis was insufficient under NEPA.[54]

In its ER, the Applicant defines cumulative impacts consistent with 40 C.F.R. § 1508.7 and CEQ guidance as "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."[55] In section 2.3, the ER presents a baseline analysis of water quality within the vicinity of the proposed Fermi Unit 3 location that is an integrated measure of discharges associated with past and present actions. The ER also presents data on hydrology and water use for the Great Lakes Basin. Although the discussion of water quality is limited to the site-specific area in the vicinity of proposed Fermi Unit 3, this limited region for the assessment is supported by the environmental baseline described in Chapter 2 of the ER, which accounts for conditions within Lake Erie and upstream, and the existing environmental monitoring program that shows no significant impacts from operation of Fermi Unit 2. Likewise, the water quality impacts assessment is supported by baseline conditions in addition to the cumulative effects of Fermi Unit 2. Such an analysis is consistent with CEQ NEPA guidance that "experience with and information about past direct and indirect effects of individual past actions may also be useful in illuminating or predicting the direct and indirect effects of a proposed action."[56]

Based on the foregoing review of the Applicant's analysis, we find that the cumulative impacts from water discharges to the Lake Erie environment have been considered in the ER, and that the resulting conclusions are not properly challenged by the Petitioners. The Petitioners fail to acknowledge the discussion of cumulative impacts in ER § 4.7 (construction) and § 5.11 (operations), and they do not dispute the conclusions drawn from this analysis. The Petitioners provide no analysis to suggest that extending the ER to include proposed additional nuclear facilities within the basin, but not in proximity to proposed Fermi Unit 3, would change any of the Applicant's conclusions documented in its ER.

In addition to providing citations to NEPA and the CEQ guidelines, the Petitioners cite only to the IJC "Inventory of Radionuclides for the Great Lakes"[57] in support of this contention. However, this IJC report is merely a general assessment of radioactivity within waters of the Great Lakes Basin. This report does not address specific issues with regard to the proposed Fermi Unit 3, and it

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[54] *Id.* at 203-05.

[55] ER at 5-197.

[56] President's Council on Environmental Quality, Guidance on the Consideration of Past Actions in Cumulative Effects Analysis at 2 (June 24, 2005) [hereinafter CEQ Guidance]; *see also* 40 C.F.R. § 1508.7.

[57] Inventory of Radionuclides for the Great Lakes, Nuclear Task Force, International Joint Commission, December 1997.

does not provide any support for the Petitioners' assertions needed to advance an admissible contention. *See* 10 C.F.R. § 2.309 (f)(1)(v).

Finally, the Petitioners argue that the Applicant does not address that tritium appears in both the ESBWR design control document (DCD) and the IJC report as one of the isotopes that requires further specific analysis. Reply at 13. However, tritium is a radionuclide that is in fact considered in the ER's radiological assessment based on estimated release rates reported in the ESBWR DCD. The Petitioners have not challenged the results presented therein; as such, the Petitioners have failed to demonstrate a genuine dispute with the Applicant on a material issue of fact or law. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Based on the foregoing, the Board finds Contention 1 inadmissible.

B. Contention 2

The Petitioners state in Contention 2:

> There is no technical basis for a finding of "reasonable confidence" that spent fuel can and will be safely disposed of at some time in the future.[58]

This contention concerns the Commission's ongoing proceedings in which it is revisiting the question whether high-level radioactive waste produced by nuclear power plants can be safely stored onsite past the expiration of existing facility licenses until offsite disposal or storage is available. In 1984 and again in 1990 and 1999, the Commission conducted so-called waste confidence proceedings.[59] In those proceedings, the Commission made or updated several findings that were the basis for generic determinations embodied in 10 C.F.R. § 51.23(a). The first of these generic determinations was that, for at least 30 years beyond the expiration of reactor operating licenses, no significant environmental impact would result from spent nuclear fuel (SNF) storage in reactor storage pools or independent spent fuel storage installations (ISFSIs) located at reactor or away-from-reactor sites.[60] The second generic determination was the Commission's finding that (there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial [high-level waste and spent nuclear fuel] originating in such reactor and generated up to that time."[61] Last fall, the Commission issued a proposed update to its 1999 Waste

[58] Cont. at 17.

[59] *See* Waste Confidence Decision Update, 73 Fed. Reg. 59,551, 59,552-53 (Oct. 9, 2008).

[60] *See id.*

[61] *Id.* at 59,553.

Confidence Decision (WCD),[62] and a related proposed rule entitled "Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation."[63]

The Petitioners assert that, through Contention 2, they seek to enforce the NRC's commitment that it would "not continue to license reactors if it did not have reasonable confidence that the wastes can and will in due course be disposed of safely."[64] The Petitioners claim the NRC has "no technical basis for a finding of reasonable confidence that spent fuel can and will be safely disposed of at some time in the future." Cont. at 31-32. The Petitioners contend that neither the WCD nor the Proposed Storage Rule satisfies the requirements of NEPA or the AEA, and therefore "the NRC has no lawful basis to issue a license for the proposed Fermi [Unit] 3 nuclear power plant." *Id.* at 31.

The Petitioners recognize that the issues in this contention are "generic in nature," and they therefore "do not seek to litigate them in this individual proceeding." *Id.* The Petitioners instead request the Board to admit the contention and hold it in abeyance "in order to avoid the necessity of a premature judicial appeal if this case should conclude before the NRC has completed the rulemaking proceeding." *Id.* Recognizing that the Board might not have the jurisdiction to rule on a contention challenging a rule, the Petitioners request alternatively that this Board refer the contention to the Commission. *Id.*

Both the Applicant and the Staff respond that Contention 2 is an impermissible attack on Commission regulations and seeks to address issues that are the subject of ongoing rulemaking.[65] The Staff further adds that the Petitioners have not cited any legal basis for holding this contention in abeyance and that the proper venue for litigation of such issues is the rulemaking process. NRC Ans. at 27. Moreover, the Applicant and the Staff maintain that, to hold a contention in abeyance, a board must first find the contention admissible, which in this instance the Board cannot because the Petitioners do not "inherently . . . demonstrate a dispute with the *Applicant,*" but instead dispute the WCD and the Temporary Storage Rule.[66] Further, the Applicant asserts that "issues that are subject of pending rulemaking cannot form the basis for an admissible contention." App. Ans. at 24-25.

Discussion

We agree that this contention is not admissible because it challenges a pending

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[62] *Id.*

[63] 73 Fed. Reg. 59,547 (Oct. 9, 2008) [Proposed Storage Rule].

[64] Cont. at 29 (citing Proposed Waste Confidence Decision, 73 Fed. Reg. at 59,552).

[65] NRC Ans. at 25; App. Ans. at 24.

[66] NRC Ans. at 28, 31; App. Ans. at 26.

NRC policy review and rulemaking. Various other licensing boards have rejected similar contentions because they challenged the ongoing agency policy review and rulemaking concerning the storage and eventual disposal of spent nuclear fuel.[67] As the *Bellefonte* Board explained:

> a contention that attacks a Commission rule, or that seeks to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, is inadmissible. This includes contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking. By the same token, a challenge footed in the petitioner's views about what regulatory policy should be does not present a litigable issue. Given that the proposed update to the Commission's waste confidence decision and the proposed revision of the waste confidence rule are the subjects of an ongoing Commission policy review and an associated rulemaking, we find that [the proposed new contention] does not present a matter appropriate for adjudication before this Licensing Board.[68]

We find Contention 2 inadmissible for the same reasons stated by the *Bellefonte* Board. "If Petitioners are dissatisfied with [the Commission's] generic approach to the problem, their remedy lies in the rulemaking process, not in this adjudication."[69]

The Petitioners ask that Contention 2 be "admitted and held in abeyance in order to avoid the necessity of a premature judicial appeal if this case should conclude before the NRC has completed the rulemaking proceeding." Cont. at 31. The reasoning underlying the Petitioners' concern that they might be required to file a premature judicial appeal is unclear, but in any event we know of no legal basis upon which to admit an otherwise inadmissible contention in order to avoid the perceived need to file such an appeal. We also do not accept the Petitioners' request to refer the issue to the Commission if we determine that we lack the authority to admit Contention 2 because it presents a challenge to a generic rule. *Id.* The standard for such a referral is not met because our ruling on this matter does not raise "significant and novel legal or policy issues," the resolution of which "would materially advance the orderly disposition of the proceeding."[70]

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[67] *See* Licensing Board Memorandum and Order (*Unistar Nuclear Operating Services* (Calvert Cliffs Nuclear Power Plant, Unit 3)) (June 9, 2009) (unpublished); Licensing Board Memorandum and Order (*Virginia Electric and Power Co.* (North Anna Power Station, Unit 3)) (June 2, 2009) (unpublished); Licensing Board Memorandum and Order (*Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4)) (Apr. 29, 2009) at 12 (unpublished).

[68] *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4) (Ruling on Request to Admit New Contention) at 12 (Apr. 29, 2009) (unpublished).

[69] *Oconee,* CLI-99-11, 49 NRC at 345.

[70] 10 C.F.R. § 2.341(f)(1).

We therefore find Contention 2 inadmissible.

C. Contention 3

The Petitioners state in Contention 3:

> The COLA violates NEPA by failing to address the environmental impacts of the "low-level" radioactive waste that it will generate in the absence of licensed disposal facilities or capability to isolate the radioactive waste from the environment.[71]

The Petitioners contend that the issue of long-term radioactive waste management and disposal of low-level radioactive waste (LLRW) that would be generated at Fermi Unit 3 is not adequately addressed in the ER. Cont. at 37-44. The ER, the Petitioners note, presumes that LLRW from the new facility will be disposed of offsite.[72] The Petitioners explain that in reality there are no facilities in the United States currently licensed and able to accept Class B, C, and greater-than-Class-C waste from Michigan for disposal.[73] Thus, the Petitioners contend, the LLRW will remain onsite indefinitely. Therefore, the Applicant must address the environmental impacts of leaving these wastes onsite. Cont. at 40. The Petitioners also argue that the Applicant must take into account the likelihood that the need for onsite disposal of LLRW will increase the decommissioning cost estimate. *Id.* at 40-41.

Citing recent licensing board rulings on similar contentions, the Applicant notes that the disposal of greater-than-Class-C waste is not directly affected by the closure of the Barnwell disposal facility because it is the responsibility of the federal government; thus, the aspects of this contention related to greater-than-Class-C waste are inadmissible. App. Ans. at 27-28. The Applicant argues that the Petitioners' assumption that the lack of a licensed disposal site for Class B and C waste means the waste will remain onsite indefinitely is incorrect. *Id.* at 28. The Applicant maintains there is a "foreseeable disposition path for removing Class B and C wastes from the Fermi [Unit] 3 site." *Id.* at 28. Moreover, the Applicant asserts that this contention constitutes an impermissible attack on Table S-3 of 10 C.F.R. § 51.51. *Id.* at 29-30. The Applicant also argues that the Petitioners provide no factual, expert, or other support to show that long-term onsite storage

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[71] Cont. at 37.

[72] Cont. at 37 (citing ER, Rev. 0, p. 5-146).

[73] Cont. at 37-39. The Petitioners note that the only operating disposal sites that presently accept Class B and C waste are in Richland, Washington, and Barnwell, South Carolina. However, neither of these facilities accepts LLRW from outside the northwest, Rocky Mountain, and Atlantic LLRW compacts. The recently licensed site in Andrews County, Texas, if opened, will only accept waste from Texas and Vermont, which are members of a prearranged compact. *Id.* at 39.

of LLRW would pose any significant safety or security risk that needs to be addressed in the COLA.[74] Citing recent Commission precedent, the Applicant states that power reactor licensees have safely stored and managed LLRW under NRC oversight for years without the development of immediate safety problems or concerns.[75]

The Staff disputes the Petitioners' characterization of Contention 3 as a contention of omission. The Staff argues that the contention "challenges the adequacy of the ER's treatment of the environmental effects of LLRW management at the Fermi [Unit] 3 site," and that greater factual support is required for such a contention than the Petitioners have provided. NRC Ans. at 32-34. The Staff also argues that, to the extent the contention is a challenge to 10 C.F.R. § 51.51 and to the effluent quantities listed in Table S-3, it is barred by 10 C.F.R. § 2.335(a). *Id.* at 37. The Staff further contends that "[t]o the extent that Contention 3 is intended to present arguments related to the type of 'site- and design-specific' impacts of on-site LLRW *storage* that the Commission has recently found to be appropriate for resolution in adjudicatory proceedings, the Petitioners have failed to proffer a 'properly framed and supported' contention as required."[76]

Discussion

Contentions concerning the management of LLRW have recently been addressed by other licensing boards[77] and the Commission.[78] Consistent with those rulings, we agree with the Applicant and the Staff that the contention is inadmissible insofar as it concerns greater-than-Class-C waste, seeks to require a change to the decommissioning cost estimate, or constitutes a challenge to Table S-3 of 10 C.F.R. § 51.51. Nevertheless, we have narrowed the Petitioners' LLRW allegations to a specific NEPA contention that meets the admissibility criteria of 10 C.F.R. § 2.309(f)(1) and that does not conflict with NRC regulations. Other boards have also narrowed LLRW contentions in a similar manner.[79] We admit the contention as so narrowed.

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[74] App. Ans. at 30.

[75] *Id.* (citing *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 77 n.42 (2009).

[76] NRC Ans. at 37 (citing *Bellefonte,* CLI-09-3, 69 NRC at 77) (emphasis in Staff Answer).

[77] *See Calvert Cliffs,* LBP-09-4, 69 NRC at 220-31; *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), LBP-09-3, 69 NRC 139, 159-64 (2009); *North Anna,* LBP-08-15, 68 NRC at 313-21; *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 121-25 (2009).

[78] *Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 70 NRC 33 (2009); *Bellefonte,* CLI-09-3, 69 NRC at 77.

[79] *See Calvert Cliffs,* LBP-09-4, 69 NRC at 220-21; *Levy County,* LBP-09-10, 70 NRC at 121.

Inadmissible Aspects of Contention 3

We agree with the Staff and the Applicant that Contention 3 should be construed as a NEPA contention. It alleges a NEPA violation based on the Applicant's failure to explain in the ER how it will safely manage LLRW from Fermi Unit 3 in the absence of a permanent disposal facility. The Petition refers to safety and security issues only in the context of discussing the environmental effects that must be evaluated under NEPA. Cont. at 40. The Petition fails to identify any NRC safety regulations requiring that the COLA be supplemented with additional information concerning LLRW management. Only in their reply brief did the Petitioners claim that Contention 3 includes a separate safety contention and provide citations to NRC safety regulations that they claim require the Applicant to provide updated information concerning LLRW management. But "a reply cannot expand the scope of the arguments set forth in the original hearing request."[80] Accordingly, we will analyze Contention 3 solely as a NEPA contention.

In addition, as other boards have concluded, only the management of Class B and Class C wastes is properly the subject of a contention such as this.[81] Contention 3 is founded upon the fact that the only operating disposal facilities for Class B and C waste are located in Richland, Washington, and Barnwell, South Carolina, and neither of those facilities currently accepts LLRW from Michigan reactors. That undisputed fact, however, is not relevant to the disposal of greater-than-Class-C waste because the disposal of that category of waste is, by statute, the responsibility of the federal government.[82] The Petitioners have not provided facts to support a contention that the United States will fail in its responsibility to provide for the disposal of greater-than-Class-C waste. 10 C.F.R. § 2.309(f)(1)(v).

We also deem too speculative the Petitioners' allegation that the decommissioning cost estimate is inadequate because the Applicant may someday need to dispose of LLRW onsite. Cont. at 41. The Petitioners suggest that the COLA must take into account the increased decommissioning costs that might result from the need to store or permanently dispose of LLRW at the Fermi Unit 3 site after the nuclear power plant ceases operation. But the decommissioning of the facility, the construction of which has not even begun, is most likely decades in the future. Arguments premised on the prediction that someday the Fermi Unit 3 site will become a permanent storage or disposal facility for LLRW are "too speculative

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[80] *Crow Butte Resources, Inc.* (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 568 (2009).

[81] *See Calvert Cliffs,* LBP-09-4, 69 NRC at 221; *North Anna,* LBP-08-15, 68 NRC at 313 n.86.

[82] 42 U.S.C. § 2021c(b)(1)(D). *See North Anna,* LBP-08-15, 68 NRC at 313 n.86.

at present and . . . therefore not 'material to the findings the NRC must make to support the action that is involved in' the present proceeding."[83]

In addition, we agree with the Applicant that the portion of this contention disputing the cost estimate for decommissioning is an indirect challenge to 10 C.F.R. § 50.75(c). App. Ans. at 31-32. The Applicant developed the cost estimate using the formula required by the regulation, which includes, among other things, an escalation factor for waste burial. The Petitioners do not claim that the Applicant used the formula incorrectly. Rather, they appear to argue that the cost estimate should be increased above the estimate developed pursuant to the regulation because of the alleged need to permanently store or dispose of LLRW onsite during decommissioning. *See* Cont. at 41. 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.[84]

NEPA issues related to the environmental consequences of the permanent disposal of Class B and C wastes are not properly before us. The Commission held that a licensing board may not admit a contention that directly or indirectly challenges Table S-3 of 10 C.F.R. § 51.51.[85] The Commission explained that "Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and concludes that this kind of disposal will not result in the release of any 'significant effluent to the environment.'"[86] We may not admit a contention that directly or indirectly challenges that assumption or conclusion. Thus, the Applicant must rely upon Table S-3 to evaluate the environmental consequences of the permanent disposal of LLRW from Fermi Unit 3, as it did, and we may not require it to reexamine issues resolved by Table S-3.

The Commission also stated, however, that "we do not rule out that, in a future COL proceeding, a petitioner could proffer an application-specific contention suitable for litigation on the subject of onsite storage of low-level radioactive waste."[87] The Commission further concluded that "[t]he questions of the safety and environmental impacts of onsite low-level waste *storage* are, in our view, largely site- and design-specific, and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported

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[83] *North Anna,* LBP-08-15, 68 NRC at 317 (quoting 10 C.F.R. § 2.309(f)(1)(iv)). *See also Calvert Cliffs,* LBP-09-4, 69 NRC at 222.

[84] *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 1), LBP-83-76, 18 NRC 1266, 1273 (1983).

[85] *Bellefonte,* CLI-09-3, 69 NRC at 75.

[86] *Id.* at 75 n.30.

[87] *Id.* at 77 n.42.

contentions."[88] In addition, the Commission observed that, even if it had chosen to promulgate a "low-level waste confidence" rule, such a rule would not, if it followed the pattern of the high-level waste confidence rule, "alter any requirements to consider in the adjudicatory proceeding the environmental impacts of waste storage during the term of the license."[89] Also, "Table S-3 does not include health effects from the effluents described in the Table," and that issue, as well as others specifically noted, "may be the subject of litigation in the individual licensing proceedings."[90]

Reformulated Contention 3

Contention 3 is not limited to the environmental consequences of the disposal of LLRW. The contention also concerns the environmental and health effects of extended onsite storage of LLRW. We conclude for the reasons just explained that we may, without creating a conflict with Table S-3, admit an application-specific contention concerning the environmental and public health consequences of the need for extended onsite storage of LLRW, assuming that contention satisfies the requirements of 10 C.F.R. § 2.309(f)(1). Contention 3 raises such an issue, although it also raises other issues described above that we do not find admissible.

Boards may reformulate contentions to "eliminate extraneous issues or to consolidate issues for a more efficient proceeding."[91] The Board has therefore reformulated Contention 3 as follows:

> The ER for Fermi Unit 3 is deficient in discussing the Applicant's plans for management of Class B and C wastes. The ER assumes the existence of an offsite disposal facility for those wastes. In light of the current lack of a licensed offsite disposal facility, however, and the uncertainty whether a new disposal facility will become available during the license term, the ER must either describe the Applicant's plan for storing Class B and C wastes onsite during the license term and the environmental consequences of such extended onsite storage, or show that the Applicant has a plan for managing the wastes that does not require an offsite disposal facility or extended onsite storage.

The narrowed contention is a contention of omission based on the Applicant's failure to acknowledge in the ER that it lacks an offsite disposal facility and

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[88] *Id.* at 76-77 (emphasis in original).

[89] *Id.* at 77.

[90] 10 C.F.R. § 51.51(b), n.1 to Table S-3.

[91] *North Trend,* CLI-09-12, 69 NRC at 552 (2009) (quoting *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-08-11, 67 NRC 460, 482 (2008) (emphasis omitted)); *Pennsylvania Power & Light Co.* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-79-6, 9 NRC 291, 295-96 (1979).

to either explain its plan for storing such wastes onsite during the license term, or show that it has some alternative means of managing the wastes that will not require either an offsite disposal facility or extended onsite storage. The narrowed contention is site- and design-specific and concerns only extended onsite storage, not permanent disposal, of Class B and C wastes. It challenges neither the assumption of Table S-3 that low-level waste from reactors will eventually be disposed of through shallow land burial, nor its conclusion that this kind of disposal will not result in the release of any significant effluent to the environment.

Analysis of Reformulated Contention 3 Under 10 C.F.R. § 2.309(f)(1)

STATEMENT OF THE ISSUE, BASIS OF THE CONTENTION, AND SCOPE OF THE PROCEEDING

Reformulated Contention 3 satisfies the contention admissibility standards of 10 C.F.R. § 2.309(f)(1). The first such standard requires that a petitioner provide a specific statement of the legal or factual issue sought to be raised.[92] In *North Anna,* the Board found that a contention of omission like the one at issue here satisfied section 2.309(f)(1)(i) by alleging that the Applicant should have explained its current plan for the management of LLRW, given the lack of an offsite disposal facility, and the potential environmental impact of retaining LLRW at the reactor site for an extended period.[93] Reformulated Contention 3 requires that DTE provide the same information or show that extended onsite storage is unnecessary because the waste will be shipped offsite for storage at another licensed facility.

The Petitioners have also provided a brief explanation of the basis of Contention 3. They explain that the ER incorrectly assumes that Fermi Unit 3 will have access to a permanent LLRW disposal facility, that in the absence of such a disposal facility the Applicant's LLRW is likely to remain onsite for an extended period, and that the ER fails to explain how the waste will be stored onsite for an extended period and the environmental consequences of extended onsite storage. Cont. at 38-40, 42-43. The Petitioners have adequately identified the legal basis of the contention by alleging that such explanation is required by NEPA (and implicitly by 10 C.F.R. Part 51). *Id.* at 37, 40. Accordingly, the Petitioners have satisfied the requirements of 10 C.F.R. § 2.309(f)(1)(ii).[94]

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[92] 10 C.F.R. § 2.309(f)(1)(i).

[93] *North Anna,* LBP-08-15, 68 NRC at 312-14.

[94] *North Anna,* LBP-08-15, 68 NRC at 314; *Pa'ina,* LBP-06-12, 63 NRC at 414.

Contention 3 is within the scope of this proceeding,[95] as required by section 2.309(f)(1)(iii). The Notice of Hearing and Opportunity to Petition for Leave to Intervene for this proceeding explained that the Licensing Board would consider the Application under Part 52 for a COL for Fermi Unit 3. Contention 3 challenges the legal sufficiency of the ER for Fermi Unit 3 and is therefore within the scope of the proceeding.[96]

MATERIALITY

Contention 3 is material to compliance with NEPA and the NRC's regulations implementing NEPA, and it therefore satisfies the requirement of section 2.309(f)(1)(iv).[97] NEPA requires that an EIS provide a detailed statement concerning among other things, "the environmental impact of the proposed action," "any adverse environmental effects which cannot be avoided should the proposal be implemented," and "any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented."[98] The NRC regulations governing preparation of the ER require that it discuss the same subjects.[99] In addition, the NRC regulations provide that the information submitted in the ER pursuant to these requirements "should not be confined to information supporting the proposed action but should also include adverse information."[100] In substance, Contention 3 alleges that the discussion of LLRW management in the ER does not reflect current conditions but rather those that existed when Michigan reactors could ship LLRW to an offsite disposal facility, and therefore the ER fails to accurately describe the proposed action and its impact on the environment. Contention 3 thus alleges omissions from the analysis required by NEPA and 10 C.F.R. § 51.45(b) and (e). Accordingly, it is material to the ER's compliance with the NRC's Part 51 regulations and to the Agency's compliance with NEPA.

According to the Applicant, the "Petitioners cite no regulatory requirement that Detroit Edison must provide a 'feasible plan' for dispositioning [LLRW] in the ER." App. Ans. at 31. It is true that Part 51 does not expressly mandate that the ER describe the applicant's plan for the management of LLRW, although sections 51.45(b)(1) and 51.45(b)(2) imply that it must do so since an understanding of mitigation measures is necessary to evaluate the proposed action's impact on the environment and any adverse environmental effects which cannot be avoided.

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[95] *See* 73 Fed. Reg. 55,876 (Sept. 26, 2008).

[96] *See North Anna,* LBP-08-15, 68 NRC at 314-15; *Pa'ina,* LBP-06-12, 63 NRC at 414.

[97] *See* 10 C.F.R. Part 51.

[98] 42 U.S.C. § 4332(C)(i), (ii), (v).

[99] 10 C.F.R. § 51.45(b)(1), (2), (5).

[100] *Id.* § 51.45(e).

Even if the text of Part 51 does not conclusively resolve the question, we may resort to case law and regulations construing the NEPA requirements for the EIS that correspond to the requirements section 51.45(b) imposes upon the ER.[101] In *Robertson v. Methow Valley Citizens Council,* the Supreme Court construed NEPA § 102(2)(C)(ii), which requires that an EIS disclose "any adverse environmental effects which cannot be avoided should the proposal be implemented," to implicitly require that the EIS disclose mitigation measures:

> [O]ne important ingredient of an EIS is the discussion of steps that can be taken to mitigate adverse environmental consequences. The requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of [NEPA] and, more expressly, from CEQ's implementing regulations. Implicit in NEPA's demand that an agency prepare a detailed statement on "any adverse environmental effects which cannot be avoided should the proposal be implemented," 42 U.S.C. § 4332(C)(ii), is an understanding that the EIS will discuss the extent to which adverse effects can be avoided. . . . More generally, omission of a reasonably complete discussion of possible mitigation measures would undermine the "action-forcing" function of NEPA. Without such a discussion, neither the agency nor other interested groups and individuals can properly evaluate the severity of the adverse effects.[102]

Section 51.45(b)(2) requires that the ER discuss "[a]ny adverse environmental effects which cannot be avoided should the proposal be implemented," the same subject that NEPA § 102(2)(C)(ii) requires be covered in the EIS. Because the NRC regulation repeats verbatim the NEPA language that the Supreme Court construed to require "a detailed discussion of possible mitigation measures," and because the analysis in the ER is the foundation upon which the Agency's EIS will be prepared, the ER should also discuss the measures the Applicant intends to use to mitigate adverse environmental consequences. If it did not, it would not provide the Staff with the information it needs to prepare the EIS in compliance with NEPA.

Ordinarily this would be the end of the materiality analysis. However, the licensing board in the *Levy County* COL proceeding recently suggested that NEPA has only a limited role to play in interpreting Part 51's requirements for the ER.[103] Although it did not directly address the question presented here, that

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[101] *Calvert Cliffs,* LBP-09-4, 69 NRC at 226. *See also infra* at pp. 260-61.

[102] 490 U.S. 332, 351-52 (1989) (citations and footnotes omitted).

[103] *Levy County,* LBP-09-10, 70 NRC at 87-88. In many respects, we are in agreement with the *Levy County* Board's rulings. That Board reached a conclusion much like ours regarding the LLRW contention in that case. *Id.* at 123-24. In the section of the opinion entitled "Standards Governing NEPA Alternatives Analysis," it relied upon NEPA case law, CEQ regulations, and Commission decisions to

(Continued)

Board's analysis could be viewed as inconsistent with our ruling that NEPA § 102(2)(C)(ii), as interpreted by the Supreme Court, provides relevant guidance for interpreting the equivalent provision in section 51.45(b)(2). We will therefore explain our view of the role NEPA plays in interpreting Part 51's requirements for the ER in greater detail than might otherwise be necessary.

We agree with the *Levy County* Board that NEPA applies to federal agencies, not permit applicants; that the requirements directly applicable to the ER are set forth in 10 C.F.R. Part 51, not NEPA; and that the ER is not identical to the EIS. The Commission could decide, consistently with NEPA, not to require an ER, or it could eliminate from the ER any obligation to discuss subjects the agency must address in the EIS. We also recognize that, to the extent the NRC's Part 51 regulations are unambiguous, the regulations must be enforced according to their plain meaning. But section 51.45(b)'s list of environmental considerations, like the corresponding list of environmental considerations in NEPA § 102(2)(C)(i)-(v), is phrased in such broad and general terms that its provisions may often fail, if construed in isolation, to clearly resolve particular questions concerning the required content of the ER. The issue whether the ER must include the Applicant's mitigation plan for LLRW presents one instance where section 51.45(b) does not expressly resolve the question at hand.

In such situations, the NEPA case law and CEQ[104] regulations concerning NEPA § 102(2)(C)(i)-(v) provide useful guidance in interpreting the corresponding provisions in 10 C.F.R. § 51.45(b)(1)-(5). As the D.C. Circuit explained, "'a regulation must be interpreted so as to harmonize with and further [ ] not to

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help explain the requirements for the ER, an approach that is consistent with our own. *Id.* at 126-28. Our disagreement is with the Board's suggestion, in a separate section of the opinion entitled "ER Is Mandated by Part 51, not NEPA," that the primary criterion in determining the adequacy of the ER should be Part 51, construed with little or no reference to corresponding provisions of NEPA. This is true only in those instances where Part 51's provisions, standing alone, are sufficient to resolve the particular question at issue. In other instances licensing boards will need to look to NEPA case law and CEQ regulations to interpret the Part 51 requirements for the ER. That is what the *Levy County* Board itself did when explaining the standards governing the alternatives analysis in the ER. *Id.* at 126-28.

[104] The Council on Environmental Quality, an agency created by NEPA, has promulgated regulations concerning compliance with NEPA. *See* 40 C.F.R. §§ 1500-1517. The Supreme Court has held that the CEQ regulations are entitled to substantial deference. *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 334, 355-56 (1989).

The Commission has stated that "the NRC as an independent regulatory agency can be bound by CEQ's NEPA regulations only insofar as those regulations are procedural or ministerial in nature. NRC is not bound by those portions of CEQ's NEPA regulations which have a substantive impact on the way in which the Commission performs its regulatory functions." Environmental Protection Regulations for Domestic Licensing and Related Conforming Amendments, 49 Fed. Reg. 9352 (Mar. 12, 1984). We do not suggest otherwise, but only that CEQ regulations provide useful guidance in interpreting the scope of the environmental considerations enumerated in section 51.45(b)(1)-(5).

conflict with the objective of the statute it implements. [Courts] must construe [regulations] in light of the statute[s they] implement [ ], keeping in mind that where there is an interpretation of an ambiguous regulation which is reasonable and consistent with the statute, that interpretation is to be preferred.'"[105] The section defining the scope of Part 51 states, with certain exceptions not relevant here, that "the regulations in this part implement: (a) Section 102(2) of the National Environmental Policy Act of 1969, as amended."[106] Section 51.45, the provision that governs the content of the ER, is thus one of the agency's regulations implementing NEPA § 102(2). It should therefore be construed consistently with corresponding NEPA requirements.

The rule of construction stated by the D.C. Circuit applies with particular force here because of the close textual relationship between the relevant provisions of NEPA and Part 51. Of particular importance, 10 C.F.R. § 51.45(b)(1)-(5) requires that the ER address a list of "environmental considerations" that correspond to the environmental considerations that NEPA § 102(2)(C)(i)-(v) requires the agency to address in the EIS.[107]

NEPA § 102(2)(C) provides that, "on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment," the agency shall prepare a "detailed statement" on:

> (i) the environmental impact of the proposed action,
>
> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
>
> (iii) alternatives to the proposed action,
>
> (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
>
> (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.[108]

Similarly, the ER must "contain a description of the proposed action, a statement of its purposes, [and] a description of the environment affected," 10 C.F.R. § 51.45(b), and it must "discuss the following considerations":

> (1) The impact[s] of the proposed action on the environment . . . . in proportion to their significance;
>
> (2) Any adverse environmental effects which cannot be avoided should the proposal be implemented;

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[105] *Western Fuels-Utah, Inc.,* 900 F.2d 318, 320 (D.C. Cir. 1990) (quoting *Emery Mining Co. v. Secretary of Labor, Mine Safety & Health Administration,* 744 F.2d 1411, 1414 (10th Cir. 1984)).

[106] 10 C.F.R. § 51.1.

[107] 42 U.S.C. § 4332(C)(i)-(v).

[108] *Id.*

(3) Alternatives to the proposed action . . . . ;

(4) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and

(5) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.[109]

Thus, the environmental considerations that the ER must discuss are equivalent to, and in most instances verbatim restatements of, the environmental considerations that NEPA requires the agency to describe in detail in the EIS. Moreover, in what appears to have been a further effort to maintain consistency with NEPA, the Commission added additional language to section 51.45(b) that was derived from CEQ regulations that interpret NEPA. For example, NEPA § 102(2)(C)(i) requires that the EIS include a detailed statement on "the environmental impact of the proposed action," while the corresponding NRC regulation states that the ER shall discuss "[t]he impact of the proposed action on the environment," and also provides that "[i]mpacts shall be discussed in proportion to their significance."[110] The Commission explained that the second sentence in section 51.45(b)(1) is "identical to the first sentence in § 1502.2(b) of the CEQ regulations . . . ."[111] The Commission also explained that "[t]he sentence in § 51.45(b)(3) which reads '[t]o the extent practicable, the environmental impacts of the proposal and the alternatives should be presented in comparative form[ ]' is drawn from § 1502.14 of the CEQ regulations."[112] The fact that the Commission used CEQ regulations as sources of law for developing requirements for the ER supports using those regulations to resolve questions concerning the content of the ER that are not resolved by the agency's regulations.

Also, with respect to alternatives to the proposed action, the Commission not only required that the ER discuss alternatives, as required by NEPA § 102(2)(C)(iii), but also required that the discussion of alternatives be sufficiently complete to aid the Commission in developing alternatives under NEPA

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[109] 10 C.F.R. § 51.45(b)(1)-(5). The Commission omitted from section 51.45(b) the statement in NEPA § 102(2)(C) that the EIS must include a "detailed statement" on the listed environmental considerations. Instead, the ER should "discuss" those considerations. Given that the Commission did include most of the text of section 102(2)(C) in the regulation, one could infer that the omission of the words "detailed statement" was intentional. Thus, the ER need not be as detailed as an EIS. But that does not change the important point that the ER must provide sufficient information to permit the NRC Staff to adequately address in the EIS the environmental consequences in NEPA § 102(2)(C)(i)-(v). The Staff may have to add some detail to the information provided in the ER, but the Commission did not expect it to write on a blank slate.

[110] 10 C.F.R. § 51.45(b)(1).

[111] 49 Fed. Reg. 9352, 9363 (Mar. 12, 1984).

[112] *Id.*

§ 102(2)(E).[113] The Commission evidently intended to ensure that the ER would provide the essential information the agency requires to fulfill its NEPA obligations concerning alternatives to the proposed action, an issue that both the NRC and the CEQ have described as the heart of an EIS.[114]

Thus, section 51.45(b)'s description of the environmental considerations that must be discussed in the ER is derived from (a) the corresponding provisions of NEPA §§ 102(2)(C) and 102(2)(E) and (b) CEQ regulations interpreting NEPA requirements. As another board stated:

> To a substantial extent Part 51 parallels and elaborates on the requirements of NEPA and the NEPA regulations promulgated by the Council on Environmental Quality in 40 C.F.R. Parts 1500 to 1508. In addition, the Part 51 regulations impose certain obligations on the applicant, e.g., to submit an environmental report which the NRC Staff uses as input to the draft and final environmental impact statements. *See* 10 C.F.R. §§ 51.45 and 51.50. For example, the ER must discuss each of the five subelements covered by NEPA § 102(2)(C), *see* 10 C.F.R. § 51.45(b)(1)-(5).[115]

The Commission has similarly observed that "much of the information in an Applicant's ER is used in the [draft environmental impact statement]."[116] Given that the ER provides the foundation upon which the EIS is built, the environmental considerations the applicant must address in the ER pursuant to section 51.45(b)(1)-(5) should be construed consistently with the environmental issues the Staff must address in the EIS pursuant to NEPA § 102(2)(C)(i)-(v). This is fully in accord with the rule of construction described above.

The Commission has made it clear that issues arising under NEPA, not just those arising under Part 51, are a material basis for challenging the ER. Section 2.309(f)(2) requires petitioners to file contentions based on the documents in existence when the petition is filed, including the applicant's environmental report.[117] This covers any contention alleging that the ER is deficient under Part 51. But the Commission also requires petitioners to raise their NEPA contentions in response to the ER, rather than awaiting publication of the EIS. Under 10 C.F.R. § 2.309(f)(2), "[o]n issues arising under the National Environmental Policy Act, the petitioner *shall file* contentions based on the applicant's environmental report" (emphasis added). The plain meaning of section 2.309(f)(2) is that NEPA

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[113] Contention 13, which we discuss *infra* at p. 297, concerns alternatives to the proposed action.

[114] 10 C.F.R. Part 51, Subpart A, Appendix A, § 5; 40 C.F.R. § 1502.14.

[115] *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 614 (2007).

[116] *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983).

[117] 10 C.F.R. § 2.309(f)(2).

contentions — not just Part 51 contentions — must be raised in response to the ER. It would make no sense to impose such a requirement if issues arising under NEPA do not provide a basis for challenging the ER.[118]

Accordingly, section 51.45(b)'s list of environmental considerations is correctly understood as requiring the applicant to provide the essential information the agency needs to prepare the EIS in compliance with NEPA § 102(2)(C)(i)-(v). We may therefore rely upon NEPA § 102(2)(C)(i)-(v), as interpreted in NEPA case law and CEQ regulations, for assistance in resolving questions concerning the content of the ER that are not unambiguously resolved by 10 C.F.R. § 51.45(b)(1)-(5). The NEPA case law we have cited confirms that the Applicant's plan for the storage of Class B and C wastes and the environmental consequences of that plan are material issues under section 51.45(b).

FACTUAL SUPPORT

The Petitioners describe Contention 3 as a "'contention of omission,' i.e., a claim, in the words of 10 C.F.R. § 2.309(f)(1)(vi), that 'the application fails to contain information on a relevant matter as required by law . . . and the supporting reasons for the petitioner's belief.'"[119] For a contention of omission, the petitioner's burden is to show the facts necessary to establish that the application omits information that should have been included.[120]

The Petitioners have met that burden. They have cited a publicly available source that describes the hazardous nature of LLRW. Cont. at 40 n.8, 43. None of the parties has disputed that LLRW is hazardous. Petitioners have also cited a Government Accountability Office (GAO) study that explains that a LLRW disposal facility located in Barnwell, South Carolina, formerly received about 99% of the nation's Class B and C waste, but that after June 30, 2008, the Barnwell

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[118] A court should not adopt an interpretation that would render a statutory provision "redundant" or "nonsensical." *Field v. Mans,* 516 U.S. 59, 68 n.7 (1995). "[A] basic tenet of statutory construction, equally applicable to regulatory construction, [is] that [a text] should be construed so that effect is given to all its provisions, so that no part will be inoperative or superfluous, void or insignificant, and so that one section will not destroy another unless the provision is the result of obvious mistake or error." *APWU v. Potter,* 343 F.3d 619, 626 (2d Cir. 2003) (quoting *Silverman v. Eastrich Multiple Investor Fund,* 51 F.3d 28, 31 (3d Cir. 1995)).

[119] Cont. at 44 (quoting *Pa'ina Hawaii, LLC,* LBP-06-12, 63 NRC at 413).

[120] The ER's failure to include an environmental analysis of the environmental consequences of extended onsite storage is best characterized as a contention of omission. Even if, however, we were to agree with the Staff that the contention is not one of omission but rather one "that challenges the adequacy of the ER's treatment of the environmental effects of LLRW management at the Fermi [Unit] 3 site," NRC Ans. at 33, that would not change our conclusion that reformulated Contention 3 complies with section 2.309(f)(v). Regardless of how the defect in the ER is characterized, the factual support described in the text, *infra,* is sufficient to satisfy the Petitioners' burden under section 2.309(f)(1)(v).

facility was closed to generators of LLRW except those located in states that are part of the Atlantic Compact (South Carolina, Connecticut, and New Jersey). LLRW generators in Michigan thus cannot send their Class B and C waste to the Barnwell facility. *Id.* at 37 n.1. Neither the Applicant nor the Staff disputes that Michigan reactors currently lack a permanent disposal facility for the Class B or C wastes they generate.

As the Commission recently observed regarding a COL application from the Tennessee Valley Authority (TVA), an applicant that also lacks access to the Barnwell disposal facility, "this closure would preclude TVA from disposing its low-level waste at Barnwell and would force TVA to store that waste onsite instead — at least until another low-level waste disposal facility agrees to accept such waste from Alabama nuclear facilities."[121] DTE is in the same situation as TVA. The Applicant acknowledged at oral argument that the current design for Fermi Unit 3 includes only 6 months' storage capacity for LLRW.[122] By contrast, the Applicant requests a 40-year license for Fermi Unit 3.[123] Thus, the closure of Barnwell will force DTE to store its Class B and C wastes onsite unless it can develop an alternative solution, such as entering into a contract with an offsite facility to store the wastes indefinitely. However, the ER neither discusses the need for extended onsite storage during the license term, nor analyzes the environmental consequences of extended onsite storage. It also does not reveal any plan for an alternative to extended onsite storage.

Furthermore, the Commission "has acknowledged that the future availability of disposal capacity for low-level radioactive waste remains highly uncertain."[124] This uncertainty further increases the likelihood that long-term storage of LLRW will be necessary at the Fermi Unit 3 site. Thus, the Petitioners have provided facts to show that the closure of the Barnwell facility could force the Applicant to store LLRW onsite for a period far longer than the capacity of its existing storage facility.

The Applicant argues that the Class B and C wastes need not remain onsite indefinitely because there is a "foreseeable disposition path" for removing the wastes from the Fermi Unit 3 site. App. Ans. at 28. The Applicant states that it "could" send its Class B and C wastes to another licensee that would accept and treat the waste or store the waste at its facility.[125] *Id.* But the Applicant does not

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[121] *Bellefonte,* CLI-09-3, 69 NRC at 71.

[122] Tr. at 51. *See also* ESBWR DCD, Rev. 5, § 11.4.1.

[123] *See* 10 C.F.R. § 52.104 (a combined license is issued for a period of 40 years).

[124] *Bellefonte,* CLI-09-3, 69 NRC at 76.

[125] The Applicant quotes a press release from "Studsvik," which operates a facility in Erwin, Tennessee, indicating that it plans to treat and assume responsibility for the storage and final disposal of Class B and C wastes from "FPL Group." App. Ans. at 28 n.23 (quoting DTE Exh. 1). The *(Continued)*

state it has actually entered into such a contract with an offsite licensee. Absent such a contract, it is foreseeable, as the Commission has noted, that the lack of an offsite disposal facility will result in extended onsite storage of LLRW.[126] Furthermore, we see nothing in the mere possibility of a contract with an offsite licensee that relieves the Applicant from the responsibility to explain in the ER how it intends to address the problem of management of Class B and C wastes, given that it now lacks access to an offsite disposal facility. For purposes of this NEPA contention, the crucial question is not merely whether the Applicant has a plan for managing its Class B and C wastes but whether that plan, and any onsite environmental impacts it may produce, is disclosed in the ER. NEPA § 102(2)(C) requires a "detailed statement" from the agency of the environmental consequences of the planned federal action. Similarly, section 51.45(b) directs that the ER "discuss" the environmental consequences that will be the subject of the agency's detailed statement. As we have explained, these requirements mean, among other things, that the ER must disclose any plan to mitigate potential adverse environmental consequences. Thus, if DTE has a plan to avoid extended onsite storage of Class B and C wastes, the ER must disclose the plan. The ER fails to do that. The Petitioners have therefore alleged facts sufficient to show that the ER fails to contain information required by 10 C.F.R. § 51.45(b) and NEPA, and they have provided references to support their allegations. 10 C.F.R. § 2.309(f)(1)(v).

The same reasoning applies to other points made by the Applicant and the Staff. The Applicant notes that the Commission has found, as a general matter, that nuclear power plant operators have been safely storing and managing LLRW onsite for years. App. Ans. at 30. At most, this suggests that the Applicant may have one or more options for managing its Class B and C wastes after the partial closure of the Barnwell facility. This does not relieve the Applicant of the burden of disclosing its actual plan in the ER, or of explaining the environmental consequences that its plan will entail.

The Staff faults the Petitioners because they "have not addressed any of the technical information concerning LLRW handling, for example the capacity issue, that is contained in Revision 4 of the ESBWR DCD and incorporated into the Fermi 3 COLA by reference." NRC Ans. at 33-34. Although the Staff did not identify the specific pages of the COLA or the DCD it had in mind, we believe it

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Petitioners note, however, that the press release concerns Studsvik's contract with a different nuclear utility to take that other utility's Class B and C wastes. Reply at 27. It does not show that Studsvik (or any other vendor) will accept waste from Fermi Unit 3. Moreover, Studsvik's agreement with FPL Group relies on an additional agreement with another company located in Texas to take the LLRW for storage. The Applicant has not shown that the Texas Company would accept its Class B and C wastes for storage.

[126] *Bellefonte,* CLI-09-3, 69 NRC at 71.

was referring to ER § 3.5.2.3, entitled "Solid Waste Management System," and the parts of the DCD cited therein. ER § 3.5.2.3 states that "[t]he Solid Waste Management System (SWMS) collects, processes, packages, and temporarily stores . . . solid radioactive wastes for offsite shipment and permanent disposal." It is precisely this erroneous assumption of an offsite disposal facility that forms the basis of Contention 3. The same ER section subsequently explains that "[t]he SWMS processes and components are described in DCD Section 11.4." Section 11.4 of the DCD states that "[o]n-site storage space for a six-month volume of packaged waste is provided in the radwaste building," and then explains that "[d]epending on the availability and accessibility of adequate waste repositories in the future," additional temporary storage could be made available.

The DCD merely suggests one option, adding temporary LLRW storage capacity, that might be developed by a utility that intends to use the U.S. ESBWR design. The Applicant acknowledged that it has not yet designed such a temporary LLRW storage facility, Tr. at 53, and the ER provides no indication that DTE intends to pursue that option. The mere possibility that the Applicant might someday choose to pursue that option is not a plan for the management of LLRW at Fermi. We cannot fault the Petitioners for not demonstrating an inadequacy in a plan the Applicant has not yet developed, much less presented in the ER. It is sufficient that the Petitioners have provided facts to support their claim that the ER must be updated to take into account the absence of an offsite disposal facility.

GENUINE DISPUTE WITH THE APPLICATION ON A MATERIAL ISSUE

Under section 2.309(f)(1)(vi), when an application is alleged to be deficient, the petitioner must identify the deficiencies and provide supporting reasons for its position that such information is required.

The Petitioners have identified the deficiency by pointing to specific pages in the ER where the Applicant presumes the existence of an offsite disposal facility for LLRW, while omitting any mention of the potential need for extended onsite storage, failing to explain its plan for such storage, and failing to address the resulting environmental consequences. Cont. at 37-38. As the Petitioners explain, the ER gives the impression that "the facility will prepare waste for routine shipment to a disposal site throughout Fermi's entire operating life, despite the fact that no such disposal site is currently available, let alone available in future decades. The plan for Fermi omits this essential information despite the reality that the waste involved is potentially hazardous for far more than 60 years." *Id.* at 38.

The Petitioner has also shown that that the deficiency in the ER must be corrected to comply with NEPA (and implicitly with Part 51). Cont. at 40-41. For the reasons we have already discussed, given the absence of an offsite disposal facility the ER must explain the Applicant's plan for extended onsite

storage of LLRW and assess the environmental consequences of its plan. The information that the ER provides concerning these issues must be accurate and up-to-date.[127] The Petitioners have adequately demonstrated a genuine dispute as to whether the ER meets these requirements. Accordingly, Contention 3 identifies a material dispute with the sufficiency of the Application, as required by 10 C.F.R. § 2.309(f)(1)(vi).

We therefore find Contention 3 admissible as reformulated above.

D. Contention 4

The Petitioners state in Contention 4:

> The Commission must suspend the COL adjudication pending completion of the NRC review of the ESBWR reactor design and the obligatory design rulemaking.[128]

The Petitioners contend that the nuclear reactor design chosen by the Applicant for Fermi Unit 3, the ESBWR, is yet to be completed, accepted or certified, and thus, the Commission must suspend the proceeding "pending completion of the NRC review of the ESBWR reactor design and the obligatory design certification rulemaking."[129] If the Commission allows the proceeding to move forward, the Petitioners allege they would be deprived of a "fair and meaningful opportunity for a hearing on the Fermi COLA," in violation of AEA, Administrative Procedure Act, NEPA, and NRC regulations. Cont. at 46. Moreover, the Petitioners argue that the uncertainties associated with the Applicant citing to an uncertified nuclear reactor design in its COLA results is a denial of the Petitioners' due process rights. *Id.* at 46.

Discussion

We may not admit Contention 4 because it impermissibly challenges an existing Commission regulation and is directly contrary to Commission precedent. App. Ans. at 33. As the Applicant notes, 10 C.F.R. § 52.55(c) allows an applicant to reference a design certification that the Commission has docketed but not granted. *Id.* at 34. Citing this regulation, the Commission has previously rejected a request to hold a license application in abeyance until the design certification rulemaking

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[127] *See Ocean Advocates v. U.S. Army Corps of Engineers,* 402 F.3d 846, 866 (9th Cir. 2005) ("A patently inaccurate factual contention can never support an agency's determination that a project will have 'no significant impact' on the environment").

[128] Cont. at 45.

[129] *Id.; see also id.* at 46.

is completed.[130] We must reach the same result. We therefore find Contention 4 inadmissible.

E. Contention 5

The Petitioners state in Contention 5:

> The Fermi site may have problematic hydrology likely to allow offsite transport of chemical and radiological contaminants.[131]

Contention 5 addresses what the Petitioners assert are deficiencies in the hydrological radionuclide transport analysis in section 2.4.13 of the Applicant's COLA. Using a Staff Request for Additional Information (RAI) concerning the Applicant's FSAR § 2.4.13 analysis as their primary support, the Petitioners assert that the Applicant's "current hydrological studies are woefully inadequate" due to the omission of key hydrogeological data in the form of adequate onsite measurements. Cont. at 50. As additional support for this claim, the Petitioners cite to a provision in 10 C.F.R. § 100.20 requiring that certain factors related to hydrological radionuclide transport "be obtained from on-site measurements." *Id.* at 50. In particular, the Petitioners assert that the Applicant omits factors "such as soil, sediment, and rock characteristics, adsorption and retention coefficients, ground water velocity, and distances to the nearest surface body of water" in its hydrological radionuclide transport analysis. *Id.* at 50. The Petitioners note that the RAIs "highlight key missing data and measurements" that are needed to prepare contentions in this proceeding; thus, the Petitioners request at least 60 days to modify the contention following the Applicant's submittal of the information requested in the RAIs. *Id.* at 52.

The Petitioners also dispute the Applicant's reassurance that chelating agents[132] would not be used in relation to the liquid radwaste processing facilities for the proposed Fermi Unit 3, noting that section 5.5 of the Applicant's COLA contradicts this claim. *Id.* at 54. The Petitioners maintain that such chelating agents "could serve to accelerate the transport of hazardous radioactive substances" that

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[130] *See Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 67 NRC 1, 3-4 (2008) (citing 10 C.F.R. §§ 52.55(c) and 2.335(a)).

[131] Cont. at 50.

[132] *Webster's Collegiate Dictionary* (Random House 1991) defines a chelate as "a heterocyclic compound having a central metallic ion attached by covalent bonds to two or more nonmetallic atoms in the same molecule." With regard to this contention, a chelating agent (or strong complexing chemical) can be of concern because it may chemically bind radioactive metal compounds and allow them to move unimpeded with groundwater flow instead of allowing the metal compounds to interact with soil, which would decrease their mobility.

could leak onto the soil or spill into the groundwater affecting drinking water sources, including the Bass Islands Group Aquifer. *Id.* at 55. The Petitioners document several types of chelating agents that raise concerns, including "naturally and artificially occurring chelates . . . present in the flora, fauna, and Lake Erie Waters" that could potentially accelerate the release of hazardous radioactive substances resulting from accidental releases associated with the proposed Fermi Unit 3.[133]

Specifically, the Petitioners are concerned that radiological or toxicological releases from Fermi Unit 3 could endanger not only the Bass Island Aquifer at Catawba Island, which is a sole source of drinking water downstream, but also other groundwater aquifers sharing a hydrological connection with the Bass Islands Aquifer throughout the area. Cont. at 61. Moreover, the Petitioners challenge the Applicant's assumption that contaminated groundwater associated with Fermi Unit 3 is limited to only two possible receptors not including the Bass Island Aquifer. The Petitioners assert that the Applicant "lacks an adequate understanding of hydrology in the surrounding area," including the effects that various quarries in Monroe County may have on a drawdown effect pulling radioactively and toxicologically contaminated water into various aquifers. *Id.* at 62-63.

Finally, citing to the Applicant's commitment in its RAI response to relax conservatisms in its laboratory testing and radiological contamination analysis in such ways as crediting dilution in the Radwaste Building prior to release, the Petitioners allege that the Applicant is not presenting an acceptable method of protecting water resources in the area. *Id.* at 65. Furthermore, the Petitioners state concern that the Applicant will manipulate its "distribution coefficient and retardation factors" in order to achieve compliance with NRC regulations. *Id.* at 65-66.

The Applicant opposes this contention for making unfounded assertions regarding site hydrology and "utterly fail[ing] to demonstrate the existence of a genuine dispute between the Petitioners and the Applicant." App. Ans. at 35. Citing to Commission precedent, the Applicant notes that the Commission has made clear that a petitioner may not merely rely on an RAI for a contention.[134] The RAI cited in this contention concerns the analysis in FSAR § 2.4.13, which the Applicant maintains is immaterial because "the ESBWR design conservatively addresses a negative outcome of the analysis," or otherwise stated, the proposed ESBWR design already includes mitigative measures needed to preclude an accidental

[133] Cont. at 59; *see also id.* at 55-59.

[134] App. Ans. at 35 (citing *Oconee,* CLI-99-11, 49 NRC at 336 (the issuance of RAIs "does not alone establish deficiencies in the application")).

release of radioactive liquids predicted by a 2.4.13 analysis. App. Ans. at 36.[135] Because the assumptions underlying the COLA analysis in section 2.4.13 took into account that the ESBWR design would mitigate any conservative results, the Applicant concludes that the Petitioners do not raise a dispute that would result in any further relief in this proceeding. *Id.* at 37. Moreover, the Applicant asserts that the Petitioners' challenges to the COLA analysis are "effectively mooted by the Applicant's commitment to provide a new analysis." *Id.* at 38. The remaining details in the contention, the Applicant argues, are based on "an erroneous reading of the record," *id.* at 37, and "broad and unfounded suppositions do not provide adequate support for an admissible contention," *id.* at 40.

The Staff does not object to the admission of this contention inasmuch as it "asserts that on-site measurements of distribution coefficients, retardation factors, and porosity are omitted from the Application." NRC Ans. at 48. However, the Staff maintains that the remainder of this contention is inadmissible for lacking adequate factual or expert support and failing to raise a genuine dispute with the Applicant. *Id.* at 48. Agreeing with the Applicant, the Staff adds that "[t]he Commission has stated that the mere issuance of an RAI does not establish deficiencies in an application."[136] Therefore, the Staff asserts that the Petitioners must do more than simply quote from an RAI and must provide "'analysis, discussion, or information *of their own* on . . . the issues raised in the RAIs.'"[137]

The Staff argues that the remainder of the contention is inadmissible because it lacks adequate factual or expert support and fails to raise a genuine issue with the Applicant.[138] Further, the Staff maintains that although the Petitioners cite to several sections of the COLA, they do not challenge the referenced information as required to demonstrate a material dispute.[139]

Finally, the Staff asserts that the Petitioners do not provide any support suggesting the ability of a radioactive plume to reach the Bass Islands Aquifer at Catawba Island nor do the Petitioners provide information to dispute conclusory statements in the COLA regarding the hydrologic characteristics of the area. NRC Ans. at 53-54. The Staff notes that the Petitioners' reliance on the RAI for this information is incorrect because the Bass Islands Group addressed in the

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[135] As explanation for the conservative calculations provided for in section 2.4.13, the Applicant provides that a qualified laboratory that could test and measure dispersion coefficients for the fractured rock conditions had not yet been identified; therefore, the COLA incorporated calculations using limiting conservative values that resulted in the exceedance of certain values. App. Ans. at 36-37.

[136] NRC Ans. at 48 (citing *Oconee,* CLI-99-11, 49 NRC at 336).

[137] *Id.* at 48 (citing *Oconee,* CLI-99-11, 49 NRC at 337).

[138] *Id.* at 49. For example, the Petitioners fail to provide a link between the assertion that chelating agents might accelerate transport of radioactive materials in groundwater and the proposed contention, which states that "the Fermi site may have problematic hydrology." *Id.* at 51.

[139] NRC Ans. at 53; *see also* 10 C.F.R. § 2.309(f)(1)(vi).

RAI is part of the bedrock aquifer at the proposed Fermi Unit 3 site and is not the Bass Islands Aquifer at Catawba Island in Ottawa County, Ohio. *Id.* at 53. The Staff also argues that the Petitioners have not adequately supported their assertion that quarries will draw contaminated groundwater into drinking water with the exception of a citation to an RAI discussing groundwater flow conditions expected during and after construction. *Id.* at 55.

Discussion

The Board finds Contention 5 admissible, in part, as it relates to the omission from the COLA of onsite measurements of distribution coefficients, retardation factors, and porosity. We also find Contention 5 admissible as it relates to exceedance of effluent concentration limits in the analysis of radionuclide transport in groundwater presented in FSAR 2.4.13 (Rev. 1). We deny the remainder of Contention 5 for failing to provide alleged facts or expert support and failing to demonstrate a genuine dispute with the application on a material issue of fact or law. *See* 10 C.F.R. § 2.309(f)(1)(v) and (vi).

Contention 5 properly asserts a contention of omission with regard to on-site measurements of distribution coefficients, retardation factors, and porosity from the COLA. The Petitioners provide a regulatory citation to 10 C.F.R. § 100.20(c)(3), which states that "[f]actors important to hydrological radionuclide transport (such as soil, sediment, and rock characteristics, adsorption and retention coefficients, ground water velocity, and distances to the nearest surface body of water) must be obtained from on-site measurements." 10 C.F.R. § 100.20(c)(3) The Petitioners contend that the Applicant itself acknowledges in its response to the RAI that the COLA does not present site-specific measurements of adsorption and retention coefficients. Cont. at 52-53. Thus, this is a properly pleaded contention of omission and we admit it as such. We do, however, restrict the Petitioners' broad assertion that "key data" and onsite measurements have been omitted to the parameters required by 10 C.F.R. § 100.20(c)(3) — including distribution coefficients, retardation factors, and porosity.

Contention 5 is also admissible as the Petitioners identify an exceedance of regulatory limits in the Applicant's radionuclide transport in groundwater as documented in FSAR 2.4.13 (Rev. 1). The Applicant stated in its FSAR that its proposed mitigating design features preclude an accidental release of liquid effluents, and thus an accidental release to ground and surface water was not assessed in FSAR 2.4.13 (Rev 0). App. Ans. at 37. The Staff, however, requested that the Applicant provide an analysis of such a release. *Id.*

In response to the Staff's RAI, the Applicant has acknowledged that some onsite hydrogeologic data were not available, and provided an analysis of liquid effluent release to groundwater based on conservative assumptions (such assumptions

result in increasing the calculated exposure concentration).[140] The results from this accidental release to groundwater are presented by the Applicant in response to the RAI, and in FSAR 2.4.13 (Rev. 1), with the result from the modeled scenario that concentrations of a number of radionuclides calculated at potential exposure locations exceeded effluent concentration limits (ECF) as specified in 10 C.F.R. Part 20, Appendix B, Table 2.[141] Acknowledgment of this exceedance of ECF values is directly noted by the Petitioners with citation to 10 C.F.R. Part 20, Appendix B, Table 2. Cont. at 52. Even though the Applicant asserts that this issue is not material because of forthcoming data and analysis, App. Ans. at 37, this Board must analyze issues based on information currently at hand. Thus, the Petitioners have correctly demonstrated a dispute with the Applicant on a material issue of law. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Other references within the contention to "problematic hydrology" and questions of adequate hydrogeologic site characterization are not admitted because the Petitioners have not provided alleged factual or expert support to raise a dispute with the Applicant. *See* 10 C.F.R. § 2.309(f)(1)(v).

With regard to the remaining parts of the contention, the Petitioners have failed to demonstrate a genuine dispute with the Applicant, have provided no alleged fact or expert opinion support for their assertions, and have raised issues that are outside of the scope of this proceeding as discussed below. *See* 10 C.F.R. § 2.309(f)(1)(iii), (v), and (vi).

First, the Petitioners assert impacts to the Bass Islands Aquifer at Catawba Island sole source aquifer due to "fast moving plumes of radioactive contamination." Cont. at 53. However, in addition to failing to provide the basis for such a contaminant plume, they fail to provide any basis for suggesting that this sole source aquifer is in hydrogeologic communication with the bedrock aquifer beneath the site, especially in light of the immediate and significant influence of Lake Erie. Such a bare assertion without the requisite support for those claims is inadequate to support the admission of a contention.[142] *See* 10 C.F.R. § 2.309(f)(1)(v).

Second, in both the Petition and the Reply to the Staff's and the Applicant's responses, the Petitioners provide lengthy discussion of chelating agents, including those naturally occurring and used in industrial processes, with a focus on the use of those chelating agents in radioactive waste processing.[143] The Applicant notes that the COLA does not mention the use of chelating agents with processing

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[140] Cont. at 63 (citing NRC RAI 2.4.13-6).

[141] *Id.* at 63-64 (citing RAI 2.4.13-6).

[142] *See Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003); *see also USEC Inc.* (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 597 (2005), *aff'd* CLI-06-10, 63 NRC 451 (2006).

[143] *See* Cont. at 54-59; *see also* Reply at 43-49.

radioactive waste streams. App. Ans. at 38. Phosphoric acid is mentioned for possible use as a corrosion inhibitor with the cooling system, which may be discharged to Lake Erie as permitted by the facility's NPDES permit.[144] The Petitioners provide no basis, however, to suggest how this agent could intermingle with leaked or spilled radioactive materials (on land) to cause accelerated groundwater contaminant plume migration. Instead, the Petitioners support their assertions by providing excerpts from several parts of the COLA to demonstrate that certain agents (not identified as chelating agents) might be present in systematic plant components.[145] These excerpts merely provide information that certain agents might be present, but the Petitioners fail to link these agents with "problematic hydrology," which is the focus of the contention. Moreover, the Petitioners do not provide alleged factual data to support the assertion that these agents could result in a safety concern by negatively reacting with radioactive materials. Consequently, this part of the contention does not provide the necessary support required for admissibility. *See* 10 C.F.R. § 2.309(f)(1)(v).

Third, issues associated with the Applicant's compliance, or lack thereof, with NRC facility decommissioning regulations are outside of the scope of this proceeding. This issue addresses a concern that is purely speculative at this juncture, and will more appropriately be addressed at the license termination stage. Thus, the claims related to the decommissioning of the facility are not currently ripe for review and outside the scope of this proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iii).

Fourth, the Petitioners' concerns regarding the Applicant's commitments to "relax conservatisms" in its laboratory testing and groundwater release analysis are in regard to the revised analysis to be submitted in response to the Staff RAI and therefore are not issues currently before the Board. These are dismissed as outside the scope of this proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iii).

And finally, we deny the Petitioners' request for an opportunity to modify this contention. The rules for filing of new or amended contentions based on previously unavailable information, as well as untimely contentions, 10 C.F.R. § 2.309(f)(2)(c), allow procedural opportunities for the Petitioners to raise these concerns at a time more appropriate for addressing them.

In sum, we admit in part Contention 5 as a contention of omission with regard to the regulatory requirement that certain factors related to hydrological transport "must be obtained from onsite measurements," 10 C.F.R. § 100.20(c)(3), and with regard to exceedance of ECLs in accidental releases to groundwater as presented in FSAR § 2.4.13. We deny, however, the remainder of this contention because the Petitioners fail to provide the alleged facts in a form other than the referenced

[144] Cont. at 56 (citing ER, Table 3.6-1).

[145] *See id.* at 54-59 (quoting ER at 3-46, 5-14 to 5-15, 5-123, 5-128, 5-202).

NRC RAI and the Applicant's response to that RAI, which is inappropriate both to inform the contention and demonstrate a genuine dispute with the application on a material issue of fact or law. Thus, we find that the remaining parts of this contention fall short of providing the necessary support and demonstration of a dispute with the application as required under 10 C.F.R. § 2.309(f)(1)(v) and (vi).

F. Contention 6

The Petitioners state in Contention 6:

> The COLA omits critical information disclosing environmental impacts to Lake Erie's Western Basin and Maumee River/Maumee Bay.[146]

The issues raised in Contention 6 focus on the potential "disproportionate impacts" the proposed Fermi Unit 3 would have on the "biologically-rich, but remarkably shallow . . . western basin" of Lake Erie. Cont. at 67. The overarching issue throughout this contention is the Petitioners' assertion that the greater vulnerability of Lake Erie's western basin to impacts from the proposed Fermi Unit 3 warrants a "western basin-specific analysis" rather than "'watering down' Fermi [Unit] 3's negative impacts by averaging them out over the entire expanse of Lake Erie." *Id.* In support of this contention, the Petitioners provide numerous references to sections of the ER that discuss the western basin of Lake Erie to highlight the need for "significant corrections and additional information."[147]

First, the Petitioners note the environmental detriment to the water quality of the western Lake Erie Basin and the Maumee River from nutrient loading, water consumption, and thermal heating that could occur as a result of the proposed Fermi Unit 3.[148] The Petitioners contend that the Applicant should analyze impacts from these environmental effects including algae production, water quality impacts, and thermal plume effects. Cont. at 69. Specifically, the Petitioners contend that the proposed Fermi Unit 3 effluent discharge may trigger an increase in algal blooms and the potential proliferation of a newly identified species of harmful algae in the western Lake Erie basin. *Id.* at 70.

Second, the Petitioners assert the need for the ER to address the potential negative impacts to the western Lake Erie Basin and the Maumee River from both a dramatic drop in water levels due to global warming and consumptive and nonconsumptive water uses, and fluctuating waters levels from seiches, or strong

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[146] Cont. at 67.

[147] *Id.*; *see also id.* at 67-76.

[148] *Id.* at 70-73; *see also* Tr. at 22-23, 43-44.

winds.[149] The Petitioners assert that the ER should analyze: (1) the potential for lower water levels to influence the availability of cooling and makeup water for the proposed Fermi Unit 3 plant, and (2) the risks associated with the water growing too warm for use in the plant's cooling system. Cont. at 68-69. The Petitioners highlight recent occurrences in the nuclear industry in which nuclear power plants were "forced to shut down for varying periods" due to the cooling water source becoming too warm. *Id.* at 69. The Petitioners also challenge the Applicant's statement that the intake structure for the proposed Fermi Unit 3 would allow the unit to function at full capacity in historically low water levels. *Id.*

Third, the Petitioners assert that the analysis in the COLA regarding "fish kills" is inadequate. *Id.* at 70. According to the Petitioners, the Applicant uses "outdated Fermi [Unit] 2 studies on fish kills," and thus, the Applicant needs to update the analyses on "the estimated number, and type, of fish that would be killed in the Fermi [Unit] 3 intakes." *Id.* The Petitioners also contend that these studies need to expand beyond analyses of Fermi Unit 2 and the newly proposed Fermi Unit 3 to include the Monroe coal burning power plant, as well as other nuclear and coal burning power plants along Lake Erie's western basin, to determine the effects that projected fish kills from the proposed Fermi Unit 3 would have on "overall fish populations." *Id.*

Fourth, the Petitioners dispute the Applicant's hydrological assessment that no significant estuaries exist within the Fermi Unit 3 area of impact because the Maumee Bay and Lower Maumee River constitute estuaries "that would be significantly impacted" by the proposal. *Id.* at 73. Thus, the Petitioners assert that the Applicant needs to expand its analysis, which it claims is limited to the Detroit River and the River Raisin, to address the effects of Fermi Unit 3 on these additional water resources. *Id.* at 73-74.

In response, the Applicant generally disputes each of the Petitioners' allegations by providing a discussion of the detailed analysis provided in the COLA for each claim. The Applicant maintains that the Petitioners provide no expert opinion or factual support to suggest that the analyses and conclusions provided in the ER or the FSAR regarding environmental and safety concerns are incorrect. App. Ans. at 46-51. The Applicant also asserts that the impacts of Fermi Unit 3 on Lake Erie, including impacts to the western basin and Maumee Bay, are documented and addressed in the COLA. *Id.* at 40. Specifically, the Applicant notes that "[c]onsistent with its focus on the western basin as the area of greatest concern, Detroit Edison considered the impacts to the western basin throughout

[149] Cont. at 68. The Petitioners note the shallow nature of the western basin of approximately 24 feet, and the downward trend of the water level, including a 10-inch water level reduction from the late 1990s to the present day. According to the Petitioners, climate change is expected to lower the water levels in Lake Erie by 3 to 6.5 feet in the next 70 years.

the ER."[150] Furthermore, the analyses provided in the COLA on the impacts to the western basin include a "comprehensive and in-depth discussion of both the environmental baseline for and the impacts" to this region. App. Ans. at 42.

The Staff adds that a contention "challenging the substantive adequacy of multiple sections" of an applicant's COLA does not meet the requirement for a contention of omission. NRC Ans. at 60. The Staff addresses each of the issues underlying Contention 6 to show that, contrary to the Petitioners' allegations, the Applicant discusses each of the alleged omissions specific to the western basin of Lake Erie in its COLA. The Staff notes that the Petitioners provide no expert or factual support to contradict the Applicant's assertions documented in the COLA with regard to water withdrawal, thermal emissions, water quality, fish kills, and the Maumee Bay and River. *See id.* at 62-67.

Discussion

The Board admits Contention 6 insofar as it relates to the adequacy of the Applicant's water quality analysis in the ER regarding the potential for increasing algal blooms and the proliferation of a newly identified species of harmful algae in the western Lake Erie basin. We deny the remainder of Contention 6 for failing to demonstrate a genuine dispute with the Applicant or providing no alleged facts or expert opinion to support the Petitioners' assertions. *See* 10 C.F.R. § 2.309(f)(1)(v) and (vi).

The Petitioners assert that the ER should include an assessment of the algal bloom potential as a result of the proposed chemical discharge (i.e., phosphorus) combined with thermal pollution expected during operation of Fermi Unit 3. Tr. at 22. The Petitioners maintain that these impacts would contribute to increasing algal blooms and microcystis problems augmenting the growth of dead zones in Lake Erie. Cont. at 73. Claiming that the technical information used by the Applicant is "old and outdated," the Petitioners maintain that the statement in the ER that the water quality in the western basin has improved, and that the phosphorous concentrations are decreasing, is "simply not true." *Id.* at 70. In support, the Petitioners reference two university studies documenting the growing problems with "greening" in the western basin and the increasing "dead zones." *Id.* The Petitioners add that the Lake Erie Protection Fund and the U.S. Environmental Protection Agency Great Lakes office are currently seeking grant proposals to find ways to reduce phosphorous and algal blooms in western Lake Erie. *Id.* at 76. Specifically, the Petitioners highlight a new algae, *Lyngbya wollei,* which "seems to be centered" in warm waters at the Applicant's Monroe coal

[150] App. Ans. at 41 (citing multiple sections of the ER where potential impacts to the western basin were analyzed).

burning power plant. The Petitioners contend that the Applicant needs to address potential proliferation of this new species in relation to Fermi Unit 3. *Id.* at 70.

We find that this part of the contention satisfies 10 C.F.R. § 2.309(f)(1). The contention provides a specific statement of the issue of fact to be controverted and a brief explanation for the basis of the contention. *See* 10 C.F.R. § 2.309(f)(1)(i) and (ii). We also find that, contrary to the arguments provided by the Staff, these issues are within the scope of this proceeding and material to the findings the NRC must make. *See* 10 C.F.R. § 2.309(f)(1)(iii) and (iv). And we find that this part of the contention is supported by alleged facts and referenced sources that demonstrate a genuine dispute with the Applicant on the adequacy of the water quality analysis, specifically the potential for algal production in the western Lake Erie basin as a result of chemical and thermal discharge from Fermi Unit 3. *See* 10 C.F.R. § 2.309(f)(1)(v) and (vi).

The Staff asserts that these issues are outside the scope of this proceeding because discharge effluents resulting from the proposed Fermi Unit 3 that could affect water quality are "regulated not under NRC regulations, but under the NPDES program established by Section 402 of the Federal Water Pollution Control Act [FWPCA]."[151] The Staff further asserts that the FWPCA specifically prohibits federal agencies from imposing effluent limits in addition to those required by that statute; and therefore, the NRC must analyze the environmental impacts of a project under NEPA, but it cannot go beyond and "impose effluent limits of its own." NRC Ans. at 64.

We reject the Staff's argument that this contention is barred by the FWPCA. Contrary to this assertion, the D.C. Circuit has held that abdicating water quality effects entirely to other agencies' certifications subverts the special purpose of NEPA.[152] The fact that an environmental impact is regulated by another federal agency or by a state does not justify the exclusion of the analysis in the Applicant's ER or the NRC's EIS.[153] Thus, we are not persuaded by the Staff's argument that the impact to water quality from effluent discharge at the proposed Fermi Unit 3 is outside the scope of this proceeding simply because FWPCA prohibits federal

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[151] NRC Ans. at 63 (citing 33 U.S.C. § 1342). The Applicant's ER states that

> [t]he water volume, water temperature and chemical composition are regulated by the MDEQ [Michigan Department of Environmental Quality] through the NPDES permit program. . . . Under regulations, the MDEQ is required to take into consideration the cumulative impacts of multiple discharges to the same body of water. Therefore, discharges from Fermi and other area facilities are included in the review and development of permit requirements (including measures to minimize any cumulative effects) for a new Fermi [Unit] 3 and for subsequent renewal of permits for combined Fermi [Unit] 2 and 3 operations.

Id. at 63-64 (citing ER at 5-207).

[152] *Calvert Cliffs Coordinating Committee, Inc. v. AEC,* 449 F.2d 1109, 1123 (D.C. Cir. 1971).

[153] *See* 10 C.F.R. § 51.71(d) n.3 and Part 51, Appendix A, § 5. *See also* 40 C.F.R. § 1502.14(c); *Natural Resources Defense Council, Inc. v. Morton,* 458 F.2d 827, 834-36 (D.C. Cir. 1972).

agencies other than EPA from imposing their own effluent limits. While NEPA requires the consideration of information regarding other regulatory requirements and permits, the fact that the applicant is subject to and complying with them "does not obviate the NEPA mandate that the federal agency perform an EIS covering these topics."[154] We thus hold that the impacts raised by the Petitioners speak precisely to the mandates of NEPA, and thus these issues are material to findings the NRC must make prior to issuance of the COL for Fermi Unit 3.

The Applicant avers that the Petitioners provide no expert or factual support for the argument that the ER should include an analysis of the potential contributions that Fermi Unit 3 could have on algal production, and "point to no studies indicating that power plants have a direct correlative impact on algal growth in the western basin." App. Ans. at 45. We disagree.

The Applicant notes that data pertaining to algal production indicate that it is primarily caused by "nutrient run-off (phosphorous), water clarity, and hydrology rather than water temperature,"[155] and that no issues with algal blooms have been observed at Fermi Unit 2 "or at any of the other Detroit Edison plants." Tr. at 35-36. The Applicant maintains that impacts to aquatic ecosystems at Fermi Unit 3, and specifically those associated with the chemical components of effluent for this proposed plant, would be limited to the constituents listed in the NPDES permit.[156] In particular, the Applicant points out that the phosphoric acid that is proposed for use as a corrosion inhibitor at Fermi Unit 3 will be discharged into Lake Erie at levels no higher than that permitted by the NPDES permit. Tr. at 34.

The ER includes a detailed analysis of the physical impacts of Fermi Unit 3 to surrounding waters, including the effects of cooling water discharges on water quality in the western basin of Lake Erie, *see* ER at 5-28; the impacts of thermal discharges on aquatic ecosystems, *see* ER at 5-37; the impacts to aquatic ecosystems associated with chemical components (assuming effluent limits will not exceed NPDES permitted levels), *see* ER at 5-40; and the water-use impacts from operational activities, *see* ER at 5-15. But the ER is devoid of an analysis on the potential for these chemical and thermal discharges to foster algal production in the vicinity of the proposed Fermi Unit 3. This omission is particularly troubling because the ER appears to dismiss the need for such an analysis on the basis that no algal blooms have been observed at Fermi Unit 2, but the Applicant stated at oral argument that Fermi Unit 2 does not use phosphoric acid as a corrosion

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[154] *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 179 (2006), *rev'd on other grounds,* CLI-07-16, 65 NRC 371, 381-85 (2007).

[155] App. Ans. at 46; *see also* Tr. at 34-36. The Staff takes another view, claiming that the ER mentions the potential for algae growth in connection with thermal emissions, and dismisses the Petitioners' argument by referencing the thorough thermal plume analysis documented in the ER. NRC Ans. at 65 (citing ER at 5-47).

[156] App. Ans. at 87; *see also* ER at 5-40.

inhibitor (which the Applicant itself acknowledged was one of the aggravating factors for algal production). Tr. at 35.

We therefore find Contention 6 admissible insofar as it challenges the adequacy of the ER's analysis of the potential contribution of chemical and thermal effluent from the proposed Fermi Unit 3 to algal production and the potential proliferation of the newly identified species of harmful algae. We find, however, that the remaining issues in Contention 6 do not meet the requirements to support admissibility of a contention.

The Petitioners' assertions that the ER should address the potential negative impacts from changes in water level overlook the information that was provided by the Applicant in the ER. With regard to safety, the proposed "Ultimate Heat Sink" for Fermi Unit 3 as described in the FSAR contains a separate water supply for safety-related cooling, preventing a seiche event or dramatic drop in water level from affecting the safety-related water supply.[157] Potential impacts on operations from water level variations are also discussed in the COLA for a range in water levels that extend beyond that possible due to climate variability,[158] and contrary to the Petitioners' assertions, the ER discusses seiches in detail.[159] The Petitioners fail to acknowledge that the Applicant included such analyses in its ER and to challenge those analyses through alleged facts or expert opinion. Thus, Petitioners have not shown a material factual dispute with the Applicant. *See* 10 C.F.R. § 2.309(f)(1)(vi).

The Petitioners are also concerned about impacts to the aquatic ecosystem from adding an additional power plant to the five existing operational plants currently heating "billions of gallons of water" in the western basin. Cont. at 75. Contrary to the Petitioners allegations that the Applicant does not address the risk that the waters of the western basin could grow too warm, the Applicant does provide an analysis of thermal impacts from Fermi Unit 3. We also note that the thermal effects from nearby facilities are implicitly included in the cumulative effects analysis.[160] Moreover, the Applicant's analysis in its ER of the thermal

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[157] *See* App. Ans. at 44.

[158] The Petitioners suggest a potential lowering of water levels of up to 6 feet over the next 70 years and argue that the Applicant must address this change. *See* Cont. at 68. In this regard, we note that the COLA considers water level variations well within the range of a water loss in excess of 6 feet. 10 C.F.R. Part 50, Appendix A, General Design Criterion (GDC) 2 requires "consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated." The ER indicates that "the design of the intake structure is based on record low water levels for Lake Erie, thus even under these conditions plant operation is able to carry on normally." App. Ans. at 42. The elevation of the Fermi Unit 3 intake in Lake Erie is more than 10 feet below the record low water level for Lake Erie. *Id.* at 43; *see also* ER § 3.4.2.1.

[159] *See* ER § 2.4.2.2.2; *see also* §§ 3.3.1, 5.3.2.1.1.7.

[160] *See* discussion of Contention 1, *supra* Section V.A.

discharge impacts demonstrates that there are no thermal plume effects from nearby facilities. App. Ans. at 44-45. The Petitioners do not acknowledge these analyses and as a result fail to challenge this analysis or otherwise raise a dispute with the conclusions reached therein. *See* 10 C.F.R. § 2.309(f)(1)(vi).

With regard to fish kills, the Applicant's ER includes a detailed analysis of the overall potential impacts to fish in Lake Erie's western basin that uses historical data from Fermi Unit 2 to demonstrate that the number of fish impinged is relatively low in comparison to other plants in the region.[161] The Petitioners question the underlying analysis of fish kills in the ER as being "outdated," yet they fail to provide any information to show that the results of the 1990s study are no longer representative.[162] The historical analysis used by the Applicant in support of its conclusion that the impacts to fish from the proposed Fermi Unit 3 would be "small," dates back to an impingement and entrainment impact study of Fermi Unit 2 performed in 1991-1992.[163] Although the data used by the Applicant for this analysis is clearly dated, the Petitioners provide no support, either through alleged facts or expert opinion, to show that these data are therefore obsolete. *See* 10 C.F.R. § 2.309(f)(1)(v). Bare assertions and speculation are not enough to support the admissibility of a contention.[164] Moreover, the cumulative impacts related to "fish kills" were also evaluated by the Applicant in the ER utilizing the Applicant's experience with the Fermi Unit 2 operations.[165] The Petitioners, again, do not provide any alleged facts or expert opinion to challenge this information.[166]

Finally, the Petitioners' assertion that the Applicant's analysis in its ER should be expanded to address impacts to the Maumee Bay and Maumee River are not substantiated. The Applicant, in its ER, analyzes the thermal emission plume from the cooling water discharge of the proposed Fermi Unit 3 discharge location, and has found such impacts to be small. App. Ans. at 83. The Maumee Bay and Maumee River are located at much larger distances from the facility.[167] The

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[161] *See* ER § 5.3.1.2.3.2; *see also* App. Ans. at 48.

[162] *See* 10 C.F.R. § 2.309(f)(1)(v); *see also* NRC Ans. at 66.

[163] *See* ER § 5.3.1.2.4.

[164] *Fansteel, Inc.,* CLI-03-13, 58 NRC at 203.

[165] *See* ER § 5.11.4.2.

[166] The Petitioners also note that due to the amount of daily water withdrawal proposed for Fermi Unit 3, the Applicant must conduct a full section 316(b) Clean Water Act analysis of the potential fish kills. Cont. at 72. According to the Petitioners, the requirement for a section 316(b) analysis is triggered by water withdrawals in excess of 50 million gallons per day, and the Applicant's 49 million gallons per day of water usage at the proposed Fermi Unit 3 is close enough to this threshold to mandate that such an analysis be conducted. *Id.* This issue is outside the scope of this proceeding because it is beyond the Board's jurisdiction to mandate that a section 316(b) analysis be conducted.

[167] The distance from the Fermi Unit 3 site to the Maumee River is greater than 5 miles as indicated in the Applicant's FSAR. *See* Fermi: Combined License Application; Part 2: Final Safety Analysis Report (Rev. 1) at 2-94, Figure 2.1-216 (Mar. 2009) [hereinafter FSAR].

Petitioners provide no alleged facts or expert opinion to suggest, contrary to the conclusions in the ER, that these regions could be adversely impacted by Fermi Unit 3 operations and should be included in the ER. *See* 10 C.F.R. § 2.309(f)(1)(v).

The Petitioners incidentally mention several other concerns including, *inter alia,* cooling tower and mercury pollution control equipment at the Monroe Power Plant; risk of terrorist attack on the power plants in the area; surface water impacts in counties in Michigan and Ohio; and assessment of sediments and water quality at the Toledo water intake. Cont. at 74-75. None of these concerns are developed with sufficient detail to provide a basis for contention admissibility.

We therefore admit in part and reject in part Contention 6 as discussed above.

G. Contention 7

The Petitioners state in Contention 7:

> Routine operations of Fermi 3 will endanger workers and the public with radionuclide emissions.[168]

The Petitioners allege in Contention 7 that the construction and operation of Fermi Unit 3 "will produce radioactive contamination" exposing the power plant workers and the general public to an "increased risk of negative health effects." Cont. at 77. Citing to Part 7 of the COLA titled, "Departures Report," the Petitioners assert that the ESBWR, by design, intentionally vents radiological gaseous effluents, which has "safety significance because it aids and abets the release of known carcinogenic agents." *Id.* The Petitioners also request a list of remedies for all the potential sources of radiation resulting from the construction and operation of Fermi Unit 3.[169] Cont. at 88.

In support of the liquid effluent portion of this contention, the Petitioners reference several lengthy excerpts from the NRC's RAI 2.4.13-6,[170] and the Applicant's RAI response. Specifically, the Petitioners dispute the Applicant's conclusion that "dilution can be the solution to radiological pollution," and argue

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[168] Cont. at 77.

[169] The Petitioners' requested list of remedies includes the following: an Agency for Toxic Substances and Disease Registry (ATSDR) evaluation of cancer rates near the plant; annually updated epidemiological studies; monitoring for worker exposure; a two dosimeter per worker provision allowing review by the Applicant and the union; biannual screening of workers for blood cancer and cancer markers; the availability to the public of worker records in auditable format; workforce and local community education programs for cancer awareness; rejection of dilution as a practice for managing releases; adherence to effluent limits; and compliance with all regulatory standards, without waiver, relaxation, exemption, or methodological concealment of true and accurate radiological reporting. Cont. at 88.

[170] The Petitioners reference the identical RAI in support of Contention 5. *See supra* at p. 269.

that "Lake Erie and the surrounding environs" will be greatly impacted by the methodology the Applicant proposes to the NRC. Cont. at 79.

In addition, the Petitioners provide an extensive recitation of multiple sections of the COLA discussing the calculated dose rates to workers and the public from the operation of Fermi Unit 2. *Id.* at 79-84. The Petitioners note that the accumulation doses discussed in the referenced passages from the COLA indicate considerable radiation exposure for workers, which they argue conflicts with the conclusions in the BEIR VII report that "no exposure to radiation is without an associated risk."[171] Cont. at 84.

The Applicant opposes Contention 7 for failing "to establish any non-compliance with NRC regulations and [ ] to demonstrate a genuine dispute" with the application. App. Ans. at 52. The Petitioners' challenges to the ER that were excerpted in the contention, the Applicant asserts, do not contain the requisite support to establish an admissible issue. According to the Applicant, the COLA sections referenced by the Petitioners "actually demonstrate[ ] that construction workers will not receive exposures above specified regulatory limits for members of the public." *Id.* at 56.

The Staff also opposes the admissibility of this contention claiming it fails to meet contention pleading requirements, raises an impermissible challenge to NRC regulations, and raises issues that fall outside the scope of this proceeding. NRC Ans. at 69. The Staff points out that the Petitioners' discussion regarding liquid effluents is "duplicative of material found in Contention 5 and should be subsumed under that contention." *Id.* at 70. The Staff asserts that the Petitioners' arguments related to gaseous effluents and the Departures Report "simply does not say what the Petitioners allege that it says," and that "[n]either the Departures Report nor any of the FSAR subsections cited therein mention any increase in radioactive effluents in connection with this design change." *Id.* at 69. Moreover, the Staff notes that the challenges to the design are not properly raised in this proceeding and should instead be submitted as part of the design certification rulemaking. *Id.* at 70.

Discussion

We agree with the arguments advanced by the Applicant and the Staff and find Contention 7 inadmissible. The Petitioners have failed to demonstrate a genuine dispute with the Applicant and have provided no alleged facts or expert opinion

[171] The Petitioners provide additional references supplying information on the alleged health effects of radiation including references to a study by the National Academy of Sciences (BEIR VII), the publications of Joseph Mangano of the Radiation and Public Health Project, the publications of Janette Sherman, MD, of the Environmental Institute at Western Michigan University, and several articles published in the *Michigan Messenger.* Cont. at 84, 86-88.

support for the assertions advanced in this contention. 10 C.F.R. § 2.309(f)(1)(v) and (vi).[172]

First, the Petitioners' allegation that the Fermi Unit 3 gaseous effluent vent system design will result in a negative impact on workers and the public is unsupported. Cont. at 77. The Petitioners merely reference the departure from the ESBWR certified design identified in Part 7 of the COLA, but provide no alleged facts or expert opinion to support that the doses to members of the public and plant workers will exceed NRC regulatory limits as a result of the modified vent path. *See* 10 C.F.R. § 2.309(f)(1)(v). In addition, the Petitioners make no attempt to identify any issues or errors with the Applicant's results contained in section 12.2.2 of the COLA FSAR regarding radiological consequences in support of the multistack vent system,[173] thereby failing to demonstrate a dispute with the applicant on a material issue of fact or law. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Second, the Petitioners address liquid effluents from Fermi Unit 3 by citing the text of an RAI and the Applicant's relevant response. Cont. at 79. As pointed out by the Staff, however, the Petitioners' treatment of this issue provides no additional arguments to that presented in support of Contention 5 and will be dealt with therein.

Third, Contention 7 addresses the impact of radiation from the operation of Fermi Unit 2 on the construction workers at Fermi Unit 3. Quoting extensively from the ER, the Petitioners challenge the Applicant's conclusion that the impact on the Fermi Unit 3 workers would be small. *Id.* at 79-84. Such a presentation of excerpts from the COLA without further explanation does not provide sufficient support for a contention.[174] Instead, the only support offered for this portion of Contention 7 is the conclusion from the BEIR VII report stating that there is no safe level of exposure. Cont. at 84. The NRC has determined that a minimum threshold of exposure is considered safe. This acceptable level of exposure is documented in the agency's regulations where dose limits are established for safe levels of exposure from normal operation of a nuclear power plant to both workers and members of the public. *See* 10 C.F.R. §§ 20.1201 and 20.1301. The Petitioners' assertion that no exposure levels are safe is therefore an impermissible

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[172] This contention as pled asserts that the radionuclide emissions from the construction and operation of Fermi Unit 3 will endanger the workers and the public. The Board was unable to discern any argument in support of the assertion that construction activities at Fermi Unit 3 would generate radionuclide emissions and subsequently cause harm to workers or members of the public.

[173] The departure material provided in Part 7 and referenced in the Petition points to section 12.2.2.1, which contains the results of the Applicant's radiological dose calculations demonstrating compliance with NRC regulations.

[174] *See USEC Inc.* (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 597 (2005), *aff'd* CLI-06-10, 63 NRC 451, 472 (2006).

challenge to the exposure limits set forth in the NRC's regulations. *See* 10 C.F.R. § 2.335(a).

Moreover, although the Petitioners' referenced excerpts from the ER provide projected doses of exposure to the plant workers and the public, this contention lacks any analysis of the excerpted material; the Petitioners do not challenge the Applicant's methods used to form those projections nor do they dispute the numbers themselves. In contrast, the Petitioners simply disagree with the Applicant's conclusion that projected impacts to plant workers and the public are small because the doses are within regulatory limits by arguing that "[t]here is no safe level of exposure." Cont. at 84. The Petitioners therefore fail to identify any violation of NRC regulations or identify any error in the Applicant's analysis to establish a genuine dispute with the Applicant. Therefore, it does not meet the necessary contention admissibility requirements, and it impermissibly challenges the dose limits in NRC regulations.[175]

Fourth, the Petitioners assert that routine radioactive releases, particularly of potential tritium releases (both planned and unplanned) from Fermi Unit 3, would harm human health. The Petitioners' support for this assertion is provided through a series of anecdotal references to releases at other facilities. Cont. at 84-85. The Petitioners, however, do not specifically challenge the Applicant's radioactive emission analyses for Fermi Unit 3 provided in the COLA, again failing to demonstrate a genuine dispute with the Applicant. *See* 10 C.F.R. § 2.309(f)(1)(vi).

Finally, the Petitioners raise a number of peripheral issues related to releases from the nuclear fuel cycle in general, incidences of childhood cancers near nuclear power plants, and a request for the NRC to address radioactive releases from "burning of coal at Monroe County's two fossil fuel plants." Cont. at 86. None of these issues fall within the scope of this proceeding nor are they material to a decision that the NRC must make. *See* 10 C.F.R. § 2.309(f)(1)(iii) and (iv).

For the reasons set forth above, the Board finds Contention 7 inadmissible.

H. Contention 8

Petitioners state in Contention 8:

> Threatened and Endangered Species have not been properly mitigated.[176]

In this contention, the Petitioners assert that "inadequate mitigation has been considered" for four endangered and threatened animal species and three species

[175] *See* 10 C.F.R. § 2.309(f)(1)(vi); *see also id.* § 2.335(a).

[176] Cont. at 89.

of threatened plants on the proposed Fermi Unit 3 site. Cont. at 89. The primary focus of the contention is the eastern fox snake, which is listed as a threatened species by the Michigan Department of Natural Resources (MDNR). Petitioners restate and adopt in Contention 8 the MDNR's comments on the Applicant's ER.[177] The comments highlight discrepancies between recorded MDNR sightings of the eastern fox snake at the Fermi property in June 2008 and the Applicant's statement in the ER that this species has not been observed on the property. The MDNR comments further state that construction activities for the new reactor will kill snakes, destroy their habitat, and may eliminate them from the area. Cont. at 89-90.

Both the Applicant and the Staff assert that Contention 8 is inadmissible for failing to demonstrate a genuine dispute on a material issue.[178] The Applicant maintains that the Petitioners fail to cite any regulations or statutes requiring it to mitigate the impacts of the project on a state-listed species. App. Ans. at 57. Moreover, the Applicant notes that the COLA provides a discussion of potential impacts to the eastern fox snake during construction and concludes that no mitigation is necessary. The Applicant asserts that the Petitioners have not argued that this conclusion is incorrect. *Id.* at 58.

The Staff adds that the Petitioners' claims are "vague and conclusory," NRC Ans. at 75, and that no explanation or additional support for the issues raised in Contention 8 is provided "other than the EPA and MDNR comments themselves." *Id.* at 76. In particular, the Staff asserts that the Petitioners have not identified specific sections of the ER that are in dispute or lack required information, nor do the Petitioners take issue with the resulting conclusions or specific mitigation plans provided by the Applicant's analyses in the ER. *Id.* at 76-77.

Discussion

We construe Contention 8 as a NEPA contention alleging that the ER fails to adequately assess the project's impacts on the eastern fox snake and to consider alternatives that would reduce or eliminate those impacts. We find the contention as so construed to be admissible. It is not admissible with respect to any other species or issue, nor is it admissible to the extent it asks that we order the Applicant to adopt additional mitigation measures for the protection of the eastern fox snake.

The Petitioners allege, in their explanation of Contention 8, that the Applicant failed to take a "hard look" at impacts to the eastern fox snake and at alternatives

[177] Cont. at 89-90 (citing E-mail from Lori Sargent, MDNR, to NRC (Feb. 9, 2009) (ADAMS Accession No. ML090401014)). A copy of the comments was also sent to the NRC on February 9, 2009.

[178] App. Ans. at 57; NRC Ans. at 75.

that would reduce or eliminate those impacts. Cont. at 89. We construe Contention 8 as a NEPA contention because NEPA is the statute that requires federal agencies to take a "hard look" at the environmental consequences of their actions.[179] The agency's regulations in 10 C.F.R. Part 51 impose upon the Applicant the obligation to supply much of the information that the agency must include in the EIS it prepares pursuant to NEPA. Thus, we construe Contention 8 to allege that the ER failed to adequately discuss impacts on the eastern fox snake and alternatives that would reduce or eliminate those impacts, in violation of the requirements of 10 C.F.R. § 51.45(b) and (e).

To be sure, neither NEPA nor Part 51 requires applicants to eliminate adverse environmental impacts. Courts have consistently interpreted NEPA as a procedural statute that requires disclosure and analysis of environmental impacts, not one that imposes substantive obligations for the protection of natural resources.[180] Thus, to the extent Contention 8 asks that we require the Applicant to adopt additional mitigation measures for the protection of the eastern fox snake, it exceeds our authority under NEPA and Part 51. But we may narrow a contention in a manner that avoids such legal difficulties.[181] We will therefore narrow the contention to disputing the adequacy of the ER's analysis of impacts to the eastern fox snake and alternatives that would reduce or eliminate those impacts.

As so narrowed and construed, we find that Contention 8 satisfies the admissibility criteria of 10 C.F.R. § 2.309(f)(1). This contention includes a specific statement of law or fact to be raised or controverted. It provides a brief explanation of the basis for the contention, alleging that the eastern fox snake inhabits the Fermi Unit 3 site and that construction activities for the new reactor will kill snakes, destroy their habitat, and might eliminate them from the area. Contention 8 is within the scope of the proceeding, since it concerns the adequacy of the ER for Fermi Unit 3. *See* 10 C.F.R. § 2.309(f)(1)(i)-(iii).

Contention 8 is material to compliance with NEPA and the NRC's regulations implementing NEPA, and it therefore satisfies the requirement of 10 C.F.R. § 2.309(f)(1)(iv). Contention 8 alleges omissions from and errors in the analysis required by 10 C.F.R. § 51.45(b) and (e) and NEPA. In substance, it alleges that the ER fails to adequately evaluate the proposed action's impact on a threatened species and alternatives that would reduce those impacts. The NRC Staff agreed that the ER must address any impacts to a species listed as threatened under a

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[179] *See Robertson v. Methow Valley Citizens Council,* 490 U.S. at 350.

[180] *See id.* ("it is now well settled that NEPA itself does not mandate particular results, but simply prescribes the necessary process") (citations omitted); *Strycker's Bay Neighborhood Council, Inc. v. Karlen,* 444 U.S. 223, 227 (1980) ("If the adverse environmental impacts of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs").

[181] *See* cases cited in note 91, *supra.*

state statute and that the agency's EIS must also address any such impacts. Tr. at 134. Accordingly, Contention 8 is material to the ER's compliance with the NRC's regulations, and ultimately to the NRC's compliance with NEPA.

The Petitioners have provided sufficient factual support for Contention 8, as required by 10 C.F.R. § 2.309(f)(2)(v). In support of their claim that construction activities at the Fermi Unit 3 site will harm the eastern fox snake, the Petitioners rely on the MDNR's February 9, 2009 comments on the ER. The author of the MDNR comments is Lori Sargent, a Nongame Wildlife Biologist in the MDNR's Wildlife Division. She states that MDNR had previously identified four endangered or threatened animal species and three species of threatened plants that are present in the project area. Subsequently, MDNR obtained or was provided with a copy of the ER for comment. In its February 9, 2009 comments on the ER, the MDNR stated that "the animal species that is of primary concern in the area is the eastern fox snake (*Pantherophis gloydi*)." Ms. Sargent noted a "discrepancy" in the ER's analysis of potential impacts to this species.

> On page 2-333 of the Environmental Report it states that "nine occurrences were reported in Monroe County . . . the snake was sighted two times on the Fermi property in June 2008." There is a discrepancy to this statement on page 4-45 where it states "The eastern fox snake (a Michigan threatened species) has not been observed on the Fermi property, but the potential for its occurrence on the property does exist.

Ms. Sargent further reported that the MDNR's own records show "a viable population of Eastern fox snake at the site of the proposed project." Ms. Sargent concluded that "going forward with the construction would not only kill snakes but destroy the habitat in which they live and possibly exterminate the species from the area."[182] She recommended the development of a "plan for protection of this rare species with regard to this new reactor project." The MDNR comments provide the necessary support for the Petitioners' contention that members of the species inhabit the site of the proposed project and will be significantly harmed, and might be eliminated from the area, by construction of the new nuclear power plant.

The Petitioners have also demonstrated a genuine dispute with the Applicant on a material issue of fact. 10 C.F.R. § 2.309(f)(1)(vi). Contention 8 restates and adopts the MDNR comments summarized above, which dispute the statement on page 4-45 of the ER regarding the presence of the eastern fox snake at the site

[182] Cont. at 90 (citing E-mail from Lori Sargent, MDNR, to NRC (Feb. 9, 2009) (ADAMS Accession No. ML090401014)).

and the potential impact of construction activities upon the snake.[183] The disputed page of the ER states:

> The eastern fox snake (a Michigan threatened species) has not been observed on the Fermi property, but the potential for its occurrence on the property does exist. The Michigan Natural Features Inventory has recorded nine occurrences for Monroe County, with the most recent report in 2007. . . . If present, the snake would most likely be found along the cattail marshes or wetland shorelines around woody debris. . . . Fermi [Unit] 3 construction activities are primarily located away from potential habitat for the eastern fox snake and the snake would be expected to move away from these activities. Therefore, the impact to this species from the project is considered SMALL, and no mitigative measures are needed.[184]

Thus, while the MDNR maintains that a viable population of eastern fox snake is present at the site of the proposed project, the ER reports that the species has not been observed on the Fermi property. ER at 4-45. Because it believes a snake population inhabits the project area, the MDNR contends that construction of the project will kill those snakes, destroy their habitat, and might eliminate the species from the project area. The ER, in contrast, assumes that any snakes that might hypothetically be present at the project site will inhabit areas not affected by construction activities and that therefore any impact upon the species will be small. MDNR recommends that a mitigation plan be developed, but the ER maintains no mitigation measures are needed. If MDNR is correct that an eastern fox snake population is present at the project site (i.e., in the area where the nuclear power plant will be constructed), then it is certainly reasonable to conclude, as MDNR does, that the population's survival is at risk. Thus, the primary factual dispute is whether a population of eastern fox snakes is present at the site of the proposed project, as MDNR and the Petitioners maintain, or whether the Applicant is correct in stating in its ER on page 4-45 of the ER (in contradiction to page 2-333 of the same document) that no such population has been observed. This is a typical dispute of fact or expert opinion that is appropriate for resolution in an evidentiary hearing.

NRC Staff suggests that the MDNR comments are insufficiently detailed and specific to support Contention 8.[185] We disagree. The Staff overstates the burden on the Petitioners at this stage of the proceeding, attempting to convert our review of the proffered factual support for the contention into a trial on the

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[183] Thus, contrary to the Staff's argument, NRC Ans. at 76, the Petitioners have identified the specific part of the ER that is in dispute.

[184] ER at 4-45.

[185] NRC Ans. at 76-77.

merits. Explaining the level of support necessary for an admissible contention, the Commission observed:

> Although [the contention admissibility rule] imposes on a petitioner the burden of going forward with a sufficient factual basis, it does not shift the ultimate burden of proof from the applicant to the petitioner. . . . Nor does [the rule] require a petitioner to prove its case at the contention stage. For factual disputes, a petitioner need not proffer facts in "formal affidavit or evidentiary form," sufficient "to withstand a summary disposition motion." . . . On the other hand, a petitioner "must present sufficient information to show a genuine dispute" and reasonably "indicating that a further inquiry is appropriate."[186]

By quoting and citing the MDNR comments, the Petitioners have provided the required "concise statement" and supporting references. 10 C.F.R. § 2.309(f)(1)(v).

The cases cited by the Staff to support its argument do not impose a more demanding burden. In *Fansteel, Inc.,* the Commission explained that "[a] petitioner's issue will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation.'"[187] Here, the Petitioners have provided more than bare assertions and speculation; they have provided tangible information supporting their contention by quoting and citing the MDNR comments. In *American Centrifuge,* the Commission stated that "'an expert opinion that merely states a conclusion (e.g., the application is "deficient," "inadequate," or "wrong") without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion . . . .'"[188] The MDNR comments do not merely state that the application is "deficient," "inadequate," or "wrong." Instead, the MDNR wildlife biologist explained, based upon that agency's records, that there is in fact a viable population of the eastern fox snake at the site of the proposed project. Because a viable snake population is present and the Applicant is proposing to undertake a large-scale construction project at the site, the agency concluded that "going forward with construction would not only kill snakes but destroy the habitat in which they live and possibly exterminate the species from the area." The MDNR comments accordingly provide a sufficient explanation of the MDNR's conclusion, not just an assertion that the ER is incorrect.

Moreover, the MDNR comments differ from the expert opinion at issue in

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[186] *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 249 (1996) (citations omitted); *see also Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994).

[187] *Fansteel,* CLI-03-13, 58 NRC at 203.

[188] *American Centrifuge,* CLI-06-10, 63 NRC at 472.

American Centrifuge in that the comments represent the opinion of the state agency charged with enforcing Michigan law concerning the protection of the threatened species at issue. Indeed, the Applicant informed us at oral argument that it might be required to obtain a permit from MDNR related to the project's effects on the eastern fox snake, and that it is working with MDNR to mitigate impacts to the snake. *See* Tr. at 128-29. The Commission has long recognized "'the benefits of participation in our proceedings by representatives of interested states.'"[189] Licensing boards have granted state agencies the right to participate in our proceedings as the state's representative.[190] In this case, neither the State of Michigan nor MDNR has asked to participate in the proceeding, but the Commission's recognition of the benefits of state participation makes particularly relevant the opinion of the state agency charged with protecting the threatened species at issue in the contention before us.

Therefore, the Petitioners have established a dispute of material fact concerning the presence of the eastern fox snake at the site and the impact of Fermi Unit 3 construction activities on the population. We do not, however, admit Contention 8 with respect to any other species. Although Contention 8 refers generally to four endangered and threatened animal species and three species of threatened plants on the proposed Fermi Unit 3 site, Cont. at 89, the Petitioners have not identified any species other than the eastern fox snake. The Petitioners informed us at oral argument that they have asked MDNR to identify the other species, but they have not yet received a response. Tr. at 121. If the Petitioners elect to file a contention regarding any other species, it must meet the requirements of 10 C.F.R. §§ 2.309(f)(2) or 2.309(c).

Contention 8 also refers to a February 9, 2009 letter sent from Region 5 of the U.S. Environmental Protection Agency to the NRC, offering recommendations regarding the scope of the EIS and encouraging the selection of alternatives with the least impact to wetlands.[191] We agree with the Applicant that the Petitioners have not identified in Contention 8 any impacts to wetlands that were "overlooked or otherwise not considered" in the ER. App. Ans. at 58. The Petitioners will have to wait until the draft of final EIS is issued to file any contentions alleging that the EIS fails to adequately assess wetlands impacts or consider alternatives that

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[189] *Fansteel,* CLI-03-13, 58 NRC at 202 (quoting *Niagara Mohawk Power Corp.* (Nine Mile Point Nuclear Station, Units 1 and 2), CLI-99-30, 59 NRC 333, 344 (1999)).

[190] *See, e.g., Connecticut Yankee Atomic Power Co.* (Haddam Neck Plant), LBP-03-18, 58 NRC 262, 264 (2003); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-93-1, 37 NRC 5, 37 (1993) (granting nonparty interested state status to state utility commissions under 10 C.F.R. § 2.715(c), the predecessor to 10 C.F.R. § 2.315(c)).

[191] Cont. at 90 (citing Letter from Kenneth A. Westlake, EPA Region 5, to Michael Lesar, NRC re: Fermi Nuclear Power Plant, Unit 3 — Notice of Intent and Scoping Request (Feb. 9, 2009) (ADAMS Accession No. ML090650467)).

would minimize those impacts.[192] For the present, wetlands impacts are relevant to Contention 8 only to the extent that they concern the effect of the project on the eastern fox snake.

We find Contention 8 admissible as construed and narrowed above.

I. Contention 9

The Petitioners state in Contention 9:

> The Commission must require completion of an EIS and selection of a "preferred alternative" prior to authorizing any construction activity of any sort.[193]

In this contention, the Petitioners challenge the Commission's Limited Work Authorization (LWA) rule as promulgated under 10 C.F.R. § 50.10(d)(1). As the Petitioners correctly note, the holder of an LWA is permitted to drive pilings; conduct subsurface preparations; place backfill, concrete, or permanent retaining walls within an excavation; and install the foundation.[194] The Petitioners contend that this regulation circumvents NEPA by allowing an "irretrievable commitment to a large, baseload plant, probably nuclear-fired, long before the completion of an Environmental Impact Statement." Cont. at 91. According to the Petitioners, this "manifests an undeniable bias toward central baseload plant construction and precludes substantive consideration of any other decentralized alternatives such as wind, solar, geothermal and energy conservation." *Id.* at 91-92.

The Applicant and the Staff both oppose the admissibility of Contention 9 because, *inter alia,* it is an impermissible challenge to an NRC regulation.[195] We agree. The Petitioners ask that we prohibit the Applicant from doing precisely what the challenged regulation authorizes. Under 10 C.F.R. § 2.335(a), we may not admit a contention that challenges an NRC regulation. The Staff also points out that the Applicant has not sought an LWA in the Fermi Unit 3 COLA. NRC Ans. at 78. The Petitioners agree that there is no pending LWA request. Reply at 63. Accordingly, the Petitioners have not presented a challenge to the application as required under 10 C.F.R. § 2.309(f)(1)(vi). Therefore, we find Contention 9 inadmissible.

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[192] 10 C.F.R. § 2.309(f)(2).

[193] Cont. at 91.

[194] *Id.* (citing 10 C.F.R. § 50.10(d)(1)).

[195] App. Ans. at 61; NRC Ans. at 78.

J. Contention 11[196]

The Petitioners state in Contention 11:

> Spent fuel reprocessing is not an option.[197]

The Petitioners contend that the NRC should reject any future bid by DTE to reprocess the irradiated nuclear fuel generated at Fermi Unit 3 due to the "risks of nuclear weapons proliferation, environmental devastation, and astronomical cost to taxpayers." Cont. at 103. The Petitioners note that the COLA explicitly states that only a "no recycle" option was considered and that the United States does not currently reprocess spent fuel. The Petitioners nevertheless assert that, because DTE is a member of the Nuclear Energy Institute (NEI), which advocates spent fuel reprocessing, the contention is admissible. *Id.*

Contention 11 provides several citations to pages in the ER where spent fuel reprocessing is mentioned as an option for managing high-level waste, which the Petitioners imply places that issue within the scope of this proceeding. *Id.* In addition, the Petitioners also mention the Applicant's citation of Table S-3, which the Petitioners object to on the ground that it does not include impacts from spent fuel reprocessing for plutonium recovery. The Petitioners object to the NRC's "lack of conservatism" in Table S-3. *Id.* at 103-04. As additional support for this contention, the Petitioners provide citations from publications by Arjun Makhijani and other authors who oppose spent fuel reprocessing for policy reasons.

Discussion

This contention is not admissible because it does not present a genuine dispute with the application, but rather seeks to litigate broad public policy issues related to the reprocessing of spent nuclear fuel. The Petitioners themselves note that the application contains an explicit statement that the United States does not currently reprocess spent fuel and that only a "no recycle" option is considered in the ER.[198] The COLA does not include any plan by the Applicant to reprocess spent fuel, nor does it rely on the existence of spent fuel reprocessing facilities elsewhere to support its conclusions on safety and environmental issues. Spent fuel reprocessing is thus unrelated to any decision the NRC might make in this proceeding. As the Staff notes, the Petitioners and the Applicant "appear to be in

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[196] The Petitioners formerly withdrew Contention 10 during oral argument on May 5, 2009. *See* Tr. at 142.

[197] Cont. at 103.

[198] *Id.* (citing ER at 5-141).

broad agreement that spent fuel reprocessing is not to be relied upon in the Fermi [Unit] 3 COLA." NRC Ans. at 86. The Petitioners' broad objections to spent fuel reprocessing are therefore outside the scope of this proceeding and fail to present a genuine dispute with the COLA. *See* 10 C.F.R. § 2.309(f)(2)(iii) and (vi). For reasons previously explained, we may not consider challenges to Table S-3 of 10 C.F.R. § 51.51(b). We therefore find Contention 11 inadmissible.

K. Contention 12

The Petitioners state in Contention 12:

> The Emergency and Radiological Response Plan is deficient.[199]

In this contention, the Petitioners suggest several inadequacies in the Applicant's "Emergency and Radiological Response Plan" ("Emergency Plan") for the proposed Fermi Unit 3. These purported inadequacies include severe weather issues, contingencies during construction of Fermi Unit 3, extending the emergency planning zone (EPZ) to 50 miles, evacuating children from the Jefferson public school system, and increasing the minimal supply of potassium iodide tablets. Cont. at 106-07. Also, as part of Contention 12, the Petitioners propose a list of mitigation measures they deem "necessary to protect the public." *Id.* at 107.

First, the Petitioners contend that during severe winter weather, the current road clearing capabilities are "woefully inadequate." *Id.* at 106. The Petitioners provide two references, a letter to the editor of the local newspaper and an article from a local media website, which purportedly demonstrate that the inadequacies are "common knowledge" in the community of Monroe. *Id.* Second, the Petitioners assert that the EPZ should extend from the current 10-mile radius used by the Applicant to "at least 50 miles," and include the surrounding "major population centers" such as Detroit and Ann Arbor, Michigan, and Toledo, Ohio. *Id.* The Petitioners add that the evacuation routes are "too narrow," and therefore need to be expanded to accommodate a "mass exodus" during an emergency evacuation. *Id.* Third, the Petitioners assert that potassium iodide tablets are not readily available, and therefore should be distributed regularly within the 50-mile EPZ. *Id.* at 107.

Finally, the Petitioners challenge the attention paid in the Applicant's ER to the feasibility of the current Fermi Unit 2 Emergency Evacuation Plan during the construction phase of the proposed Fermi Unit 3. *Id.* at 106. The Petitioners reference the Applicant's analysis in its ER of transportation impacts[200] to highlight

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[199] *Id.* at 106.

[200] *See* ER at 4-81 to 4-82 (§ 4.4.2.4.2, Environmental Impacts of Construction).

that traffic impacts during construction of the proposed new facility are likely to be a "serious problem." Cont. at 106. From the ER, the Petitioners gather information regarding the projected Fermi Unit 3 workforce being expected to commute between 50 and 70 miles to the work site (2900 workers), and the associated traffic congestion related to the increase in the number of workers, particularly when Fermi Unit 3 construction coincides with a scheduled Fermi Unit 2 outage.[201] The Petitioners also note the limited access routes between the Fermi site and the major freeways aggravating the feasibility of the evacuation routes, and further contend that there is an inadequate school bus fleet to perform emergency evacuation of the area public schools. *Id.* at 107.

The Applicant maintains that Contention 12 includes "no basis, references, documentary support, or expert opinions to demonstrate a genuine dispute with respect to the EPZ, the ETEs [evacuation time estimate studies] or any other aspect of the evacuation planning." App. Ans. at 70-71. The Applicant states that no reference is provided to the particular Emergency Plan in dispute nor do the Petitioners challenge the time estimate ranges from the fourteen different scenarios analyzed in the COLA. *Id.* at 68. The Applicant also avers that any challenge to the adequacy of the emergency preparedness for Fermi Unit 2 is outside the scope of this proceeding, and a contention asserting the need for a larger EPZ is a direct attack on an NRC regulation.[202] And finally, the Applicant asserts that any details regarding the distribution of potassium iodide tablets is a responsibility delegated by the NRC to the state of Michigan; thus, this issue is beyond the scope of this proceeding.[203]

The Staff is in agreement with the Applicant that Contention 12 is inadmissible because the Petitioners fail to challenge any aspect of the COLA, with one exception. The Staff notes that the basis addressing the emergency evacuation plan for Fermi Unit 2 during construction of Fermi Unit 3 properly challenges the COLA; however, the Staff argues, this basis is not adequately supported and the Petitioners fail to demonstrate the Applicant's noncompliance with applicable laws by addressing deficiencies in the emergency plan at issue. NRC Ans. at 87-88. The Staff maintains, *inter alia,* that the aspect of this contention regarding the capacity of local roads is especially troublesome considering that the Applicant provides an extensive assessment (totaling more than 300 pages) of the entire highway system within the EPZ, yet none of this information is challenged by the Petitioners. *Id.* at 91.

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[201] Cont. at 106 (citing ER at 4-81 (§ 4.4.1)).

[202] App. Ans. at 71; *see also id.* at 69.

[203] App. Ans. at 72. The Staff also notes that 10 C.F.R. § 50.47(b)(10) and Part 50, Appendix E, § IV.D.2 discuss the use of potassium iodide (KI) and the requirements for distributing emergency planning information; the regulations provide that KI distribution beyond the 10-mile EPZ Is not necessary. NRC Ans. at 90.

Discussion

The Petitioners raise three distinct issues with regard to the Fermi Unit 3 Emergency Plan. Cont. at 106-08. The first issue relates to the impact of current road clearing capabilities during severe winter weather on facility emergency evacuation times. *Id.* at 106. The evacuation time for the Petitioners' postulated scenario in Contention 12 is analyzed by the Applicant and the evacuation time estimates are documented in the Fermi Unit 3 COLA. App. Ans. at 71. Furthermore, the Petitioners have not challenged the specifics of this analysis nor have they indicated any failure of these studies to meet NRC requirements; thus failing to demonstrate a genuine dispute with the Applicant as required under 10 C.F.R. § 2.309(f)(1)(vi).

In the second issue, the Petitioners argue that the EPZ should be extended to an area encompassing a minimum 50-mile radius from the Fermi site. Cont. at 106. NRC regulations require that procedures be established to provide for early notification and clear instructions to the populace within the plume exposure pathway EPZ. *See* 10 C.F.R. § 50.47(b)(5). In accordance with the regulations, the plume exposure pathway EPZ shall generally consist of an area covering a radius of "about 10 miles." *See* 10 C.F.R. § 50.47(c)(2). As pled, the Petitioners provide no basis for the assertion that the EPZ should be increased to a 50-mile radius. 10 C.F.R. § 2.309(f)(1)(ii). In addition, the Petitioners provide no alleged facts or expert opinion to support their assertion that the EPZ should be increased. 10 C.F.R. § 2.309(f)(1)(v).

Finally, the third issue involves a challenge to the Evacuation Plan for Fermi Unit 2 during the construction of the proposed Fermi Unit 3; the issue of concern being the need to evacuate with the projected increase in workforce during construction. Specifically, the Petitioners raise a series of challenges to the adequacy of the Applicant's Emergency Plan. Cont. at 106. In doing so, however, the Petitioners fail to provide a specific reference to the Applicant's Emergency Plan submitted as Part 5 of the COLA to challenge the adequacy of that analysis. In fact, for Contention 12, the Petitioners' only reference to the COLA is to the Applicant's assessment of the construction impacts on local traffic in the ER. *Id.* at 106-07. Such a reference provides a potential starting point for a contention, but does not challenge the extensive analysis of evacuation times provided in the Applicant's Emergency Plan including the impact of the proposed Fermi Unit 3 construction workforce, which appears to be the Petitioners' primary concern in this regard.

Although it might be argued that the Fermi Unit 2 Evacuation Plan is outside the scope of this Fermi Unit 3 COL proceeding, contrary to the Petitioners' assertions the Applicant did provide an analysis of the evacuation times for exactly this scenario, as noted above. The Petitioners do not challenge this analysis or the resulting evacuation times documented in the Applicant's Emergency Plan,

particularly in Scenario 14, which is applicable here.[204] In fact, Contention 12 fails to challenge the COLA in any way, thus lacking the necessary demonstration of a genuine dispute with the Applicant on a material issue. *See* 10 C.F.R. § 2.309(f)(1)(vi).

In addition to the challenges made against the Applicant's Emergency Plan, the Petitioners request that the Applicant fund seven remediation measures. Cont. at 106-08. In regard to these seven requested remedies, each is a measure to be taken by the Applicant in consort with state and local officials. Not one of the requested remedial actions constitutes an action that the NRC must take in this proceeding to grant a combined license for a new nuclear reactor nor do they fall within the jurisdiction of the NRC in any regard. Moreover, denial of the license in this proceeding would not provide the remedies the Petitioners desire. Thus, as they pertain to these remediation measures, the Petitioners' requests are clearly outside the scope of this proceeding.

Based on the foregoing, the Board finds Contention 12 inadmissible.

L. Contention 13

The Petitioners state in Contention 13:

> The identification, characterization and analysis of need, alternatives to construction, and the mix of conservation and renewable energy sources is wholly inadequate and violates NEPA.[205]

The Petitioners contend that the Applicant's alternatives analysis in its ER is deficient for failing to "contain complete data for meaningful understanding of the reasonable alternatives" as NEPA requires. Cont. at 109. The Petitioners accuse the Applicant of systematically exaggerating the risks for the alternatives and failing to assess "all reasonable options in a comprehensive fashion." *Id.* at 111. The Petitioners contend that the Applicant has "grossly" underestimated the cost of the facility, has provided an outdated argument regarding its need for power, has provided a disingenuous discussion of energy efficiency, and has not provided adequate consideration of solar and wind energy alternatives. *See id.* at 111-22. Both the Applicant and the Staff oppose admission of Contention 13 for failing to meet the requirements in 10 C.F.R. § 2.309(f)(1).

This contention raises four distinct issues concerning alternatives to and the need for the proposed new reactor. We will separately summarize and analyze each of those issues.

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[204] *See* Fermi: Combined License Application; Part 5: Emergency Plan (Rev. 1) at ES-8, Table 6-2, Scenario 14 (Mar. 2009).

[205] Cont. at 109.

1. Cost of the New Facility

The Petitioners allege that the Applicant significantly underestimated the cost of Fermi Unit 3, thereby skewing the analysis of alternatives. The Petitioners provide testimony from a pending rate case before the Michigan Public Service Commission (MPSC) stating that, based on recent developments in the industry, the costs at issue in the testimony were "grossly underestimated," and that use of "inaccurate resource costs will portray an inaccurate resource economic assessment."[206] The Petitioners assert that more accurate costs scenarios are missing from the ER, which has "direct implications for comparing the economics and relative environmental impacts of sustainable alternatives to nuclear." Cont. at 111.

The Applicant argues that the Petitioners fail to directly controvert the application or provide adequate support to demonstrate a genuine dispute. App. Ans. at 75. The Staff maintains that the information in the testimonial excerpt does not support the Petitioners' assertion. The Staff adds that the accuracy of an applicant's cost estimate is not material to the findings the NRC must make under NEPA.[207]

This contention concerns the ER's analysis of alternatives to the proposed action. Under the NRC's Part 51 regulations, the ER must "contain a description of the proposed action, a statement of its purposes, [and] a description of the environment affected," 10 C.F.R. § 51.45(b), and it must also discuss "[a]lternatives to the proposed action . . . ." *Id.* § 51.45(b)(3). The requirement to discuss alternatives in the ER parallels NEPA's requirement that an EIS provide a detailed statement of reasonable alternatives to a proposed action.[208] The alternatives discussion in the ER or EIS, however, need not include "every *possible* alternative, but every *reasonable* alternative."[209] Reasonable alternatives do not include alternatives that are "impractical[;] . . . that present unique problems; or that cause extraordinary costs."[210] Thus, an alternative need not be considered in detail if it is technologically unproven, unsafe, too costly, or otherwise impracticable.[211]

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[206] Cont. at 112 (citing Testimony of Geoffrey C. Crandall, former technical staff member of the MPSC and private utility economist, July 2008).

[207] NRC Ans. at 94 (citing *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 576 (2008)).

[208] 42 U.S.C. § 4332(2)(C)(iii); *see also Claiborne,* CLI-98-3, 47 NRC at 104.

[209] *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 71 (1991) (emphasis added).

[210] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-03-30, 58 NRC 454, 479 (2003) (citing *Airport Neighbors Alliance v. United States,* 90 F.3d 426, 432 (10th Cir. 1996), *Communities, Inc. v. Busey,* 956 F.2d 619, 627 (6th Cir. 1992)).

[211] *See Kelley v. Selin,* 42 F.3d 1501, 1521 (6th Cir. 1995) (upholding NRC decision not to consider

(Continued)

If the Applicant disqualified an environmentally preferable alternative on the ground that it was too costly compared to the cost of the proposed new reactor, then the reasonableness of the Applicant's cost estimate for the new reactor could be a material issue under NEPA. But we agree with the Staff and the Applicant that this aspect of Contention 13 is inadequately supported by fact or expert opinion and fails to demonstrate a genuine dispute with the COLA. *See* 10 C.F.R. § 2.309(f)(1)(v) and (vi). The Petitioners have not clearly identified any environmentally preferable alternative that would have merited further consideration (i.e., that would have constituted a reasonable alternative to constructing the new reactor) if a more accurate cost estimate for the new reactor had been used. In fact, the ER disqualified alternatives preferred by the Petitioners, including wind and solar power, not because they were too costly but because they would not provide a reliable source of baseload power.[212]

In addition, the only support the Petitioners provide for their claim that the ER underestimates the cost of Fermi Unit 3 is an excerpt of the testimony of Geoffrey C. Crandall, a private utility economist, in a MPSC rate case. Cont. at 111-12. The cost estimate at issue in that case was not from the ER for Fermi Unit 3, but rather from Michigan's 21st Century Electric Energy Plan, a document prepared and issued by the MPSC. Although Mr. Crandall disputed the "$2352/kW" estimate for Fermi Unit 3 in the Energy Plan, he said nothing about the total estimated cost provided in the ER, which is $3500 to $4500/kWe.[213] The Petitioners have not provided any meaningful basis for comparing the cost estimates referred to in the testimony with the Fermi Unit 3 estimate, nor have they provided any other facts or expert opinion that contradict the ER's cost estimate.

We therefore find this aspect of Contention 13 inadmissible.

2. The Need for Power

The Petitioners claim that the ER does not include data that reflect the recent economic downturn in Michigan and the likely resulting reduction in the need for power. Cont. at 113. The Petitioners note that the analysis in the ER regarding the need for power was premised on Michigan's 21st Century Electric Energy Plan, which purportedly "forms the core data projections in the ER supporting endless

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additional alternative spent fuel storage technologies that were "neither sufficiently demonstrated nor practicable for use" for the application in question); *NRDC v. Morton,* 458 F.2d at 837 (approving exclusion from alternatives discussion of alternative energy sources that "will be dependent on [future] environmental safeguards and [technological] developments"); *Busey,* 956 F.2d at 627 (upholding rejection of alternatives that "presented severe engineering requirements" or were "imprudent for reasons including their high cost, safety hazards, [and] operational difficulties").

[212] *See* ER at 9-9 through 9-11.

[213] Cont. at 112; COL, Part 1 at 7.

growth in electrical consumption and . . . the 'need' for Fermi 3." *Id.* As the data in the report were gathered in 2006, the Petitioners highlight that the information is 2.5 years old and "has been overtaken by history." *Id.* The Petitioners maintain that "the economic prognosis for Michigan, and consequent implications for energy usage and need, have shifted sharply" in the last 6 months. *Id.* at 115-16. Moreover, the Petitioners assert that, contrary to data the Applicant cites in its ER, Detroit Edison's most recent rate case filing (U-15677 of 9/30/2008) "reflects current negative trends and forecasts a drop in electric peak demand." *Id.* at 114. The Petitioners argue that the data and the assessment of need in the COLA must be updated to reflect the current economic environment in Michigan. *Id.* at 116.

The Applicant and the Staff assert that the Petitioners fail to present expert or factual support to establish a genuine dispute with the application.[214] The Applicant asserts that this contention challenges the Michigan 21st Century Plan and not the Applicant's analysis in its COLA. App. Ans. at 75. Moreover, the Applicant notes that the forecasting process described in the ER encompasses a 20-year planning cycle based on a wide variety of factors, unlike the Petitioners' "narrow focus on perceived near-term economic conditions." *Id.* at 77. The Staff argues that the outdated nature of the Applicant's need for power would only be material to this proceeding if the contention were to plead that there was "no need for power whatsoever in 2020, when Fermi [Unit] 3 is projected to begin operations. NRC Ans. at 96.

The Commission's NEPA regulations provide:

> [I]n a proceeding for the issuance of a combined license for a nuclear power reactor under part 52 of this chapter, the presiding officer will:
>
> (1) Determine whether the requirements of Sections 102(2)(A), (C), and (E) of NEPA and the regulations in this subpart have been met;
>
> (2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; [and]
>
> (3) Determine, *after weighing the environmental, economic, technical, and other benefits against environmental and other costs,* and considering reasonable alternatives, whether the combined license should be issued, denied, or appropriately conditioned to protect environmental values.[215]

Thus, the NRC's NEPA regulations mandate balancing the economic and other benefits of the proposed new reactor against the environmental and other costs that the project might incur. The need for power is therefore a material issue under NEPA when the Applicant claims, as it does here, that the benefit

[214] App. Ans. at 75; NRC Ans. at 96.

[215] 10 C.F.R. § 51.107(a)(1)-(3) (emphasis added).

of the project is satisfying the need for power. The Commission so ruled in denying a request for rulemaking from the Nuclear Energy Institute that would have removed from the agency's regulations any requirement that applicants and licensees analyze, and the NRC evaluate, "alternative energy sources and the need for power with respect to the siting, construction, and operation of nuclear power plants."[216] The Commission explained that "the NRC must continue to consider alternative energy sources and the need for power to fulfill its responsibilities under [NEPA]."[217] This is necessary, the Commission explained, because "the NRC's NEPA analysis associated with nuclear power plant licensing . . . must include a balancing of costs and benefits," and the NRC has generally equated the need for power with the benefit side of the cost/benefit balance.[218] Although the Commission acknowledged "the primacy of State regulatory decisions regarding future energy options," it also made clear that "this acknowledgement does not relieve the NRC from the need to perform a reasonable assessment of the need for power."[219]

This conclusion follows from the D.C. Circuit's decision in *Calvert Cliffs' Coordinating Committee, Inc. v. AEC,*[220] which requires that the NRC evaluate and balance both the claimed benefits and the environmental costs of a proposed new reactor. The D.C. Circuit stated:

> NEPA mandates a case-by-case balancing judgment on the part of federal agencies. In each individual case, the particular economic and technical benefits of planned action must be assessed and then weighed against the environmental costs; alternatives must be considered which would affect the balance of values. . . . The magnitude of possible benefits and possible costs may lie anywhere on a broad spectrum. Much will depend on the particular magnitudes involved in particular cases. In some cases, the benefits will be great enough to justify a certain quantum of environmental costs; in other cases, they will not be so great and the proposed action may have to be abandoned or significantly altered so as to bring the benefits and costs into a proper balance. The point of the individualized balancing analysis is to ensure that, with possible alterations, the optimally beneficial action is finally taken.[221]

This implies that the NRC must analyze the need for additional power when it relies upon such a benefit in performing the balancing of benefits and costs

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[216] Nuclear Energy Institute, Denial of Petition for Rulemaking, 68 Fed. Reg. 55,905, 55,905 (Sept. 29, 2003).

[217] *Id.* at 55,905.

[218] *Id.* at 55,909.

[219] *Id.*

[220] 449 F.2d 1109.

[221] 449 F.2d at 1123 (internal citation omitted).

required by 10 C.F.R. § 51.107(a)(3). The issue of the need for power may therefore fall within the scope of the findings the NRC must make under NEPA when reviewing an application for a new reactor, and a petitioner may obtain a hearing on the issue if it satisfies the other requirements of section 2.309(f)(1).

We find, however, that the Petitioners have failed to provide supporting facts or expert opinion sufficient to demonstrate a genuine dispute with the COLA concerning the need for power. 10 C.F.R. § 2.309(f)(1)(v) and (vi). We do not find a genuine dispute here because, contrary to the Petitioners' claim, the Applicant's analysis of the need for power accounts for economic conditions in Michigan that might reduce the growth in demand, acknowledges sources of uncertainty, and recognizes that energy efficiency and conservation may also reduce the need for power.[222] The analysis, which is based on the MPSC's 21st Century Electric Energy Plan, considers several sources of uncertainty, including business cycles and economic conditions.[223] The uncertainty analysis explicitly recognizes that the automobile industry is a "major uncertainty,"[224] and includes the low-growth scenario cited by the Petitioners in their contention.[225] In order to take account of the various factors and uncertainties that may affect the future need for power, both the annual sales forecast and peak demand forecast in the ER include a high-growth case, a base case, and a low-growth case. The Petitioners have at most provided some alleged facts suggesting that the future need for power might be closer to the low-growth case identified in the ER than to the high-growth case or the base case. The Petitioners have not, however, provided facts or expert opinion to indicate that the future need for power will likely fall below the low-growth case, nor have they identified an issue affecting the need for power or a source of uncertainty that was not considered in the ER. They have therefore failed to demonstrate a genuine dispute with the Application.

We therefore decline to admit this aspect of Contention 13.

3. Energy Efficiency

The Petitioners criticize the Applicant for concluding that a combination of conservation and power purchases will not provide the necessary baseload power needed to satisfy target reliability levels. Cont. at 116. The Petitioners provide witness testimony from a rate case before the MPSC and cite a book written by Dr. Arjun Makhijani to support the claim that, in its COLA, the Applicant relies on "severely out-of-date" forecasts and unreasonable assumptions, and should

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[222] ER at 8-25 to 8-29, 8-32 to 8-38.

[223] *See* ER at 8-9; 8-25 to 8-27.

[224] *Id.* at 8-9.

[225] Cont. at 114; ER at 8-9, 8-27, 8-34, 8-37.

instead be required to provide "contemporaneous data and need projections." *Id.* at 119.

The Applicant and the Staff argue that the Petitioners fail to raise a material dispute with the application or to provide the requisite factual or expert support. The Applicant asserts that, contrary to the Petitioners' claims, the ER discusses energy conservation, but concludes "that there is a need for additional electric generating resources in order to preserve electric reliability and provide affordable energy over the next 20 years *even in the presence of increased use of energy efficiency and renewable resources.*"[226] The Staff agrees that the Petitioners fail to address the ER's discussion of energy conservation, and that they fail to provide a basis for their claim that the Applicant's materials are incomplete. NRC Ans. at 100.

The Applicant discusses conservation and demand-side management measures in section 9.2.1.3 of the ER.[227] The Petitioners fail to establish a genuine dispute with this or any other relevant part of the ER. On the contrary, the Petitioners again present a quotation from testimony in a case before the MPSC. Cont. at 117. As with the cost issue discussed above, it is of no help to the Petitioners to merely show a dispute of fact with the Applicant in a rate-making proceeding before the MPSC. They must show a dispute with the ER, supported by sufficient facts or expert opinion. They fail, however, to establish any clear connection between the dispute before the MPSC and the ER's discussion of energy conservation and demand-side management, much less one that would be sufficient to show a genuine dispute of material fact.

The Petitioners also cite general claims about potential reductions in energy use contained in a book by Dr. Arjun Makhijani. Cont. at 118. Dr. Makhijani's claims concern reductions in energy use he believes could be achieved on a national scale as a result of "'moderate investment in efficiency and combined heat and power systems . . . ." *Id.* As with the MPSC testimony, the statements in Dr. Makhijani's book do not take issue with any claim made in the ER. They are too general to create a genuine dispute with the Applicant on a material issue.

We therefore do not admit the energy efficiency aspect of Contention 13.

4. Alternative Energy Sources

The final aspect of Contention 13 challenges the Applicant's alternatives analysis because it allegedly omits facts concerning the feasibility of solar photovoltaic and wind power. According to the Petitioners, the alternatives analysis should have included an "objective, serious consideration" of various combinations of

[226] App. Ans. at 78-79 (emphasis in original).

[227] ER at 9-6 to 9-7.

renewable energies. Instead, Petitioners claim, the ER evaluates only a 100% wind power alternative and alternatives based on out-of-date solar technologies. Cont. at 119-21.

The Applicant argues that, despite the Petitioners' allegations, the ER does consider various combinations of alternatives involving renewable fuels, and the Petitioners fail to challenge these conclusions. App. Ans. at 81. The Staff maintains that the Petitioners failed to take the Applicant's goal of baseline power generation into account when proposing alternatives for consideration. NRC Ans. at 102. As a result, the Petitioners do not address whether wind and solar technologies are appropriate for baseload generation, but instead the Petitioners "appear to be arguing against construction of baseload facilities in general." *Id.* at 103. The Staff argues that the Applicant analyzed the appropriate range of renewable and nonrenewable energy sources within the framework determined by the Applicant's goal for baseload generation. *Id.*

Again, Petitioners fail to establish a genuine dispute of material fact with the ER. With respect to wind, the Petitioners offer only another statement from a book by Dr. Makhijani, in this case an assertion that renewables can be used during off-peak times to generate ice which can then be melted for air conditioning. Cont. at 119. This assertion is unsupported by facts or analysis to demonstrate the feasibility of using such a technology on a utility scale. With respect to solar power, the Petitioners offer two news stories describing new types of solar collectors. *Id.* at 120-21. As with wind power, they provide no support for the feasibility of using these technologies on a utility scale. The Petitioners have thus failed to provide facts or expert opinion sufficient to show that the ER disregarded a feasible alternative based on either wind power, solar power, or some combination of the two.

Similar contentions have been submitted and rejected in other COL proceedings.[228] Here, as in those cases, Petitioners have failed to provide factual or expert support sufficient to establish a genuine dispute of fact or law. This last part of Contention 13 will therefore not be admitted.

M. Contention 14

The Petitioners state in Contention 14:

> The Environmental Report fails to identify and consider direct, indirect, and cumulative impingement/entrainment and chemical and thermal effluent discharge

[228] *See, e.g., South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-2, 69 NRC 87, 110 (2009); *Bellefonte,* LBP-08-16, 68 NRC at 404.

impacts of the proposed cooling system intake and discharge structures on aquatic resources.[229]

Contention 14 primarily addresses the alleged effects of the proposed Fermi Unit 3 cooling system on aquatic resources. Cont. at 123. The Petitioners initially focus on the purported "massive thermal pollution" resulting from the cumulative discharge of heated water into Lake Erie from the Monroe Coal Plant, Fermi Unit 2, and the Whiting Coal Plant. *Id.* The Petitioners additionally allege that during certain conditions, the intake and outfall from the proposed Fermi Unit 3 could impact the Maumee Bay estuary; thus, "[s]uch impacts must be evaluated." *Id.* The remaining components of Contention 14 include the Petitioners' concerns regarding toxic discharges that could threaten aquatic ecosystems and contaminate drinking water, phosphorus contamination and algal blooms, and increased likelihood of "impingement and entrainment of Lake Erie biota." *Id.* at 124. The Petitioners also add that the Applicant neglected to analyze the human health effects of air emissions from the cooling tower exhaust resulting from the residual toxic agents and etiological agents used to "kill germs" in this part of the plant. *Id.* at 131. The Petitioners' support for these allegations consists of extensive quotations from the Applicant's COLA including statements that the contentions are "borne out by the [ER] on these matters." *Id.* at 135.

The Applicant and the Staff oppose the admission of Contention 14 because the Petitioners fail to provide a basis for this contention or demonstrate the existence of a material dispute with the Applicant. More importantly, the Petitioners fail to provide any factual or expert support for their positions. The Applicant also notes that many of the omissions alleged by the Petitioners are indeed included in the COLA and that the "Petitioners do not controvert any of these conclusions and therefore fail to demonstrate a genuine dispute with the application." App. Ans. at 83. The Staff adds that the content of Contention 14 regarding "water use and thermal discharges, toxic discharges, phosphorus contamination and algal blooms, and prevention of impingement and entrainment" are duplicative of Contention 6, and should therefore "be subsumed under Contention 6 and the two treated as a single contention." NRC Ans. at 106.

Discussion

Similar to the Applicant and the Staff, we are unable to discern the differences between the claims made in Contention 14 and those made in Contention 6, discussed herein. Because much of this contention is duplicative of Contention 6,

[229] Cont. at 123.

we refer the reader to our ruling on Contention 6, *see supra* at p. 278, and do not further address these issues.

One exception is in regard to the Petitioners' concerns of health impacts from emissions from the cooling tower stacks and associated microorganisms. In support of this part of the contention, the Petitioners provide lengthy excerpts from the Applicant's ER, which in turn concludes that the human health impacts are localized and small. The Petitioners do not draw conflict with this conclusion nor do they challenge the methodology or analysis that led to the results summarized in the ER. No expert support is provided for this contention except for citations to the ER itself, and none of the conclusions from the ER are disputed in the contention; both of which are requirements needed for an admissible contention. *See* 10 C.F.R. § 2.309(f)(1)(v) and (vi).

For the reasons stated herein, and those provided for denying the admissibility of Contention 6, *supra* at p. 278, the Board finds Contention 14 inadmissible.

VI. CONCLUSION AND ORDER

Based, therefore, upon the preceding findings and rulings, it is, this 31st day of July 2009, ORDERED as follows:

A. Petitioners 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 are admitted as parties in this proceeding and their Request for Hearing and Petition to Intervene are granted. A hearing is granted with respect to Contention 3 and Contention 8 as narrowed by the Board; and Contention 5 and Contention 6 are admitted in part and denied in part, as set forth herein. We found all the remaining contentions advanced by the Petitioners inadmissible.

B. This Order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.311. Any petitions for review meeting applicable requirements set forth in that section must be filed within ten (10) days of service of this Memorandum and Order.

It is so ORDERED:

THE ATOMIC SAFETY AND
LICENSING BOARD

Ronald M. Spritzer, Chairman
ADMINISTRATIVE JUDGE

Michael F. Kennedy
ADMINISTRATIVE JUDGE

Randall J. Charbeneau
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 31, 2009

Copies of this notice and order were sent this date by the agency's E-Filing system to the counsel/representatives for (1) Applicant Detroit Edison Company; (2) Petitioners Beyond Nuclear *et al.*; and (3) NRC Staff.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Gregory B. Jaczko, Chairman
Dale E. Klein
Kristine L. Svinicki

In the Matter of **Docket No. 30-36974-ML**
(Materials License Application)

PA'INA HAWAII, LLC **August 13, 2009**

ORDER

This long-pending proceeding stems from a June 2005 application for an underwater irradiator to be located in Honolulu, Hawaii. Applicant Pa'ina Hawaii, LLC recently filed a motion requesting the Commission to transfer this case from the Atomic Safety and Licensing Board to itself, for final disposition.[1] The motion states that there is no current scheduling order in the proceeding,[2] and expresses concern over delays.[3]

Under NRC regulations, the Board has an obligation to establish a case scheduling order, and to advise the Commission of any significant delay in meeting major activities set forth in the hearing schedule.[4] In May 2006, the Board issued a scheduling order indicating that it intended to meet the Model Milestones for a Subpart L proceeding.[5] The Model Milestones set the goal of beginning an evidentiary hearing (if one is to be held) within 175 days of the NRC Staff's issuance of the final Safety Evaluation Report (SER) and final document

[1] *See* Applicant Pa'ina Hawaii, LLC's Motion to Transfer Case to Nuclear Regulatory Commission (July 24, 2009).

[2] *See id.* at 2.

[3] Pa'ina's motion is under consideration, and will be addressed in a separate decision.

[4] *See* 10 C.F.R. §§ 2.332(a), 2.334(c).

[5] *See* Order (May 1, 2006) (unpublished).

under the National Environmental Policy Act (NEPA).[6] Following issuance of the final Environmental Assessment in this case, the Board issued at least three orders requesting the parties to provide dates acceptable for a hearing,[7] but did not establish a hearing date, and only recently indicated that it had concluded that no hearing would be necessary.[8]

The following items appear to be pending before the Board:

- NRC Staff's Motion to Dismiss Portions of Amended Environmental Contentions and for Leave to Seek Summary Disposition (September 26, 2008);
- Motion for Leave to File Supplemental Direct Testimony of Michael Kohn, President of Pa'ina Hawaii, LLC (April 2, 2009);
- Intervenor Concerned Citizens of Honolulu's Amendment to Environmental Contention 3, Re: Transportation Accidents (April 6, 2009).

In addition, the Board has yet to make merits rulings with respect to admitted Environmental Contentions 3 and 4.

Under our inherent supervisory authority over adjudicatory proceedings, we direct the Board to provide us with a status report outlining the Board's general plan, together with a timetable, for resolving all pending matters, including whether, in the Board's view, any additional briefing, oral argument or other actions will be necessary to complete the record. The Board should provide this status report no later than September 3, 2009.

IT IS SO ORDERED.

For the Commission

J. SAMUEL WALKER
Acting Secretary of the Commission

Dated at Rockville, Maryland,
this 13th day of August 2009.

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[6] *See* 10 C.F.R. Part 2, Appendix B, § II. Model Milestones for Hearing Conducted Under 10 C.F.R. Part 2, Subpart L.

[7] *See* Order (Submission of a Joint Proposed Schedule) (Apr. 29, 2008); Order (Directing Parties to Submit Scheduling Information for Hearing) (Aug. 7, 2008); Order (Ruling on Intervenor's Motion to Strike Testimony, Releasing Previously Reserved Hearing Dates, and Directing Parties to Submit Scheduling Information for Hearing) (Dec. 4, 2008). The Board's last actual scheduling order appears to have been issued on July 17, 2008. This order did not set forth a hearing date, but indicated that the Board would later do so. *See* Order (Scheduling Order) (July 17, 2008) (unpublished).

[8] *See* Order (Notice Regarding Hearing) (June 5, 2009) (unpublished).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Ann Marshall Young, Chair
Dr. Gary S. Arnold
Dr. Alice C. Mignerey

In the Matter of **Docket Nos. 52-034-COL**
52-035-COL
(ASLBP No. 09-886-09-COL-BD01)

LUMINANT GENERATION COMPANY, LLC
(Comanche Peak Nuclear Power Plant, Units 3 and 4)

August 6, 2009

RULES OF PRACTICE: STANDING

Section 189a of the Atomic Energy Act (AEA) provides the basis for the standing of a petitioner in an NRC proceeding, requiring the NRC to provide a hearing "upon the request of any person whose interest may be affected by the proceeding."

RULES OF PRACTICE: STANDING

The Commission has implemented the requirements of section 189a in its regulations in 10 C.F.R. § 2.309(d)(1), which provides in relevant part that a licensing board shall consider three factors when deciding whether to grant standing to a petitioner: the nature of the petitioner's right under the AEA to be made a party to the proceeding; the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and the possible effect of any order that may be entered in the proceeding on the petitioner's interest.

RULES OF PRACTICE: STANDING (ORGANIZATIONAL)

For an organization to establish standing, it must show either immediate or threatened injury to its organizational interests or to the interests of identified members.

RULES OF PRACTICE: STANDING (PROXIMITY)

Under Commission case law, there are some circumstances in which petitioners may be presumed to have standing based on their geographical proximity to a facility or source of radioactivity. In nuclear power reactor licensing proceedings, a "rule of thumb" has been developed whereby persons who reside or frequent the area within a 50-mile radius of the reactor are presumed to have standing to participate in a proceeding involving that reactor.

RULES OF PRACTICE: CONTENTIONS

Strict contention admissibility standards, adopted in 1989 and rendered more stringent in 2004 amendments, exist to ensure that hearings cover only genuine and pertinent issues of concern and focus on real, concrete issues. Although technical perfection is not an essential element of contention pleading, the rules bar contentions where petitioners have only what amount to generalized suspicions, hoping to substantiate them later.

RULES OF PRACTICE: CONTENTIONS (SPECIFICITY AND BASIS)

The requirements of 10 C.F.R. § 2.309(f)(1)(i) and (ii) — that a "specific statement of the issue of law or fact to be raised or controverted" and a "brief explanation of the basis for the contention" be provided — are fairly straightforward, and the issue that generally arises under the first of these is whether a contention is stated with sufficient specificity.

RULES OF PRACTICE: CONTENTIONS (SCOPE; CHALLENGE TO NRC RULE)

Subsection (iii) of section 2.309(f)(1) requires that a petitioner must "[d]emonstrate that the issue raised in the contention is within the scope of the proceeding," which may be defined by statute, rule, or the Commission notice or order referring the proceeding to the Atomic Safety and Licensing Board Panel. In addition, under 10 C.F.R. § 2.335(a), no NRC rule may be attacked in an adjudicatory

proceeding; the appropriate procedure to raise such a challenge is to file a petition for rulemaking pursuant to 10 C.F.R. § 2.802.

RULES OF PRACTICE: CONTENTIONS (MATERIALITY)

The materiality requirements of 10 C.F.R. § 2.309(f)(1)(iv) and (vi) mandate that petitioners show that any issue raised in a contention has significance regarding the "findings the NRC must make to support the action that is involved in the proceeding." In other words, does the issue make any difference to, or have any impact on, the grant or denial of an application at issue in a given proceeding?

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION)

Disputes often arise among parties as to the nature and extent, or amount, of information that must be provided to support a contention in order for it to be admitted. Section 2.309(f)(1)(v) concerns the nature of the information that is required, and section 2.309(f)(1)(vi) concerns the sufficiency — i.e., the extent or amount — of supportive information offered.

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION)

Taken literally, 10 C.F.R. § 2.309(f)(1)(v) might be read to require a petitioner to provide a statement that is both "concise" and also covers the full universe of "the alleged facts or expert opinions" and additional information and material that supports a contention. The Commission has, however, interpreted 10 C.F.R. § 2.309(f)(1)(v), quite reasonably and simply, to require a petitioner to support its contentions with documents, expert opinion, or at least a fact-based argument. On the other hand, as was observed even before the 1989 procedural rule amendments, a protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that a dispute exists. The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate. In other words, as the Commission has more recently observed, a petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate.

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION)

More than mere notice pleading is required, and a petitioner's contention will

be ruled inadmissible if the petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation. Petitioners need not, however, proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion. A board may appropriately view petitioners' support for a contention in a light favorable to petitioners, but it is the petitioners' burden to establish the admissibility of a contention.

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION)

Simply attaching material or documents in support of a contention, without explaining their significance, is inadequate to support the admission of a contention, and any supporting material that is provided by a petitioner, including those portions of the material that are not relied upon, is subject to board scrutiny. In making a ruling on contention admissibility a board is not, however, to look to the merits of the contention, and a petitioner is not required to prove its case at the contention stage.

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION)

Section 2.309(f)(1)(vi) has been interpreted to require a petitioner to read the pertinent portions of the license application, including the Safety Analysis Report [SAR] and the Environmental Report [ER], state the applicant's position and the petitioner's opposing view, and explain why petitioner disagrees with the applicant. Petitioners in a contention must explain why the application is deficient, through reference to specific portions of the application, and must directly controvert a position taken by the applicant in the application. Enough material must be provided to show an actual and genuine dispute on a material issue. If a contention neither raises a genuine, material dispute with any specific part of an application nor identifies any omission from the application along with the reasons petitioners believe the material should be included, it must be denied.

RULES OF PRACTICE: CONTENTIONS (SUPPORTING INFORMATION)

If a petitioner, through reference to the application itself, as well as through expert opinion, a document or documents, a fact-based argument, or some combination of all three, provides support for an otherwise admissible contention, sufficient to show a genuine dispute on a material issue of fact or law and reasonably indicating that further inquiry is appropriate, it should be admitted.

Particularly if no expert opinion or supporting relevant documents are submitted, any fact-based argument that is provided must be reasonably specific, coherent, and logical, sufficient to show such a dispute and indicate the appropriateness of further inquiry.

RULES OF PRACTICE: CONTENTIONS (CHALLENGE TO WASTE CONFIDENCE RULE)

Contentions amounting to challenges to the Waste Confidence Rule in 10 C.F.R. § 51.23(a) are denied, because the history of the rule indicates it was intended to cover new reactors as well as existing ones, and in any event the Commission is currently involved in a rulemaking to amend the rule, and it has long been agency policy that Licensing Boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.

RULES OF PRACTICE: CONTENTIONS (CHALLENGE TO DECOMMISSIONING RULES)

Contentions that amount to challenges to NRC decommissioning rules are found not to be admissible.

RULES OF PRACTICE: CONTENTIONS (TERRORISM-RELATED ISSUES)

The Commission has ruled terrorism-related issues to be outside the scope of NRC adjudications.

RULES OF PRACTICE: CONTENTIONS (CHALLENGES RELATED TO NEPA)

With regard to management of high-level waste, 10 C.F.R. § 51.51(b), Table S-3, when read together with the "background documents" referenced in Note 1 to the Table, indicates small or no radiological release into the environment. Thus, contentions challenging the ER's finding of "SMALL" impact, and effectively challenging Table S-3, must be denied in accordance with 10 C.F.R. § 2.335(a); and contentions that fail to address the ER's supplementation of Table S-3 fail to dispute provisions in the application as required under 10 C.F.R. § 2.309(f)(1)(vi).

RULES OF PRACTICE: CONTENTIONS (CHALLENGES RELATED TO NEPA)

A contention challenging the absence in the ER of consideration of impacts from a severe radiological accident at one unit on other colocated units, supported by fact-based argument demonstrating a genuine dispute on a material issue and identifying supporting reasons for petitioners' belief, is admitted. In considering the question of the level of credibility of impacts asserted to require consideration in the ER, the Licensing Board consulted NUREG-1555, the NRC's Standard Review Plans for Environmental Reviews for Nuclear Power Plants; although a guidance document, with no binding effect, it is entitled to special weight so as to make it appropriate to consider in evaluating contentions, and it provides insight into the information the NRC considers necessary for a complete ER.

RULES OF PRACTICE: CONTENTIONS (CHALLENGES RELATED TO NEPA)

A contention challenging ER's omission of consideration of alternatives — consisting of combinations of renewable energy sources such as wind and solar power, with technological advances in storage methods and supplemental use of natural gas, to create baseload power — is admitted. Although portions of the original contention, including those concerning alternatives that do not address baseload power generation, are not admissible under Commission precedent, relevant NEPA court precedent mandates admission of the contention, supported by fact-based argument provided in the report attached to the petition, which concerns combinations of renewable sources with storage and other methods to create baseload power. Under this case law, applicant may not define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered.

TABLE OF CONTENTS

I. INTRODUCTION 318

II. BACKGROUND 318

III. STANDING OF PETITIONERS TO PARTICIPATE IN PROCEEDING 321

IV. BOARD RULING ON PENDING MOTION TO STRIKE 322

V. BOARD ANALYSIS AND RULINGS ON PETITIONERS' CONTENTIONS 324

A. Standards for Admissibility of Contentions 324
B. Rulings on Individual Contentions 329
1. COLA[1] Should Be Stayed Pending US-APWR[2] Rulemaking 330
2. ER[3] Erroneously Assumes Federal High-Level Waste Disposal Capacity 335
3. COLA Does Not Consider Consequences of Long-Term Onsite Waste Storage 341
4. ER Erroneously Assumes No Releases from Waste Storage 343
5. COLA Should Consider Consequences of Offsite Waste Disposal 346
6. COLA Should Consider Consequences of Government Becoming Waste Custodian 347
7. COLA Does Not Address Requirements of 10 C.F.R. §§ 52.80(d) and 50.54(hh)(2) 349
8. COLA Does Not Fully Analyze Radiological Hazards of Discharges into Squaw Creek Reservoir 350
9. COLA Underestimates Radiation Doses to Public Using Obsolete LADTAP II Model 356
10. COLA Fails to Account for Impacts of MOX Fuel 359
11. COLA Fails to Analyze Impacts of Global Warming on Availability of Water for Plant Operations 360
12. COLA Fails to Consider Greenhouse Gas Impacts 363
13. ER Fails to Consider Scenarios and Impacts of Severe Radiological Accident at One Unit on Other Units 365
14. COLA Should Consider Consequences of Dependence on Foreign Sources of Uranium 369
15. COLA Should Consider Radiological, Environmental, and Public Health Impacts of Decommissioning 371
16. Decommissioning Funding Assurance in COLA Is Inadequate 374
17. ER Makes Unrealistic Assumptions About Emergency Evacuation Model and Plan 374
18. ER Fails to Make Reasonable Assumptions About Alternatives to Constructing and Operating Units 3 and 4 375

[1] "COLA" is an acronym for "combined construction permit and operating license application," or "combined license application."

[2] "US-APWR" is an acronym for "United States Advanced Pressurized Water Reactor."

[3] "ER" is an acronym for "Environmental Report."

19. ER Fails to Consider Methods to Prevent Aircraft Attack on Units 3 and 4 380
VI. CONCLUSION 382
VII. ORDER 382

MEMORANDUM AND ORDER
(Ruling on Standing and Contentions of Petitioners, and Other Pending Matters)

I. INTRODUCTION

This proceeding involves an Application by Luminant Generation Company, LLC (Luminant or Applicant) to construct and operate two U.S.-Advanced Pressurized Water Reactors (US-APWR) at the Comanche Peak Nuclear Power Plant (Comanche Peak) site, located in Somervell County, Texas. On April 6, 2009, Petitioners Sustainable Energy and Economic Development (SEED) Coalition, Public Citizen, True Cost of Nukes, and State Representative Lon Burnam filed a Petition for Intervention and Request for Hearing, seeking admission of nineteen contentions. Neither Applicant nor the Nuclear Regulatory Commission (NRC) Staff contests the standing of Petitioners to participate in the proceeding. Applicant, however, opposes the admissibility of all nineteen contentions set forth in the petition, and while the NRC Staff initially conceded that Petitioners submitted one admissible contention, it now agrees that information Applicant subsequently submitted renders that contention moot.

For the reasons set forth below, we find that Petitioners have established standing to intervene in this proceeding and have proffered at least one admissible contention as required by 10 C.F.R. § 2.309(a). Accordingly, we grant Petitioners' Request for Hearing.

II. BACKGROUND

On September 19, 2008, Luminant submitted an application for a combined license (COL[4]) to construct and operate two US-APWRs, Units 3 and 4, adjacent

[4] The term "COL" was first used in the Commission's 1992 notice of its final rule "amending its regulations governing the issuance of combined construction permits and operating licenses," as an abbreviation or acronym for the term "combined license" in Commissioner Curtiss's Separate View. *(Continued)*

to the existing Comanche Peak Units 1 and 2.[5] The NRC accepted the COL Application (COLA) for docketing on December 2, 2008.[6] On February 5, 2009, the Commission published a Notice providing that members of the public had 60 days to file a petition for leave to intervene in the proceeding.[7] On April 6, in response to the Notice, Petitioners filed a Petition for Intervention and Request for Hearing.[8] On May 1, Applicant and the NRC Staff filed timely Answers to the Petition,[9] and Petitioners filed timely Replies to the Answers on May 8.[10] Meanwhile, on May 4 this Licensing Board was established to preside over the proceeding.[11]

On May 15, 2009, Luminant filed a Motion to Strike portions of Petitioners' two Replies, arguing that the Replies "impermissibly include new arguments,

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See Combined Construction Permits and Operating Licenses; Conforming Amendments, 57 Fed. Reg. 60,975, 60,976 (Dec. 23, 1992). Since that time, the term has variously been described as standing for "combined construction permit and operating license," "combined operating license," and "combined license." It basically refers to the concept of a combined construction permit and operating license, as described in the 1992 rulemaking. *See also infra* text accompanying note 156.

[5] *See* Letter Transmitting Combined License Application for Comanche Peak Nuclear Power Plant, Units 3 and 4 (Sept. 19, 2008) (ADAMS Accession No. ML082680250); http://www.nrc.gov/reactors/new-reactors/col/comanche-peak/documents.html; *see also* Notice of Receipt and Availability of Application for a Combined License, 73 Fed. Reg. 66,276 (Nov. 7, 2008).

[6] Acceptance for Docketing of an Application for Combined License for Comanche Peak Nuclear Power Plant, Units 3 and 4, 73 Fed. Reg. 75,141 (Dec. 10, 2008).

[7] Notice of Order, Hearing, and Opportunity to Petition for Leave to Intervene, 74 Fed. Reg. 6177 (Feb. 5, 2009).

[8] Petition for Intervention and Request for Hearing (Apr. 6, 2009) [hereinafter Petition]. Along with their intervention petition, Petitioners also filed a petition to stay the adjudication on the COL Application and hold in abeyance all related proceedings pending completion of a current rulemaking on the US-APWR design. Petition for Order to Stay Comanche Peak Nuclear Power Units 3 and 4 Combined Construction and Operating Licensing Application Proceedings and Hold the Combined Operating License Application in Abeyance Pending Completion of the US-APWR Application Rulemaking (Apr. 6, 2009) [hereinafter Petition for Stay]. This Petition for Stay was denied by the Commission prior to forwarding this proceeding to the Atomic Safety and Licensing Board Panel (ASLBP) for adjudication. Commission Order (*Luminant Generating Co., LLC* (Comanche Peak Nuclear Power Plant, Units 3 and 4)) (Apr. 27, 2009) (unpublished) [hereinafter Order Denying Petition for Stay]; Memorandum from Annette L. Vietti-Cook, NRC Secretary, to E. Roy Hawkens, ASLBP Chief Administrative Judge (Apr. 29, 2009). We address the subject of the Order Denying Petition for Stay in our discussion of Contention 1.

[9] Luminant's Answer Opposing Petition for Intervention and Request for Hearing (May 1, 2009) [hereinafter Luminant Answer]; NRC Staff's Answer to Petition for Intervention and Request for Hearing (May 1, 2009) [hereinafter NRC Staff Answer].

[10] Petitioners' Reply to Applicant's Answer to Petition for Intervention and Request for Hearing (May 8, 2009) [hereinafter Reply to Applicant]; Petitioners' Reply to NRC Staff's Answer to Petition for Intervention and Request for Hearing (May 8, 2009) [hereinafter Reply to NRC Staff].

[11] Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 21,837 (May 11, 2009).

references, and attachments."[12] On May 26, Petitioners filed a timely Response opposing the Motion to Strike.[13] On the same date, Applicant filed a letter providing notification that it had filed certain information asserted to render Petitioners' Contention 7 moot.[14] Earlier, on April 29, Applicant had filed a letter indicating that it had provided additional information related to Contention 17.[15]

On June 5, 2009, Petitioners filed a letter with the Office of the Secretary, requesting access to the information Applicant submitted regarding Contention 7.[16] Because the information was designated as "sensitive unclassified nonsafeguards information" (SUNSI), Petitioners were not permitted access to it without first demonstrating a "need for the information in order to meaningfully participate in this adjudicatory proceeding."[17] On June 15, 2009, the NRC Staff granted Petitioners' request for access.[18] The parties subsequently filed a joint proposed Protective Order regarding protection of the SUNSI,[19] which the Board approved and issued on July 1, 2009.[20] Among other things, the Protective Order established a schedule for the filing of "SUNSI Contentions" — new contentions that might arise from the SUNSI.[21] Also on July 1, the Board issued an Order directing Petitioners to notify the Board whether, once granted access to the SUNSI, it still contested Applicant's and NRC Staff's assertion that Contention 7 had been rendered moot, and setting deadlines regarding any such notification and

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[12] Luminant's Motion to Strike Portions of Petitioners' Reply (May 15, 2009) at 1 [hereinafter Motion to Strike].

[13] Petitioners' Response to Luminant's Motion to Strike Portions of Petitioners' Reply (May 26, 2009) [hereinafter Response to Motion to Strike].

[14] Letter from Steven P. Frantz, Counsel for Luminant, to Ann Marshall Young *et al.* (May 26, 2009), with attached Letter from Rafael Flores to NRC Document Control Desk (May 22, 2009); *see also* Letter from Steven P. Frantz, Counsel for Luminant, to Office of the Secretary (Apr. 30, 2009), with attached Letter from Rafael Flores to NRC Document Control Desk (Apr. 24, 2009).

[15] Letter from Steven P. Frantz, Counsel for Luminant, to Office of the Secretary (Apr. 29, 2009), with attached Letter from Rafael Flores to NRC Document Control Desk (Apr. 28, 2009).

[16] Letter from Robert Eye, Counsel for Petitioners, to NRC Office of the Secretary (June 5, 2009).

[17] *See* 74 Fed. Reg. at 6179.

[18] Letter from James Biggins, Counsel for NRC Staff, to Robert Eye, Counsel for Petitioners (June 15, 2009).

[19] Joint Motion for Entry of a Protective Order (June 30, 2009).

[20] Licensing Board Memorandum and Order (Protective Order Governing the Disclosure of Protected Information) (July 1, 2009) (unpublished).

[21] *Id.* at 4 (stating that "Petitioners must file any proposed SUNSI contentions within twenty-five (25) days after receipt of or access to that information"). The Board later amended the Protective Order, on Petitioners' motion, extending the deadline for SUNSI contentions by 7 days. Licensing Board Order (Amending Protective Order and Extending Time for Filing New Contentions Based on SUNSI Information) (July 16, 2009) (unpublished).

responses thereto.[22] On July 7, Petitioners were provided access to the SUNSI,[23] and on July 14, after reviewing it, provided notice that Petitioners did not agree that Contention 7 was moot.[24] On July 20, Petitioners filed a brief in support of this position,[25] and on July 27, Applicant and the NRC Staff filed responses to Petitioners' brief.[26] Petitioners filed a reply brief on August 3, 2009.[27]

Meanwhile, the Board heard oral argument on the admissibility of Petitioners' nineteen contentions and on Applicant's Motion to Strike on June 10 and 11, 2009, in Granbury, Texas.[28]

III. STANDING OF PETITIONERS TO PARTICIPATE IN PROCEEDING

Any person requesting a hearing and seeking to intervene in an NRC proceeding must demonstrate that he or she has "standing" to participate in the proceeding. Section 189a of the Atomic Energy Act (AEA) provides the basis for the standing of a petitioner in an NRC proceeding, requiring the NRC to provide a hearing "upon the request of any person whose interest may be affected by the proceeding."[29] The Commission has implemented the requirements of section 189a in its regulations in 10 C.F.R. § 2.309(d)(1), which provides in relevant part that a licensing board shall consider three factors when deciding whether to grant standing to a petitioner: the nature of the petitioner's right under the AEA to be made a party to the proceeding; the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and the possible effect of any order that may be entered in the proceeding on the petitioner's interest.[30] And for an

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[22] Licensing Board Order (July 1, 2009) (unpublished).

[23] Letter from Jonathan M. Rund, Counsel for Luminant, to Robert V. Eye, Counsel for Petitioners (July 7, 2009).

[24] Letter from Robert V. Eye, Counsel for Petitioners, to Ann Marshall Young (July 14, 2009).

[25] Petitioners' Brief Regarding Contention Seven's Mootness (July 20, 2009) (document filed as a nonpublic submission pursuant to the July 1, 2009, Protective Order).

[26] Luminant's Response to Petitioners' Brief Regarding Mootness of Contention 7 (July 27, 2009) (document filed as a nonpublic submission pursuant to the July 1, 2009, Protective Order); NRC Staff's Answer to Petitioners' Brief Regarding Contention Seven's Mootness (July 27, 2009).

[27] Petitioners' Consolidated Response to NRC Staff's Answer and Applicant's Answer to Petitioners' Brief Regarding Contention Seven's Mootness (Aug. 3, 2009) (document filed as a nonpublic submission pursuant to the July 1, 2009, Protective Order).

[28] Transcript of Proceeding (Tr.) at 1-413.

[29] 42 U.S.C. § 2239(a)(1)(A).

[30] 10 C.F.R. § 2.309(d)(1)(ii)-(iv). In determining whether a petitioner in an NRC proceeding has established the necessary "interest" under the rule, licensing boards are directed to follow the guidance *(Continued)*

organization to establish standing, it must show "either immediate or threatened injury to its organizational interests or to the interests of identified members."[31]

Under Commission case law, there are some circumstances in which petitioners may be presumed to have standing based on their geographical proximity to a facility or source of radioactivity. In nuclear power reactor licensing proceedings, a "rule of thumb" has been developed whereby "persons who reside or frequent the area within a 50-mile radius of" the reactor are presumed to have standing to participate in a proceeding involving that reactor.[32] All of the Petitioners herein, either on their own or through individual members, have demonstrated residence within 50 miles of the proposed units.[33] Moreover, individual members of True Cost of Nukes, SEED Coalition, and Public Citizen who live within 50 miles of the proposed new units have stated that they authorize these organizations to request a hearing on their behalf.[34]

Based on the preceding, we find that all of the Petitioners have demonstrated standing to participate in this proceeding.

IV. BOARD RULING ON PENDING MOTION TO STRIKE

Applicant moves to strike certain material included in Petitioners' Replies to Applicant and the NRC Staff, arguing that the Replies "impermissibly include new arguments, references and attachments without satisfying the standards governing

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found in judicial concepts of standing, as stated in federal court case law. *See, e.g., Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998); *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995). Under these concepts, a board considers whether a petitioner has alleged (1) a "concrete and particularized injury that is (2) fairly traceable to the challenged action and (3) likely to be redressed by a favorable decision." *Yankee,* CLI-98-21, 48 NRC at 195 (citing *Steel Co. v. Citizens for a Better Environment,* 523 U.S. 83, 102-04 (1998); *Kelley v. Selin,* 42 F.3d 1501, 1508 (6th Cir. 1995)). In this proceeding, however, we need not address these considerations, given that we find standing (which, as indicated above, is not contested) under the 50-mile "proximity presumption" that has been established in Commission case law. *See infra* text accompanying note 32.

[31] *Georgia Tech,* CLI-95-12, 42 NRC at 115.

[32] *See Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994).

[33] *See* Petition, Declaration of J. Nile Fischer ¶ 2 (Apr. 3, 2009), Declaration of Nita O'Neal ¶ 2 (Apr. 4, 2009), Declaration of Don Young ¶ 2 (Apr. 3, 2009), Declaration of Ron Burnam ¶ 2 (Apr. 3, 2009); *see also* Petition at 2-3.

[34] *See* Petition, Declaration of J. Nile Fischer ¶ 5 (Apr. 3, 2009), Declaration of Nita O'Neal ¶ 5 (Apr. 4, 2009), Declaration of Don Young ¶ 5 (Apr. 3, 2009), Declaration of Ron Burnam ¶ 5 (Apr. 3, 2009); *see also* Petition at 2-3.

late-filed contentions set forth at 10 C.F.R. § 2.309(c) and (f)(2)."[35] Noting that a "reply is intended to give a petitioner an opportunity to address arguments raised in the opposing parties' answers," Applicant urges, relying on Commission case law, that a reply "may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention."[36] Noting the Commission's directive that "[a]ny reply should be narrowly focused on the legal or logical arguments presented in the applicant/licensee or NRC staff answer,"[37] Applicant asks that we strike certain portions of Petitioners' Replies related to Contentions 2, 3, 8, and 9.[38]

Petitioners respond that their Replies provide only "legitimate amplifications of the original contentions . . . or a logical/legal response to the Answers of the Staff and Applicant," citing Commission precedent for this principle,[39] and providing specific arguments relating to each contention at issue.[40]

The Commission in the *LES* case upheld a Licensing Board determination that, although it would take into account any information from reply briefs that "legitimately amplified" issues presented in the original petitions, it would not consider instances of what "essentially constituted untimely attempts to amend [the] original petitions."[41] Because the reply briefs in *LES* had not been accompanied by any attempt to address the nontimely filing and new-contention

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[35] Motion to Strike at 1.

[36] *Id.* at 2 (citing *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 182, 198-99 (2006); *Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 351-63, *aff'd,* CLI-06-17, 63 NRC 727 (2006)). Applicant in addition cites in support of its arguments *Louisiana Energy Services, L.P.* [*LES*] (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004); *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 622-23 (2004); *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428-29 (2003); *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 399-400, 404, 407, 429 (2008).

[37] Motion to Strike at 4 (quoting Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2203 (Jan. 14, 2004)).

[38] *Id.* at 5-6.

[39] Response to Motion to Strike at 1-2 (citing *Palisades,* LBP-06-10, 63 NRC at 328).

[40] *Id.* at 1-6.

[41] *LES,* CLI-04-25, 60 NRC at 224 (quoting the Licensing Board's decision below, *Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 58 (2004)); *see also LES,* CLI-04-35, 60 NRC at 625 (denying petitioner's motion for reconsideration of CLI-04-25). We note that the Commission in both *LES* rulings pointed out that a petitioner may in instances of exigent or unavoidable circumstances file a request for an extension of time to file an original hearing petition and contentions — an action which, as in this proceeding, was not done in *LES. LES,* CLI-04-25, 60 NRC at 225; *LES,* CLI-04-35, 60 NRC at 623 (citing 69 Fed. Reg. at 2200).

factors in section 2.309(c) or (f)(2), they were not considered in determining the admissibility of the contentions.[42]

As we assured the parties at oral argument, in making our rulings below on the admissibility of Petitioners' contentions, we have not considered anything in the Replies that does not focus on the matters raised in the answers, that would not constitute "legitimate amplification" under relevant case law, or that would not be admissible under 10 C.F.R. § 2.309(c) or (f)(2).[43] To this extent, we grant Applicant's Motion to Strike, and to the extent any part of the Replies has been considered, we so state in our discussion of the various contentions at issue.

V. BOARD ANALYSIS AND RULINGS ON PETITIONERS' CONTENTIONS

A. Standards for Admissibility of Contentions

As has previously been noted in a number of NRC adjudications,[44] to intervene in such a proceeding a petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).[45] Failure of a contention to meet any of these requirements precludes its admission.[46]

These standards for the admissibility of contentions originally came into being in 1989, when the Commission amended its rules to "raise the threshold for the

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[42] *See LES,* CLI-04-25, 60 NRC at 224 (citing *LES,* LBP-04-14, 60 NRC at 58). We note that the Commission later remanded to the Licensing Board a request to consider several previously rejected contentions under the nontimely filing and new-contention criteria of 10 C.F.R. § 2.309(c) and (f)(2), despite the fact that the Petitioner therein had addressed these criteria for the first time only in its interlocutory appeal to the Commission. *LES,* CLI-04-35, 60 NRC at 625. For this reason, in an abundance of caution and in order to give Petitioners every benefit of the doubt, we have also considered in making our rulings herein whether any of the material at issue that would not constitute "legitimate amplification" might be admissible under the criteria of 10 C.F.R. § 2.309(c) and (f)(2). In some cases we note this specifically, but even where not noted this has been done.

[43] *See* Tr. at 17.

[44] *See, e.g., Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 272-74 (2006); *PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 302-12 (2007). An Appendix to the *Pilgrim* decision provides a more detailed summary of relevant case law on contention admissibility than that found in this Memorandum and Order. *See Pilgrim,* LBP-06-23, 64 NRC at 351-59.

[45] *See* 10 C.F.R. § 2.309(a).

[46] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999) [*PFS*]; *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

admission of contentions."[47] The Commission has stated that the "contention rule is strict by design," having been "toughened . . . in 1989 because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'"[48] More recent amendments to the NRC procedural rules, which went into effect in 2004,[49] put into place additional restrictions and changes to provisions relating to the hearing process. The contention admissibility rule, however, contains essentially the same substantive admissibility standards for contentions.[50]

The Commission has explained that the "strict contention rule serves multiple interests."[51] These include the following (quoted in list form):

> First, it focuses the hearing process on real disputes susceptible of resolution in an adjudication. For example, a petitioner may not demand an adjudicatory hearing to attack generic NRC requirements or regulations, or to express generalized grievances about NRC policies.
>
> Second, the rule's requirement of detailed pleadings puts other parties in the proceeding on notice of the Petitioners' specific grievances and thus gives them a good idea of the claims they will be either supporting or opposing.
>
> Finally, the rule helps to ensure that full adjudicatory hearings are triggered only by

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[47] Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,168 (Aug. 11, 1989); *see also Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999).

[48] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (quoting *Oconee,* CLI-99-11, 49 NRC at 334).

[49] *See* 69 Fed. Reg. at 2182.

[50] The current version of the rules, however, no longer incorporates provisions formerly found in 10 C.F.R. § 2.714(a)(3) and (b)(1), which permitted the supplementation of petitions and the filing of contentions after the original filing of petitions. Under the current rules, contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register,* unless a longer period is therein specified; an extension is granted, *see LES,* CLI-04-25, 60 NRC at 225; *LES,* CLI-04-35, 60 NRC at 623-25; 69 Fed. Reg. at 2200; or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time, *see* 10 C.F.R. § 2.309(c), (f)(2).

In addition, although there is nothing in the rule itself speaking to the content of a petitioner's reply to NRC Staff or applicant answers to a petition, as noted *supra* in the text accompanying note 37, the Commission in its Statement of Considerations for the 2004 final rule stated that a petitioner's reply brief "should be narrowly focused on the legal or logical arguments presented in the applicant/licensee or NRC staff answer," and this has since been construed to permit only "legitimate amplification." *See supra* Section IV. Based on this authority, and because amendments to petitions are not permitted as they were prior to 2004, motions to strike, such as that we rule on in Section IV, *supra,* are increasingly common in NRC adjudicatory proceedings.

[51] *Oconee,* CLI-99-11, 49 NRC at 334.

> those able to proffer at least some minimal factual and legal foundation in support of their contentions.[52]

In its Statement of Considerations adopting the most recent revision of the rules, the Commission reiterated that "[t]he threshold standard is necessary to ensure that hearings cover only genuine and pertinent issues of concern and that the issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues."[53] The purpose of the contention admissibility rule is, the Commission emphasized, to "focus litigation on concrete issues and result in a clearer and more focused record for decision."[54]

Although it has been recognized that "technical perfection is not an essential element of contention pleading,"[55] the rules have nonetheless been held to "bar contentions where petitioners have only 'what amounts to generalized suspicions, hoping to substantiate them later.'"[56] Looking to each of the provisions of 10 C.F.R. § 2.309(f)(1) separately, we first observe that the requirements of subsections (i) and (ii) — that a "specific statement of the issue of law or fact to be raised or controverted" and a "brief explanation of the basis for the contention" be provided — are fairly straightforward, and indeed the issue that generally arises under the first of these is whether a contention is stated with sufficient specificity.[57]

Subsection (iii) of section 2.309(f)(1) requires that a petitioner must "[d]emonstrate that the issue raised in the contention is within the scope of the proceeding." The scope of a proceeding may be defined by statute, rule, or the Commission notice or order referring the proceeding to the Atomic Safety and Licensing Board Panel (ASLBP). In addition, as noted above[58] and as stated at 10 C.F.R. § 2.335(a), no NRC rule may be attacked in an adjudicatory proceeding.

The materiality requirements of 10 C.F.R. § 2.309(f)(1)(iv) and (vi) mandate that petitioners show that any issue raised in a contention has significance

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[52] *Id.* (citations omitted); *see also* 10 C.F.R. § 2.335(a) (stating that "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding").

[53] 69 Fed. Reg. at 2189-90.

[54] *Id.* at 2202.

[55] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-3, 53 NRC 84, 99 (2001) (citing *Houston Lighting and Power Co.* (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 649 (1979), in which it is stated that "[i]t is neither Congressional nor Commission policy to exclude parties because the niceties of pleading were imperfectly observed").

[56] *McGuire/Catawba,* CLI-03-17, 58 NRC at 424 (citing *Oconee,* CLI-99-11, 49 NRC at 337-39).

[57] *See, e.g., Shieldalloy Metallurgical Corp.* (Licensing Amendment Request for Decommissioning of the Newfield, New Jersey Facility), LBP-07-5, 65 NRC 341, 352 (2007), *appeal denied,* CLI-07-20, 65 NRC 499 (2007); *Palisades,* LBP-06-10, 63 NRC at 362-63.

[58] *See supra* note 52 and accompanying text.

regarding (i.e., "is *material* to") the "findings the NRC must make to support the action that is involved in the proceeding."[59] In other words, does the issue make any difference to, or have any impact on, the grant or denial of an application at issue in a given proceeding?

Probably most disputes over contention admissibility arise with regard to subsections (v) and (vi) of section 2.309(f)(1), both of which concern the information a petitioner must provide in support of a contention in order to have it admitted for adjudication. Under subsection (vi), a petitioner must:

> (vi) Provide 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 the specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, 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[.]

This has been interpreted to require a petitioner to "read the pertinent portions of the license application, including the Safety Analysis Report [SAR] and the Environmental Report [ER], state the applicant's position and the petitioner's opposing view," and explain why petitioner disagrees with the applicant.[60] In other words, a contention must "explain why the application is deficient,"[61] through reference to "specific portions of the application," and it must directly controvert a position taken by the applicant in the application.[62] Enough information must be provided to show an actual and "genuine" dispute on a "material" issue.[63]

There is often, as has been the case in this proceeding, dispute among parties as to the nature and extent, or amount, of information that must be provided to support a contention in order for it to be admitted. While subsection (vi) speaks to the question of sufficiency — i.e., extent or amount — of supportive information offered, subsection (v) speaks more to the nature of the information. Under this provision, a petitioner must

> (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[.]

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[59] 10 C.F.R. § 2.309(f)(1)(iv).

[60] 54 Fed. Reg. at 33,170; *Millstone,* CLI-01-24, 54 NRC at 358.

[61] 54 Fed. Reg. at 33,170; *Palo Verde,* CLI-91-12, 34 NRC at 156.

[62] *See Oconee,* CLI-99-11, 49 NRC at 341-42.

[63] *See supra* text accompanying note 59.

Taken literally, this provision might be read to require a petitioner to provide a statement that is both "concise" and also covers the full universe of "the alleged facts or expert opinions"[64] and additional information and material that supports a contention. It is clear that more than "mere 'notice pleading'" is required.[65] It has also been stated that a petitioner's contention "will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits,' but instead only 'bare assertions and speculation.'"[66] Moreover, simply attaching material or documents in support of a contention, without explaining their significance, is inadequate to support the admission of a contention.[67] And any supporting material provided by a petitioner, including those portions of the material that are not relied upon, is subject to board scrutiny.[68] In making a ruling on contention admissibility a board is not, however, to look to the merits of the contention.[69]

In addition, while it is often argued in opposition to a contention that a petitioner has not "shown" that various alleged facts are as alleged, or provided "support" for various facts that themselves are offered in "support" of a contention, a petitioner is not "require[d] . . . to prove its case at the contention stage."[70] Nor need a petitioner "proffer facts in 'formal affidavit or evidentiary form,' sufficient 'to withstand a summary disposition motion.'"[71] And although it is the petitioner's burden to establish the admissibility of a contention, a "Board may appropriately view Petitioners' support for its contention in a light that is favorable to the Petitioner."[72]

Subsections 2.309(f)(1)(v) and (vi) have been subject to varying interpretations, by parties and indeed in the numerous decisions that licensing boards such as this one issue on contention admissibility. On a very basic level, however, we note some fundamental principles. First, as to the nature of supportive information that a petitioner must provide, the Commission has interpreted subsection (v), quite reasonably and simply, to require a petitioner to support its contentions with

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[64] 10 C.F.R. § 2.309(f)(1)(v).

[65] *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003). "Notice pleading" has been described as a broad standard requiring only "a short and plain statement of the claim." *Conley v. Gibson,* 355 U.S. 41, 47 (1957).

[66] *Fansteel,* CLI-03-13, 58 NRC at 203 (quoting *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)).

[67] *See id.* at 204-05.

[68] *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996).

[69] *See, e.g., USEC Inc.* (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 596-97 (2005) and authorities cited therein.

[70] *Yankee,* CLI-96-7, 43 NRC at 249 (citing 54 Fed. Reg. at 33,171).

[71] *Id.* (citing *Georgia Tech,* CLI-95-12, 42 NRC at 118).

[72] *Palo Verde,* CLI-91-12, 34 NRC at 155.

"[d]ocuments, expert opinion, or at least a fact-based argument."[73] On the other hand, as was observed even before the 1989 procedural rule amendments, "a protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that . . . a dispute exists. The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an 'inquiry in depth' is appropriate."[74] In other words, as the Commission has more recently observed, "a petitioner 'must present sufficient information to show a genuine dispute' and reasonably 'indicating that a further inquiry is appropriate.'"[75]

Thus, if a petitioner, through reference to the application itself, as well as through expert opinion, a document or documents, a fact-based argument, or some combination of all three, provides support for an otherwise admissible contention, sufficient to show a genuine dispute on a material issue of fact or law and reasonably indicating that further inquiry is appropriate, it should be admitted. And, particularly if no expert opinion or supporting relevant documents are submitted, any fact-based argument that is provided must be reasonably specific, coherent, and logical, sufficient to show such a dispute and indicate the appropriateness of further inquiry.

B. Rulings on Individual Contentions

We move now to our rulings on Petitioners' contentions, prefacing them with some general observations. First, we have gone into some detail in the previous section in order to clarify as much as possible for the parties and other interested persons the grounds for our rulings that follow. Second, as will become apparent in our rulings, some of the Petitioners' contentions and arguments in support thereof concern issues of some significance but are more general and wide-reaching than specific and focused, and some are addressed in existing NRC rules and/or current rulemakings. For the most part, the legal authority and principles discussed in the preceding section of this Memorandum require that we deny the admission of contentions of this nature. Indeed, given that we operate under, and are bound by,

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[73] *Oconee,* CLI-99-11, 49 NRC at 342.

[74] *Connecticut Bankers Association v. Board of Governors,* 627 F.2d 245, 251 (D.C. Cir. 1980) (quoting *Independent Bankers Association of Georgia v. Board of Governors of Federal Reserve System,* 516 F.2d 1206, 1220 n.57 (D.C. 1975)); *see also* 54 Fed. Reg. at 33,171.

[75] *Yankee,* CLI-96-7, 43 NRC at 249 (citing 54 Fed. Reg. at 33,171; *Costle v. Pacific Legal Foundation,* 445 U.S. 198, 204 (1980)); *Vermont Yankee Nuclear Power Corp. v. NRC,* 435 U.S. 519, 554 (1978)); *see also Gulf States Utilities Co.* (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994). It has also been observed that a contention must demonstrate "that there has been sufficient foundation assigned for it to warrant further exploration." *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 428 (1990) (footnote omitted).

the rule of law, we may not therefore admit any such contentions where there is a lack of relevant support for their admission under 10 C.F.R. § 2.309(f)(1)(i)-(vi) and other legal authority interpreting those provisions.[76] If, on the other hand, we find adequate support under these provisions and law, we are required to admit, and we do admit, certain contentions.

In some instances, Petitioners' contentions are not optimally supported. In the following rulings we have given close consideration to the support actually offered, in the context of the matters raised, and in light of the contention admissibility rule provisions themselves and relevant legal authority interpreting them. In some cases we find the support to be insufficient to admit the contentions; in others we find it to be sufficient, in nature, amount, specificity, basic logic, and persuasiveness, to show genuine disputes on material issues and to warrant further inquiry. By admitting or denying these contentions, however, we speak not to their merits substantively, nor do we express any opinion as to any ultimate outcome on those we admit.

Finally, in making all the rulings that follow, whether they result in admission or denial of contentions, we are fulfilling our duty to the best of our ability to rule without fear or favor toward any party, based solely on the pleadings of the parties and on the law.[77] Considering pleadings and applying relevant law to the facts alleged and arguments made regarding them obviously requires some level of judgment and interpretation of regulatory provisions and legal principles, as well as of factual matters and related factors that are not on their face always clear in any "black and white" way. The law deals often in shades of gray, but we have endeavored to read and see as clearly and fairly as possible what has been placed before us, in the light of all relevant law of which we are aware, in making the following rulings, to which we now turn.

1. COLA Should Be Stayed Pending US-APWR Rulemaking

Petitioners in Contention 1 state:

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[76] Regarding those contentions that we deny, we note that in some cases there may be other ways in which to raise the issues they concern, including petitions for rulemaking or enforcement petitions. In addition, there may be opportunity to file additional contentions in the future, provided that such contentions are filed in compliance with the relevant regulatory provisions, including 10 C.F.R. § 2.309(c) and (f)(2). As noted in our Order below, if a party files a new contention within 30 days of the availability of the new information to that party, the contention will generally be considered timely under section 2.309(f)(2), although this does not, of course, rule out argument on matters including whether a contention is based on information that is in fact "new."

[77] Although this statement, as well as our observation regarding our duty to the rule of law, may seem self-evident to attorneys and others who regularly participate in adjudicatory proceedings, we provide them for the benefit of any Petitioners or others who may not be as familiar with such proceedings.

> The COLA adjudication should be stayed and COLA proceedings held in abeyance until the completion of the reactor design certification rulemaking process.[78]

Petitioners incorporate by reference into Contention 1 their earlier Petition for Stay that was denied by the Commission.[79] Petitioners argue that the NRC should "stay the Comanche Peak COLA adjudication and hold in abeyance proceedings related thereto pending completion of the US-APWR design certification rulemaking."[80] According to Petitioners, failure to stay the adjudication would violate the AEA, the Administrative Procedure Act (APA), and Part 52 of the Commission's regulations.[81]

First, Petitioners argue that the AEA requires a license applicant to provide any technical information bearing on protection of public health and safety,[82] suggesting that such information should include reference to a certified reactor design. Second, Petitioners contend that the docketing notice of this proceeding is inconsistent with the federal APA and NRC docketing standards, "because the underlying reactor design rulemaking is not completed [and thus] a proper notice consistent with these legal requirements is not possible."[83] Third, Petitioners argue that, under 10 C.F.R. Part 52, the NRC "may either conduct an adjudication on the entire Comanche Peak Units 3 and 4 COLA, including issues related to the US-APWR design or, alternatively, complete the US-APWR design certification rulemaking prior to commencing an adjudicatory hearing on the COLA."[84] To conduct a COLA adjudication in the absence of a reactor design certification rule, Petitioners insist, would violate the NRC's duty under the AEA in 42 U.S.C. § 2133(c), as well as the Commission's regulations in 10 C.F.R. Part 52[85] — but they do not specify exactly which regulations would allegedly be violated.

Petitioners list several ways in which the US-APWR is a "significantly different design from current operating US four-loop plants," with "generally greater dimensions and capacities" that may impact "other operational and technical aspects of the nonreactor parts of the plant and . . . have radiological ramifications as well."[86] For example, Petitioners note that the US-APWR boasts a larger gross electrical output, longer fuel assemblies, and a larger containment structure than

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[78] Petition at 8-9.

[79] *Id.* at 9; *see supra* note 8.

[80] Petition at 14.

[81] *Id.* at 9.

[82] *Id.* (citing 42 U.S.C. § 2133(b)(2), (3)).

[83] *Id.* (citing 5 U.S.C. § 554 *et seq.*; 10 C.F.R. §§ 2.101(a)(2) and 2.104(b)).

[84] *Id.*

[85] *Id.*

[86] *Id.* at 10.

current operating four-loop plants in the United States.[87] They also note that the US-APWR requires additional pieces of equipment, including a residual heat exchanger and extra containment spray nozzles.[88] These differences, Petitioners contend, highlight the dangers of adjudicating the COLA prior to completion of the reactor design certification process — particularly given the US-APWR's "lack of an operating history."[89] Petitioners also cite an article suggesting that, because the US-APWR utilizes different reactor internals than its U.S. four-loop counterparts, it brings about "safety problems relevant to the flow induced vibration of reactor internals."[90] Petitioners contend that, given these problems, the details of the US-APWR design "should be carefully considered and issues related thereto resolved in the subject rulemaking before proceeding with the COLA adjudication."[91]

Luminant opposes Contention 1 on several grounds, first stating that Contention 1 is simply a restatement of the Petition for Stay, which the Commission has already rejected.[92] In addition, Applicant argues that Contention 1 constitutes an impermissible challenge to Part 52 of the Commission's regulations, in violation of 10 C.F.R. § 2.335(a).[93] Applicant also urges that 10 C.F.R. § 52.55(c) specifically allows a COL applicant to reference a design certification application in the COLA.[94] Thus, Applicant argues, it has acted consistently with Part 52 procedures in referencing the US-APWR design certification application,[95] and Petitioners' Contention 1 represents an impermissible attack on those procedures and should accordingly be dismissed.[96] Even treating Contention 1 as a challenge to the US-APWR design rather than a challenge to Part 52, the contention should not be considered in the context of this COLA proceeding, Applicant insists. Rather, Applicant argues, the Commission has determined that such contentions

[87] *Id.* at 10-11.

[88] *Id.* at 11.

[89] *Id.* at 10.

[90] *Id.* at 12-13 (quoting Tadashi Morii, *Hydraulic Flow Tests of APWR Reactor Internals for Safety Analysis,* 238 Nuclear Eng'g & Design 469 (2008)).

[91] *Id.* at 10.

[92] Luminant Answer at 14.

[93] *Id.* at 15.

[94] *Id.* at 14.

[95] Applicant points out that the COLA references sections of Revision 1 of the US-APWR Design Control Document (DCD). *Id.* at 14-15 (citing Final Safety Analysis Report at 1.1-1 [hereinafter FSAR]).

[96] *Id.* at 15.

should be held in abeyance and referred to the Staff for consideration in the design certification rulemaking — but only "if it is otherwise admissible."[97]

According to Applicant, Contention 1 is not "otherwise admissible," because it fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v) and (vi). Among other things, Applicant challenges Petitioners' satisfaction of subsection (v) and argues, regarding subsection (vi), that "Petitioners do not explain why they believe [the] differences [between the US-APWR and current operating U.S. four-loop plants] are significant or what additional information should have been provided in the COLA or the design control document (DCD)."[98] Moreover, Applicant argues that Petitioners ignore those sections of the DCD and COLA that actually address the information they claim "should be carefully considered."[99] In an attachment to its Answer, Applicant provides a listing of all COLA sections and DCD sections that address Contention 1.[100]

The NRC Staff objects to the admission of Contention 1 on the grounds that the Commission already denied the Petition for Stay, and "Petitioners do not raise any claims in this contention that are not already raised in the Petition for Stay."[101] Thus, according to the NRC Staff, Contention 1 should be found inadmissible under 10 C.F.R. §§ 2.309(f)(1)(i)-(vi) and 2.335.[102]

In their reply to the NRC Staff's answer, Petitioners suggest that because Contention 1 identifies inadequacies in the COLA, it should therefore be admitted.[103] Petitioners dismiss the argument that Contention 1 constitutes a challenge to Part 52, arguing that 10 C.F.R. 52.55(c) is "silent concerning whether a pending reactor design rulemaking *per se* excludes consideration of reactor design issues in the context of a parallel COLA adjudication."[104] In Petitioners' view, resolving reactor design issues prior to adjudication is the more "efficient" and "commonsensical" approach and should therefore be adopted by the Board, even if "it may be NRC practice to advance licensing proceedings in a truncated fashion."[105] Petitioners point out that, while the NRC may typically allow COLA adjudications to run

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[97] *Id.* at 16; *see also* Final Policy Statement on the Conduct of New Reactor Licensing Proceedings, 73 Fed. Reg. 20,963, 20,972 (Apr. 17, 2008) ("[I]n a COL proceeding in which the application references a docketed design certification application, the licensing board should refer such a contention to the staff for consideration in the design certification rulemaking, and hold that contention in abeyance, if it is otherwise admissible").

[98] Luminant Answer at 19.

[99] *Id.* at 20.

[100] *Id.,* Attachment 1, Comanche Peak COLA Sections and US-APWR DCD Sections That Address Contention 1 [hereinafter Luminant Answer Attachment 1].

[101] NRC Staff Answer at 10.

[102] *Id.*

[103] Reply to NRC Staff at 1-2.

[104] *Id.* at 2.

[105] *Id.*

parallel with the design certification process, "if the reactor design is not approved the COLA adjudication will have been wasted effort."[106]

At oral argument, however, Petitioners acknowledged that Commission precedent requires the Board to dismiss Contention 1. Specifically, counsel for Petitioners expressly agreed with the Board's suggestion that it "would not have the authority under the precedent to find this particular contention admissible,"[107] at the same time stating that Petitioners did "not conced[e] that the contention should be dismissed."[108]

Licensing Board Ruling on Contention 1

In Contention 1, Petitioners essentially reiterate the request set forth in their earlier Petition for Stay to the Commission, asking this Licensing Board to find merit in the same arguments that the Commission has already rejected. The Commission in its Order denying the Petition for Stay stated that "10 C.F.R. § 52.55(c) envisions COLA adjudications during the pendency of design certification reviews."[109] The Commission noted that it had denied similar requests for a stay in two other COLA proceedings,[110] and that "Petitioners have made no showing that this case warrants treatment any different from these previous cases."[111] The Commission therefore denied the petition, "for the reasons stated in the *Fermi* and *Shearon Harris* orders."[112] The Commission subsequently, in the *Shearon Harris* proceeding, remanded the licensing board's decision admitting a contention that (1) raised a design-related issue addressed in a design certification application and (2) challenged the completeness of a COLA.[113] The Commission directed the Board to determine whether the contention was "otherwise admissible" under 10 C.F.R. §§ 2.309(f)(1), in which case it might be held in abeyance and referred to the Staff.[114]

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[106] *Id.*

[107] Tr. at 22.

[108] *Id.*

[109] Order Denying Petition for Stay at 1. Section 52.55(c) provides that "[a]n applicant for a construction permit or a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted."

[110] *See Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-09-4, 69 NRC 80, 84-85 (2009); *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1, 3-4 (2008).

[111] Order Denying Petition for Stay at 2.

[112] *Id.*

[113] *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-09-8, 69 NRC 317 (2009), *remanding* LBP-08-21, 68 NRC 554, 561-64 (2008).

[114] *See id.* at 327.

Contention 1 merely lists the major differences between the US-APWR and current operating U.S. four-loop plants.[115] Such differences, while they may require the Staff to examine the DCD more closely, raise nothing appropriate for resolution in this proceeding. As noted above, Luminant has provided with its Answer a table listing all the sections of its Application that address the differences Petitioners identify in their contention.[116] Petitioners have not disputed the contents of this table. We are left to conclude that Contention 1 does not identify any omission from Luminant's COLA, nor does it raise a genuine dispute with the application as required under section 2.309(f)(1)(vi).[117] We thus find Contention 1 to be inadmissible.

2. ER Erroneously Assumes Federal High-Level Waste Disposal Capacity

Petitioners in Contention 2 state:

> The Comanche Peak Environmental Report erroneously assumes that there will be high-level waste/spent nuclear fuel disposal capacity available at a federal site, presumably Yucca Mountain, Nevada. But even if Yucca Mountain is available as a federal repository for spent nuclear fuel and high-level nuclear waste, its capacity would be reached by waste from the current generation of operating reactors. Therefore, the spent nuclear fuel and high-level waste generated by Comanche Peak Units 3 and 4 would have to be dispositioned to a subsequent repository that has been neither sited nor authorized.[118]

In this contention, Petitioners challenge the "assumption" in Applicant's ER, in section 5.7.1.6, that there will be a federal repository available for disposal of spent fuel and high-level waste generated by Comanche Peak Units 3 and 4.[119] Petitioners acknowledge that Applicant's assumption relies on the NRC's "Waste Confidence Decision"[120] — the NRC's generic determination that spent

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[115] *See* Petition at 10-14.

[116] Luminant Answer Attachment 1.

[117] Petitioners do cite an article suggesting that the US-APWR design "brings about safety problems relevant to the flow induced vibration of reactor internals. . . ." *See supra* note 90. This article and associated discussion, however, do not establish this to be an issue appropriate for adjudication in this proceeding. Petitioners may raise any such issues with the NRC Staff in the US-APWR design rulemaking.

[118] Petition at 14.

[119] *Id.*

[120] As noted by the NRC Staff in its Answer, the term "Waste Confidence Decision" refers to the Commission's "generic findings regarding the availability of a geologic repository for high-level

(Continued)

fuel generated in "any reactor" can be stored safely and without significant environmental impact for at least 30 years, and that a geologic repository with sufficient capacity will become available by 2025.[121] According to Petitioners, however, the Waste Confidence Decision is "inapplicable" to Units 3 and 4 for at least two reasons.

First, Petitioners claim, the Decision applies only to those reactors that were operating in December 1999, when the Decision was last reviewed, and not to new reactors such as Units 3 and 4.[122] Indeed, Petitioners assert, the Decision could not practicably apply to new reactors, since "[t]he volume of spent nuclear fuel and other high-level radioactive wastes generated by the current generation of nuclear reactors exceeds the anticipated capacity at Yucca Mountain."[123] Petitioners bolster this assertion with Department of Energy (DOE) statistics about the current volume of nuclear waste and its predicted growth over the next several years.[124] In Petitioners' view, "[t]his projection of the volume of the spent nuclear fuel and high-level radioactive waste stream betrays the assumption in the Comanche Peak Environmental Report that assumes Yucca Mountain would be available for disposition of waste generated at Units 3 and 4."[125]

Second, Petitioners call into question the Waste Confidence Decision's assumption that a geologic repository will become available by 2025. In fact, Petitioners argue, there is "very little likelihood" that it will.[126] Petitioners point to recent congressional testimony by Secretary of Energy Steven Chu, in which the Secretary declared that Yucca Mountain is "no longer an option" as a geologic repository.[127] Petitioners also provide the expert declaration of Gordon Thompson, which expresses "skepticism" about the NRC's "series of Waste Confidence decisions."[128] Dr. Thompson states that "[t]hose decisions have not been based

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waste disposal and the safety and environmental impacts of storing spent fuel onsite beyond the licensed operating life of a reactor." NRC Staff Answer at 12 n.7 (citing Waste Confidence Decision Review, 55 Fed. Reg. 38,474 (Sept. 18, 1990)). The Decision, which has periodically been updated, is codified at 10 C.F.R. § 51.23, a provision known as the "Waste Confidence Rule."

[121] Petition at 15 (citing Waste Confidence Decision Review, 64 Fed. Reg. 68,005, 68,006 (Dec. 6, 1999)).

[122] *Id.* at 15.

[123] *Id.* (citing 42 U.S.C. § 10134(d)).

[124] *Id.* at 15-16 (citing Office of Civilian Radioactive Waste Management, DOE Program Plan, Rev. 3, 1 (2000)) (stating that in 1998 "there was over 38,000 metric tons of high-level waste from commercial reactors in the United States," and that this amount "would more than double by 2035").

[125] *Id.* at 16.

[126] *Id.*

[127] *Id.* at 17 (citing H. Josef Hebert, *Chu: Yucca No Longer Option for Nuclear Waste,* Associated Press, Mar. 5, 2009).

[128] Petition, Declaration by Gordon Thompson in Support of Contentions Submitted by [SEED] at 4 (Apr. 6, 2009) [hereinafter Thompson Declaration].

on a systematic assessment of the program's feasibility, or an assessment of factors that could cause delays,"[129] and concludes that, based on a combination of technical and political considerations, "the most reasonable assumption about repository development during the next half-century is that no repository for [high-level waste] and [spent nuclear fuel] will open in the USA."[130] Based on the statements of Secretary Chu and Dr. Thompson, Petitioners argue that the Waste Confidence Decision lacks any reasoned basis, and that Applicant is not justified in relying on it. Petitioners propose that "the COLA should be withdrawn and resubmitted with an analysis of how the management of spent nuclear fuel and high-level radioactive wastes generated by Comanche [P]eak [U]nits 3 and 4 will be handled based on an assumption that a federal repository will *not* be available for disposition of those wastes."[131]

Applicant responds that Contention 2 should be dismissed "because it challenges the Commission's Waste Confidence Rule, 10 C.F.R. § 51.23, contrary to 10 C.F.R. § 2.335(a), and it fails to satisfy the requirements for waiver of that regulation as set forth in 10 C.F.R. § 2.335(b)."[132] According to Applicant, regulatory history demonstrates that the Waste Confidence Rule was intended to cover new reactors — not just those currently in operation,[133] and the Rule was amended in 2007 specifically "to clarify that the rule encompasses COL applications."[134] Thus, Applicant argues, the Waste Confidence Rule clearly applies to Comanche Peak Units 3 and 4. Finally, Applicant notes that contentions nearly identical to Contention 2 have been rejected by licensing boards in at least nine other proceedings.[135] For all these reasons, Applicant asserts, the Board should reject Contention 2.

The NRC Staff also argues that Contention 2 impermissibly challenges the

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[129] Thompson Declaration at 4.

[130] *Id.* at 5.

[131] Petition at 17.

[132] Luminant Answer at 21.

[133] *Id.* at 22.

[134] *Id.* at 23.

[135] *Id.* (citing *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 217-18 (2009); *Shearon Harris,* LBP-08-21, 68 NRC at 586-87; *Duke Energy Carolinas, LLC* (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17 68 NRC 431, 456-57 (2008); *Bellefonte,* LBP-08-16, 68 NRC at 415-16; *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 336-37 (2008); *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 267-68 (2007); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 246-47 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-70 (2004); *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 296-97 (2004)).

Waste Confidence Rule,[136] and that the Rule applies not only to currently operating reactors but to new reactors as well. Moreover, Staff argues, Contention 2 seeks to address issues that are the subject of ongoing rulemaking, contrary to Commission precedent,[137] pointing out that the Commission recently published proposed revisions to the Waste Confidence Rule.[138] Finally, the Staff insists that Contention 2 fails to specify any deficiencies or omissions in the COLA and fails to meet the contention admissibility criteria at 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).[139]

In their Reply to the NRC Staff, Petitioners allege that Applicant's "assumption" about Yucca Mountain's availability constitutes a violation of 10 C.F.R. § 52.79(a)(3).[140] Specifically, Petitioners contend, Luminant's Final Safety Analysis Report (FSAR) fails to adequately specify "the kinds and quantities of radioactive materials expected to be generated [by Units 3 and 4] and how radiation limits under 10 CFR Pt. 20 will be met."[141] Petitioners go on to fault Applicant for relying on "the 1990 version of the Waste Confidence Rule," which "must assume a second repository will be available for disposition of Comanche Peak Units 3 and 4 spent fuel and high-level wastes."[142] In Petitioners' view, "[t]his is not a reasonable assumption."[143] Finally, Petitioners cite certain comments of Dr. Arjun Mkihijani as further support for Contention 2.[144]

Applicant moves to strike those portions of Contention 2 that contain "new arguments, references, and attachments."[145] Specifically, Luminant objects to (1) the sentences including citations to 10 C.F.R. § 52.79(a)(3), and (2) all references to Dr. Makhijani's attached analysis, including the attachment itself.[146] In their Response to Applicant's Motion to Strike, Petitioners argue that the citation to 10 C.F.R. § 52.79(a)(3) constitutes "legitimate amplification of the issue raised in the Petition."[147] Petitioners also characterize Dr. Makhijani's comments as "supportive amplifications of the premise" of Contention 2, and on this basis

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[136] NRC Staff Answer at 12-13.

[137] *Id.* at 13 (citing *Oconee,* CLI-99-11, 49 NRC at 345).

[138] *See* Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 73 Fed. Reg. 59,547 (Oct. 9, 2008).

[139] NRC Staff Answer at 13-14.

[140] Reply to NRC Staff at 3.

[141] *Id.*

[142] *Id.* at 4.

[143] *Id.*

[144] *Id.* at 4-5 (citing Reply to NRC Staff, Arjun Makhijani, Comments of the Institute for Energy and Environmental Research on the U.S. Nuclear Regulatory Commission's Proposed Waste Confidence Rule Update and Proposed Rule Regarding Environmental Impacts of Temporary Spent Fuel (2009)).

[145] Motion to Strike at 1.

[146] *Id.* at 5.

[147] Response to Motion to Strike at 2.

insist that the Board should not decline to consider these two elements of the reply.[148]

At oral argument, counsel for Petitioners, Applicant, and the NRC Staff further addressed whether the Licensing Board could hold Contention 2 in abeyance pending issuance of the new Waste Confidence Rule, which, according to counsel for NRC Staff, has already "gone up to the Commission."[149] Counsel for Petitioners proposed that the Board "could essentially take a step back and wait to see what the new Waste Confidence Rule is going to look like" before deciding whether to admit or deny Contention 2.[150] Such an approach, counsel suggested, would promote "efficiency" by preventing "a repetition of the petition process under a new Waste Confidence Rule that might be issued down the line."[151] In response to this suggestion, counsel for Applicant and the NRC Staff maintained that Commission precedent requires that any contentions that raise issues currently subject to rulemaking be rejected.[152]

Licensing Board Ruling on Contention 2

To begin, to the extent Contention 2 amounts to an attack on the Waste Confidence Rule in 10 C.F.R. § 51.23(a), which addresses the long-term storage of spent fuel and high-level waste generated by nuclear reactors,[153] we are compelled to find it inadmissible. Under 10 C.F.R. § 2.335(a), a licensing board may not admit any contention that challenges a Commission rule or regulation, unless a waiver is requested under 10 C.F.R. § 2.335(b). In the present case, Petitioners have not requested a waiver, nor do they allege that any "special circumstances" warrant such a waiver.

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[148] *Id.*

[149] Tr. at 31.

[150] Tr. at 32.

[151] Tr. at 33.

[152] Tr. at 42-43 (citing *Oconee,* CLI-99-11, 49 NRC at 345), 52.

[153] The current version of the Waste Confidence Rule states, in subsection (a):

> The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

10 C.F.R. § 51.23(a).

Petitioners' central arguments are essentially (1) that the Waste Confidence Rule does not apply to reactors that were not in operation at the time the Waste Confidence Rule was reviewed in 1999; (2) that, even assuming that the Waste Confidence Rule does apply in this proceeding, political reality undermines the Rule's assertion that a federal repository will become available by 2025; (3) that the ER is therefore in error in its "assumption" that a repository will be available; and (4) that we should admit Contention 2 and hold it in abeyance until the Commission issues its updated Waste Confidence Rule, which is expected in the near future.

Regarding the question whether the phrase "any reactor" as used in 10 C.F.R. § 51.23(a) refers to any new reactors, we note that the Commission in its 1990 review of the Waste Confidence Rule stated the following:

> The availability of a second repository would permit spent fuel to be shipped offsite well within 30 years after expiration of [the current fleet of] reactors' [operating licenses]. The same would be true of spent fuel discharged from any new generation of reactor designs.[154]

This supports a reading that in 1990 "any reactors" included future reactors, but arguably that this was contingent upon the availability of a second repository. In 2007, however, subsections 51.23(b) and (c) were amended specifically to clarify that the Waste Confidence Rule encompasses COL applications like the one at issue here.[155] And the Rule is again under review at this time. In its proposed rule, issued on October 9, 2008, the Commission stated:

> [T]he Commission is now preparing to conduct a significant number of proceedings on combined construction permits and operating licenses (COL) applications for new reactors. The Commission anticipates that the issue of waste confidence may be raised in those proceedings and desires to take a fresh look at its Waste Confidence findings to take into account developments since 1990.[156]

Based on this statement, it is clear that the Commission is currently assessing the applicability of the Waste Confidence Rule to "all reactors" — both current and anticipated. And as the Commission stated in *Oconee,* "[i]t has long been agency policy that Licensing Boards should not accept in individual license proceedings contentions which are (or are about to become) the subject of general

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[154] 55 Fed. Reg. at 38,504. These findings were reaffirmed in the Commission's most recent review of the Waste Confidence Decision. 64 Fed. Reg. at 68,007.

[155] Final Rule: "Licenses, Certifications, and Approvals for Nuclear Power Plants," 72 Fed. Reg. 49,352, 49,429 (Aug. 28, 2007).

[156] Waste Confidence Decision Update, 73 Fed. Reg. 59,551, 59,553 (Oct. 9, 2008).

rulemaking by the Commission."[157] As to political considerations, we will assume that the Commission will take all appropriate realities into account in the pending rulemaking. Petitioners are of course free to petition the Commission to go in a different direction in its rulemaking approach to high-level waste management by plants.

Meanwhile, given the preceding circumstances and the Commission's ruling in *Oconee,* Petitioners' Contention 2, regarding the ER and its assumptions, may not be admitted, and we must therefore also decline to follow Petitioners' suggestion to admit Contention 2 and hold it in abeyance pending issuance of the updated Waste Confidence Rule.

Finally, we note Petitioners' argument in their Reply to the NRC Staff's Answer, to the effect that, under 10 C.F.R. § 52.79(a)(3), COL applicants are required to include in their FSARs ("at a level of information sufficient to enable the Commission to reach a final conclusion on all safety matters that must be resolved by the Commission") "[t]he kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in part 20 of this chapter."[158] This claim is, however, essentially in the nature of a new contention, challenging the adequacy of what is contained in Luminant's FSAR (in contrast to the current Contention 2, which concerns the ER), and there is nothing to indicate that Petitioners could not have raised this issue at the time it submitted its original Petition. Therefore, we have not considered this argument for purposes of determining the admissibility of Contention 2.[159]

3. COLA Does Not Consider Consequences of Long-Term Onsite Waste Storage

Petitioners in Contention 3 state:

> Because no spent nuclear fuel and high-level radioactive waste repository site is now available and future availability of such site is problematic, the COLA adjudication should consider the environmental consequences and public health impacts from long-term storage of high-level waste and spent fuel on site at Comanche Peak.[160]

Petitioners state that the ER "concedes" the current absence of a federal repository, thus requiring Applicant to store the spent fuel from Units 3 and 4

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[157] *Oconee,* CLI-99-11, 49 NRC at 345 (internal quotation marks omitted).

[158] 10 C.F.R. § 52.79(a), (a)(3); *see also* Reply to NRC Staff at 3-4.

[159] *See supra* note 50.

[160] Petition at 17.

either onsite in dry cask storage or spent fuel pools, or offsite at another plant.[161] Petitioners contend that long-term dry cask storage poses unique and serious risks, including risks associated with terrorism and long-term radiation exposure, which should be addressed in the COLA.[162] As support for this point, Petitioners provide the declaration of Dr. Gordon Thompson, discussing the potential for a large, unplanned radioactive release from spent nuclear fuel stored onsite.[163] Petitioners conclude that the ER "should either be disregarded or withdrawn by the Applicant and amended to account for the public health and environmental consequences of long-term [onsite high-level waste management]."[164]

Applicant and the NRC Staff challenge this contention on the grounds that it attacks the Waste Confidence Rule, contrary to 10 C.F.R. § 2.335(a), and fails to satisfy the requirements for waiver set forth in 10 C.F.R. § 2.335(b).[165] Specifically, they argue that under the Waste Confidence Rule, a COLA need not discuss the long-term environmental impacts of onsite spent fuel storage,[166] and may assume that a federal repository will become available in time to store such spent fuel safely and without significant environmental impacts. Applicant and Staff urge that Contention 3 should therefore be dismissed pursuant to 10 C.F.R. § 2.335(a). The NRC Staff also argues that the Thompson Declaration "does not provide adequate support for the contention," since Petitioners fail to explain how it supports their claim.[167]

Replying to the NRC Staff, Petitioners argue that "it is not reasonable" to suggest that a COLA need not analyze the dangers of a terrorist attack on dry cask storage, especially given the new requirements laid out in 10 C.F.R. § 50.54(hh).[168] Petitioners contend that "Applicant should be required to disclose now its plans for on-site storage of spent fuel and high-level wastes."[169] Luminant moves to strike a paragraph of Petitioners' reply suggesting that "terrorists attacks on dry cask storage should be considered pursuant to 10 C.F.R. § 50.54(hh)."[170] According to Applicant, this paragraph "provides new information and arguments that were not identified in the Petition."[171]

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[161] *Id.* at 18 (citing ER at 5.7-3).
[162] *Id.* at 18-19.
[163] *Id.* at 19 (citing Thompson Declaration at 9-13).
[164] *Id.* at 19.
[165] Luminant Answer at 24; NRC Staff Answer at 15.
[166] Luminant Answer at 24-25; NRC Staff Answer at 15.
[167] NRC Staff Answer at 16 n.10.
[168] Reply to NRC Staff at 5.
[169] *Id.* at 6.
[170] Motion to Strike at 5.
[171] *Id.*

Licensing Board Ruling on Contention 3

The Board finds that Contention 3, like Contention 2, must be denied as an impermissible attack on the Waste Confidence Rule. The Waste Confidence Rule states that "spent fuel . . . can be stored safely" onsite for at least 30 years beyond a plant's licensed life for operation.[172] Beyond 30 years, the Rule provides that a geologic repository will be available with sufficient capacity to dispose of all high-level waste generated,[173] and states that "no discussion of any environmental impact of spent fuel storage . . . for the period following the term . . . of the reactor combined license . . . is required in any environmental report."[174] Thus, in the end, Contention 3 amounts to a challenge to the NRC Waste Confidence Rule, and because Petitioners do not allege any "special circumstances" warranting a waiver, the contention is inadmissible under 10 C.F.R. § 2.335(a).[175]

Finally, regarding the possibility of terrorist attacks, as discussed in greater detail in our discussion of Contention 19 *infra,* the Commission in the *Oyster Creek* proceeding ruled terrorism-related issues to be outside the scope of NRC adjudications.[176]

4. ER Erroneously Assumes No Releases from Waste Storage

Petitioners in Contention 4 state:

> The Comanche Peak Environmental Report assumes that there will be no release to the environment from management of spent nuclear fuel and high-level wastes. This is a false assumption that is contradicted by the Environmental Protection Agency's Final Yucca Mountain radiation release regulations and the Department of Energy findings that significant radioactivity releases from Yucca Mountain would occur over time.[177]

Petitioners challenge section 5.7.1.6 of the ER for incorrectly assuming "that there would be no significant releases of radioactivity to the environment related to management of radioactive waste."[178] According to Petitioners, this assumption

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[172] 10 C.F.R. § 51.23(a).

[173] *Id.*

[174] *Id.* § 51.23(b).

[175] *See supra* text accompanying notes 153-159.

[176] *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 126 (2007); *see infra* text accompanying notes 417-427. To the extent that Petitioners argue that the provisions of 10 C.F.R. § 50.54(hh) should be applied to dry cask storage, they may, as Staff suggested at oral argument, file a rulemaking petition with the Commission. *See* Tr. at 67-68.

[177] Petition at 19.

[178] *Id.*

is contradicted by two separate sources. First, Petitioners point to the transcript of a DOE meeting, which they say indicates that DOE "recognizes that significant releases from a Yucca Mountain repository would occur over time."[179] Second, Petitioners point to EPA's final Yucca Mountain radiation release regulations, which they contend "are premised on the assumption that there will be significant releases of radiation from a federal repository."[180] In Petitioners' view, Applicant's ER should be "disregarded or withdrawn and resubmitted" to reflect the true projected radiation releases from Yucca Mountain.[181]

In their Answers, both Luminant and the NRC Staff urge the Board to dismiss Contention 4 as an impermissible attack on the Commission's regulations. They argue that the provisions of 10 C.F.R. § 51.51 require COL applicants to rely on NRC's Table S-3 in calculating the environmental effects of the uranium fuel cycle, which includes high-level waste management.[182] Table S-3, they state, when read together with certain "background documents,"[183] indicates that there will be no post-closure radioactive releases from Yucca Mountain, and on this basis Applicant's ER concludes that the effects of any such releases associated with Comanche Peak Units 3 and 4 are "SMALL."[184] Applicant and Staff argue that Contention 4 presents a challenge to Table S-3 and thus should be dismissed pursuant to 10 C.F.R. § 2.335(a).[185]

Moreover, according to both Applicant and the NRC Staff, Petitioners fail to provide any support for their allegations in Contention 4, and neither of the sources cited by Petitioners — neither the DOE meeting transcript nor the EPA's

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[179] *Id.* at 19-20 (citing Office of Civilian Radioactive Waste Management, DOE, NWTRB Repository Panel Meeting: Postclosure Defense and Design Selection Process (1999)).

[180] *Id.* at 20; *see also* 40 C.F.R. Part 197.

[181] Petition at 20.

[182] Luminant Answer at 26; NRC Staff Answer at 18.

[183] Note 1 to Table S-3 states that "[i]n some cases where no entry appears [in the Table] it is clear from the background documents that the matter was addressed and that, in effect, the Table should be read as if a specific zero entry had been made." 10 C.F.R. § 51.51(b), Table S-3 n.1; *see also* Luminant Answer at 26 n.123. The "background documents" in question are identified in the same note as follows:

> Data supporting this table are given in the "Environmental Survey of the Uranium Fuel Cycle," WASH-1248, April 1974; the "Environmental Survey of Reprocessing and Waste Management Portion of the LWR Fuel Cycle," NUREG-0116 (Supp. 1 to WASH-1248); the "Public Comments and Task Force Responses Regarding the Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle," NUREG-0216 (Supp. 2 to WASH-1248): and in the record of final rulemaking pertaining to Uranium Fuel Cycle Impacts from Spent Fuel Reprocessing and Radioactive Waste Management, Docket RM-50-3.

[184] Luminant Answer at 26; NRC Staff Answer at 18.

[185] *Id.*

radiation release regulations — contradicts Table S-3 in any way.[186] Instead, Staff and Applicant argue, nothing in these documents actually undermines the ER's conclusion that impacts from high-level waste management will be "SMALL," and thus Contention 4 should also be dismissed on the grounds that it lacks adequate support as required by 10 C.F.R. § 2.309(f)(1)(v).[187]

Licensing Board Ruling on Contention 4

The Board agrees that Contention 4 constitutes an impermissible challenge to Table S-3. In Contention 4, Petitioners challenge the ER's conclusion, in section 5.7.1.6, that "the environmental impacts of radioactive waste disposal from the [uranium fuel cycle] are SMALL." Petitioners fail to acknowledge, however, that this conclusion is based entirely on 10 C.F.R. § 51.51(b), Table S-3[188] — a table containing the NRC's generic calculation of the environmental impacts of the uranium fuel cycle. Under section 51.51(a), "every [ER] . . . shall . . . take Table S-3 . . . as the basis for evaluating the contribution of the environmental effects of . . . management of . . . high-level wastes related to uranium fuel cycle activities."[189] With regard to the management of high-level waste, Table S-3, when read together with the "background documents" referenced in note 1 to the Table, indicates "zero" radiological release into the environment.[190] Thus, the ER's finding of "SMALL" impact is appropriate and, indeed, required by 10 C.F.R. § 51.51. Because Contention 4 amounts to an attack on that regulation, it must be dismissed in accordance with 10 C.F.R. § 2.335(a).

We note Petitioners' references to a DOE meeting transcript and EPA regulations in 40 C.F.R. Part 197, which allegedly undermine the assumption in Table S-3 that high-level waste management results in zero effluent. Even assuming these documents do undermine that assumption, however, this is not the appropriate forum to raise a challenge to Table S-3. Again, 10 C.F.R. § 2.335(a) bars petitioners from challenging NRC rules and regulations in an adjudicatory

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[186] Luminant Answer at 27-28; NRC Staff Answer at 19-20.

[187] *Id.*

[188] More specifically, this conclusion is based on ER Table 5.7-2, which replicates Table S-3, as required by 10 C.F.R. § 51.51(a).

[189] 10 C.F.R. § 51.51(a).

[190] Although Table S-3 does not indicate the total releases from management of high-level waste, note 1 to the Table indicates that a "zero" entry should be inferred in cases where "it is clear from the background documents that the matter was addressed." *See supra* note 183. In the case of high-level waste management, the relevant background document assumes "that after the repository is sealed there would be no further release of radioactive materials to the environment." Licensing and Regulatory Policy and Procedures for Environmental Protection; Uranium Fuel Cycle Impacts from Spent Fuel Reprocessing and Radioactive Waste Management, 44 Fed. Reg. 45,362, 45,368 (Aug. 2, 1979).

proceeding such as this; the appropriate procedure to raise such a challenge is to file a petition for rulemaking pursuant to 10 C.F.R. § 2.802.

5. COLA Should Consider Consequences of Offsite Waste Disposal

Petitioners in Contention 5 state:

> The COLA should consider environmental impacts and public health consequences of accidents and releases related to off-site radioactive waste disposal.[191]

In this contention, Petitioners fault Luminant for assuming in its ER that "there will be no significant radioactive releases to the environment related to off-site disposal."[192] Petitioners argue that Applicant should consider environmental and public health effects, including those originating from "on-site processing, transportation accidents, off-site processing, and long-term releases from the disposal site because of either improper or inadequate waste site characterization, natural events such as earthquakes, and intentional or unintentional releases."[193]

Applicant and the NRC Staff oppose Contention 5 for the same reason they oppose Contention 4: they argue it constitutes an impermissible attack on the Commission's generic findings contained in Table S-3.[194] Applicant states that ER § 5.7.1.6, the section challenged by Petitioners, "references Table 5.7-2, which repeats Table S-3 as the reference reactor data, and after applying a scaling factor, provides the plant-specific data for Comanche Peak Units 3 and 4"; and that, as such, Petitioners' challenge is actually to Table S-3.[195] According to the Staff, Petitioners do not in challenging ER § 5.7.1.6 identify the environmental impacts or specific public health consequences they dispute, nor do they explain how "on-site processing, transportation accidents, off-site processing, and long-term releases" could create such impacts, and thus they demonstrate no genuine dispute.[196] Applicant concedes that, "[t]o the extent that this contention raises issues related to transportation accidents, these issues are not covered by Table S-3," but indicates that Table S-4, which addresses transportation impacts, is in effect incorporated into ER § 5.7.[197] In this regard, Applicant argues, the ER "contains a full description and detailed analysis of the environmental effects of waste transportation, including an analysis of transportation accidents" in ER

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[191] Petition at 20.
[192] *Id.* (citing ER § 5.7-9).
[193] *Id.* at 21.
[194] Luminant Answer at 29; NRC Staff Answer at 20-21; *see also* 10 C.F.R. § 51.51(b).
[195] Luminant Answer at 29.
[196] NRC Staff Answer at 21.
[197] Tr. at 82-83.

§§ 3.8, 5.7.2, and 7.4, and Petitioners "fail to controvert any aspect of these analyses."[198] Moreover, Applicant argues, "Petitioners fail to provide support, as required by 10 C.F.R. § 2.309(f)(1)(v), for any alternative consideration of the issues associated with radioactive wastes."[199]

Regarding the provision of section 51.51(a) allowing an applicant to "supplement" Table S-3 with a "discussion of the environmental significance of the data set forth in the table," Applicant's counsel stated at oral argument that Luminant undertook such an analysis in ER § 5.7.1.7, but that Petitioners' Contention 5 does not specifically challenge or even acknowledge that analysis. Rather, according to counsel, "the Petitioners' challenge is to the quantity of the effluents and therefore impermissible."[200] Counsel for the NRC Staff agreed, adding that "the petitioner does not address any supplemental discussion in his contention but it's really attacking . . . the content of Table S-3 itself."[201] Counsel for Petitioners at oral argument acknowledged that Contention 5 is implicitly a challenge to the rule and Table S-3,[202] but also stated that Petitioners "are here to preserve that issue and to make some record on it."[203]

Licensing Board Ruling on Contention 5

Petitioners in Contention 5 fail to dispute those sections of the ER that supplement Table S-3 and address the requirements of Table S-4.[204] Thus no genuine dispute as required by 10 C.F.R. § 2.309(f)(1)(vi) is shown regarding these matters. And Contention 5 otherwise, by Petitioners' own admission, constitutes a challenge to the provisions of Table S-3. As noted in our rulings on a number of contentions herein at issue, under 10 C.F.R. § 2.335(a) such a challenge to a rule is not permitted in an NRC adjudicatory proceeding. The Board therefore concludes that Contention 5 is inadmissible.

6. COLA Should Consider Consequences of Government Becoming Waste Custodian

Petitioners in Contention 6 state:

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[198] Luminant Answer at 30 n.131.

[199] *Id.* at 27.

[200] Tr. at 72.

[201] Tr. at 73.

[202] Tr. at 87.

[203] Tr. at 84.

[204] As counsel for NRC Staff noted at oral argument, "any additional analysis that is provided by the Applicant could be the subject of an admissible contention, provided that the contention admissibility rules are met." Tr. at 73. No such contention, however, has been filed herein.

> The COLA adjudication should consider the public health impacts and environmental consequences of requiring governmental units to become the custodian of high-level waste and spent nuclear fuel at the Comanche Peak site after the operating license has lapsed and post-closure activities have been completed.[205]

In this contention, Petitioners argue that the COLA "should consider the environmental and public health consequences of either . . . Texas or the [federal] government becoming . . . *de facto* custodians of spent fuel and high-level wastes at the Comanche Peak site after the operating license has lapsed and post-closure activities of the licensee have been completed."[206] Petitioners suggest that, if any spent fuel remains onsite once the operating license for Units 3 and 4 has lapsed, the government might become legally responsible for managing it. Therefore, Petitioners contend, the ER should identify the government entity that would have such ownership, estimate the costs that can be reasonably anticipated as a result of such ownership, and discuss the environmental and public health consequences thereof.[207]

Applicant opposes Contention 6 on the grounds that it presents an impermissible challenge to the Waste Confidence Rule, contrary to 10 C.F.R. § 2.335(a).[208] Applicant points out that the Waste Confidence Rule explicitly states that an applicant need not discuss in its ER any environmental impacts of spent fuel storage "for the period following the term of the . . . reactor combined license."[209] Contention 6 presents a challenge to this Rule, Applicant argues, by suggesting that Luminant must discuss such environmental impacts in its ER.[210]

The NRC Staff also opposes Contention 6 as an impermissible attack on Commission regulations. Staff argues that, under 10 C.F.R. § 52.110, decommissioning is not complete, and an operating license cannot be terminated, in effect, until all spent fuel and high-level waste has been removed from the site.[211] In other words, as stated at oral argument:

> [A]s long as spent fuel is on site, the site will be subject to an NRC license and NRC regulatory authority, therefore, the specific issue that was raised in this contention, which is that the COLA should consider public health and environmental consequences of requiring government units to become custodian of spent fuel after the license lapses is really not a possible scenario under the regulations.[212]

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[205] Petition at 21.

[206] *Id.*

[207] *Id.* at 21-22.

[208] Luminant Answer at 31.

[209] *Id.* at 32 (quoting 10 C.F.R. § 51.23(b)).

[210] *Id.*

[211] NRC Staff Answer at 22-23 (citing 10 C.F.R. § 52.110(k)).

[212] Tr. at 90.

Moreover, according to the NRC Staff, a governmental entity would never become "required" to assume ownership over spent fuel at a nuclear facility that has ceased operating. As the Staff points out, the licensee remains authorized to own and possess the facility even after the operating license expires.[213] Thus, the NRC Staff concludes, Contention 6 presents an impermissible challenge to the Commission regulations governing decommissioning and license termination. In addition, the Staff argues that Contention 6 fails to meet the admissibility criteria at 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v), and (vi).[214]

Petitioners filed no reply to the Staff's and Applicant's arguments. At oral argument, counsel for Petitioners seemed to acknowledge the legal landscape as the NRC Staff described it,[215] but emphasized that Contention 6 really "deals with what happens to a facility where there has been a default of a license,"[216] depicting a scenario in which a licensee defaults before "meaningful enough" decommissioning funding has accumulated, and suggesting that "the only institutions in our society that are set up to [embrace this problem] in any kind of meaningful way would be units of government."[217] According to the NRC Staff, however, "even if a government entity did take over, they would have to have an NRC license to possess spent fuel on the site, so again, there's no situation where spent fuel onsite would not be covered by an NRC license."[218]

Licensing Board Ruling on Contention 6

We agree with Applicant and the NRC Staff that Contention 6 raises issues that challenge both the Waste Confidence Rule and NRC regulations relating to decommissioning.[219] In addition, the contention is insufficiently supported to show a genuine dispute on a material issue of law or fact.[220] We therefore deny admission of Contention 6.

7. COLA Does Not Address Requirements of 10 C.F.R. §§ 52.80(d) and 50.54(hh)(2)

In Contention 7 Petitioners allege:

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[213] NRC Staff Answer at 23-24 (citing 10 C.F.R. §§ 52.110(b), 52.109).
[214] *Id.* at 24-25.
[215] Tr. at 91.
[216] *Id.*
[217] Tr. at 93-94.
[218] Tr. at 94.
[219] *See infra* discussion on Contention 15.
[220] *See* 10 C.F.R. § 2.309(f)(1)(v), (vi).

> The Applicant's COLA is incomplete because it fails to include the requirements of 10 CFR 52.80(d) that require the applicant to submit a description and plans for implementation of the guidance strategies intended to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities with the loss of large areas of the plant due to explosions and/or fires as required by 10 CFR 50.54(hh)(2).[221]

Prior to oral argument on this contention (which the NRC Staff agreed was admissible based on information available when it was filed),[222] Applicant filed certain sensitive unclassified nonsafeguards information (SUNSI) purported to render the contention moot.[223] At oral argument, counsel for both Applicant and the Staff asserted that Contention 7 was indeed rendered moot by the SUNSI,[224] but counsel for Petitioners declined to acknowledge the mootness of Contention 7 without first having access to the SUNSI.[225] As indicated *supra* in the Background section of this Memorandum, on July 1, 2009, the Licensing Board issued an order approving a joint proposed protective order relating to the SUNSI in question,[226] and another order directing Petitioners "within five (5) days after receipt of the SUNSI, [to] notify the Board and all parties whether they challenge the assertions of Applicant and NRC Staff that the material in question renders Contention 7 moot."[227] Applicant subsequently provided the material in question to Petitioners' counsel, as well as two individuals associated with Petitioners, who had signed appropriate, agreed-upon nondisclosure affidavits as provided in the protective order.[228] Thereafter Petitioners provided notification that they do dispute the asserted mootness of Contention 7, and the parties have filed briefs, at least some of which contain SUNSI. The Board will address the issue of whether Contention 7 was rendered moot by the material filed by Applicant in a subsequent order.

8. COLA Does Not Fully Analyze Radiological Hazards of Discharges into Squaw Creek Reservoir

Petitioners in Contention 8 state:

> The COLA is inadequate because it fails to fully analyze the radiological hazards

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[221] Petition at 22.
[222] NRC Staff Answer at 28.
[223] *See supra* note 14.
[224] Tr. at 99, 100.
[225] Tr. at 105-06.
[226] *See supra* note 20.
[227] *See supra* note 22.
[228] *See supra* note 23.

> that will occur from operation of the Comanche Peak nuclear plants based on discharge of water that contains radioactive particulates and tritium to Squaw Creek Reservoir.[229]

Petitioners are concerned in this contention with uncontrolled release of radioactive material, quoting from the Comanche Peak ER, in which Applicant candidly admits that the Squaw Creek Reservoir (SCR) is a radiological issue:

> Radioactive particulate matter that is permitted and released to SCR in liquid effluents is deposited onto the settlement layer of the reservoir bottom, particularly in the area of the circulating water discharge release point. Unlike the tritium being diluted and removed by rainfall and lake water makeup, the particulates have no removal mechanism other than radioactive decay.[230]

Petitioners claim that, "[i]n effect, SCR is and will continue to be an unlicensed radioactive waste disposal facility for Comanche Peak Nuclear Plant operations."[231] Petitioners are also concerned with radiological consequences should the dam that forms the SCR fail, asserting that this would immediately cause the tritium in the SCR to spread, and that exposure of the sediment to the air would allow it to dry out so that winds would be able to spread the particulate radioactive materials within it.[232] Petitioners fear that a prolonged drought or the effects of global warming may result in insufficient inflow to the SCR to prevent its drying out, and that this might also permit dried radioactive materials to be transported to populated regions.[233]

Petitioners based their concerns focusing on tritium within the SCR on a statement in Applicant's FSAR that Petitioners characterize as indicating that "it is anticipated that when all four units at Comanche Peak are operating tritium levels may be exceeded."[234] Petitioners allege that "the Applicant fails to provide any plan for regular monitoring [of the] SCR to determine when tritium levels are exceeded while all four units are operating."[235]

Petitioners fault Applicant for relying on adequate rainfall to provide a dilution source and overlooking the possibility that protracted drought or the effects of global warming may reduce water availability for dilution. According to Petitioners, a reduction in water availability could cause the SCR to exceed permitted

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[229] Petition at 26.
[230] *Id.* (quoting ER at 5.11-3).
[231] *Id.* at 26.
[232] *Id.* at 27.
[233] *Id.*
[234] *Id.* at 28 (citing FSAR at 11.2-2).
[235] *Id.* at 28.

tritium concentration levels, and in addition, "the COLA fails to analyze the potential for radioactive groundwater contamination from plant operations."[236] As support for Contention 8, Petitioners provide a short statement by a groundwater hydrologist on the "Potential for groundwater contamination at the Comanche Peak Nuclear Power Plant," which begins with the following statement: "There is insufficient time to perform a thorough review of the groundwater system and assess the potential for groundwater contamination at the Comanche Peak . . . Plant."[237]

Applicant responds that Petitioners' claim that the SCR is a "radiological problem with no solution" is incorrect and unsupported, stating:

> [T]he ER demonstrates that liquid radioactive effluents from Comanche Peak will comply with NRC regulations; that the results of monitoring programs show no problem with radionuclides in either the water or sediments in SCR; and that monitoring of SCR in the future will continue to ensure compliance with applicable regulatory requirements.[238]

Applicant points to various controls on the discharging of liquid potentially containing radioactive material, as well as the monitoring performed to assure they are effective.[239] Applicant notes that radiological monitoring has been performed at Comanche Peak over the last 25 years, and acknowledges that tritium has been detected in the SCR, but maintains that tritium levels have remained "well below applicable regulatory limits."[240] Moreover, Applicant asserts, "radionuclide particulate matter that is released into the SCR via liquid effluents, as permitted by NRC regulations, has not been detected in SCR sediments."[241]

Applicant states that Petitioners misread FSAR § 11.2.3.1, which actually discusses how Applicant intends to control tritium to maintain a margin of at least 20% below the permitted limit at all times. According to Applicant, the FSAR discusses precautionary measures and does not suggest that any limits will be exceeded.[242] In addition, Applicant points out that the current groundwater monitoring program monitors potential radionuclide releases near Units 1 and 2, including gamma-emitting radionuclides and tritium, and that results to date

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[236] *Id.*

[237] Petition, Declaration of George Rice, Groundwater Hydrologist, at 1 (undated) [hereinafter Rice Declaration].

[238] Luminant Answer at 37.

[239] *Id.* (citing ER at 3.5-1 to 3.5-3).

[240] *Id.* at 38 (citing FSAR § 11.2.3.1; ER at 6.2-4).

[241] *Id.*

[242] *Id.* at 39 (citing FSAR at 11.2-2; ER at 6.2-2); *see supra* text accompanying note 234; *see also* Tr. at 165.

indicate that all parameters are below detection limits or below minimum detected activity levels.[243] Because the regulated and permitted discharge process does not meet the definition of disposal, Applicant argues, the SCR need not be considered a disposal site, as Petitioners contend.[244]

Finally, Applicant states that, with no significant buildup of radioactive materials in the SCR sediment, neither dam failure nor drying out of the reservoir would pose a radiological hazard.[245] In Applicant's view, Petitioners provide no basis for the claim that the COLA disregards the potential for radioactive groundwater contamination.[246] Indeed, Applicant claims, "[g]iven that the effluents will comply with regulatory requirements, there is no material dispute that the impacts of those effluents will be SMALL."[247]

The NRC Staff opposes Contention 8 on the grounds that "the Petitioners have not provided any support, scientific or otherwise, for their claim," and that Petitioners have failed to "dispute[ ] information in the Application related to drought and water use."[248] The Staff discredits the hydrologist's statement, pointing to the admission that there was not a thorough review of the groundwater system at Comanche Peak, and arguing that the assertion, that some radionuclides if released "may contaminate the local groundwater system and any lakes or streams to which the groundwater discharges," is conclusory and has no reasoned basis.[249]

Petitioners in their Reply (1) challenge the support for the ER's conclusions that are cited by Applicant and Staff; (2) assert that the ER does not contain "any discussion of the kind or quantity of radioactive particulates that have been and those anticipated to be discharged into [SCR]"; (3) argue that this violates 10 C.F.R. § 52.79(a)(3); (4) cite certain authority on, and several examples of, dam failures; (5) provide additional argument and cite certain authority on water issues including drought; and (6) make various arguments that Applicant's monitoring program will not reduce or prevent tritium in the SCR, and that "Applicant should be required to analyze the contingency that sufficient inflow will be unavailable for dilution purposes and plan for such a contingency."[250] Applicant moves that we strike from our consideration in ruling on Contention 8, numbers (3), (4), and (5) of the preceding.[251] In addition, regarding number (2), we note that

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[243] Luminant Answer at 42 (citing ER at 2.3-56).

[244] *Id.* at 40.

[245] *Id.* at 41.

[246] *Id.*

[247] *Id.* at 43.

[248] NRC Staff Answer at 30.

[249] *Id.* at 33 (quoting Rice Declaration at 1).

[250] Reply to NRC Staff at 9-13.

[251] Motion to Strike at 6.

Applicant also stated through counsel at oral argument that Applicant submits certain environmental monitoring reports to the NRC, which are believed to identify detectable levels found in the SCR, so that "it's not a mystery what the levels are right now."[252]

Licensing Board Ruling on Contention 8

The Board finds Contention 8 to be inadmissible. Our ruling rests primarily on Petitioners' failure to provide any support for the allegation that radionuclides in the SCR could reach concentrations where they would constitute a radiological hazard, or to dispute specific provisions in the Application addressing this issue. The contention is based upon hypothesized chains of events leading to potentially adverse radiological effects on nearby populations, premised on the agreed fact that the proposed plants will unavoidably release small amounts of radioactive particulate matter and tritium to the SCR.

Petitioners allege that particulate material will settle out in the sediment lining the SCR, and that, since there is no removal mechanism for particles in the sediment other than radioactive decay, the concentrations of these materials will increase over the life of the plant. Then, should the reservoir bed ever become exposed and dry out, particulate matter may as a result also dry out, become airborne, and be a potential radiological hazard for nearby populations. Petitioners propose two mechanisms by which the reservoir bed might become exposed — dam failure and extended drought, possibly caused by global warming.

With regard to the possibility of dam failure, such events do of course occur. Even assuming the dam were to fail, however, the final step in this scenario requires that the sediment dries up, and that dry particulate radioactive material is blown to populated areas, resulting in a health risk. Petitioners do not, however, specify the level of radioactive material that must be present for this to be a significant health concern. Moreover, Petitioners provide no support other than their reference to the ER itself for their allegation that radioactive particulate material would concentrate in the sediment bed to the point of attaining a hazardous concentration, nor do they suggest that particulate material discharged from Units 3 and 4 will have a significantly greater effect on sediment loading than material that has been discharged from Units 1 and 2.

In contrast, while not disputing Petitioners' assertion that particulate radioactive material is released from Units 1 and 2 to the SCR, Applicant points out that monitoring is done of releases into the SCR, that no particulate radionuclides have been detected in the SCR sediment,[253] and that discharge from future Units 3 and 4

[252] Tr. at 150.

[253] *See* Luminant Answer at 37-38.

will be similarly controlled.[254] Even taking into account arguments in their Replies regarding support for ER conclusions and the need for analysis of water inflow for dilution purposes, Petitioners have not disputed specific provisions that are in the Application on the SCR sediments, water, and monitoring of effluents into the SCR. Nor have they otherwise provided sufficient specific support to demonstrate a genuine dispute with the application on a material issue of fact or law relating to their allegations in these regards. The same conclusions apply to Petitioners' second proposed chain of events, with particulate radioactive materials concentrating in the SCR sediment and either extended drought or global warming causing the SCR to dry out, exposing the radioactive sediment to dispersion by the wind.

The third proposed chain of events concerns generation, concentration, and release of tritium. The parties agree that Units 1 and 2 produce tritium and release it to the SCR, as will Units 3 and 4. Petitioners allege that tritium levels within the SCR may increase to above safe levels, proposing two mechanisms by which this could occur. First, Petitioners suggest that during extended periods when all four plants are operating at high power with maximum tritium production, a failure to take appropriate dilution actions could result in high tritium concentration. Alternatively, Petitioners suggest that inadequate dilution due to extended drought could result in high tritium concentration. But Applicant has shown that the COLA contains a discussion of control procedures intended to maintain the tritium level at less than 80% of the permitted level.[255]

Again, even taking into account their Replies on Contention 8, Petitioners provide no challenges to Applicant's monitoring program that specifically address its ability to detect any increase in tritium and allow for timely correction — thus preventing increases of tritium to a point that would violate relevant limits. In the end, whatever mechanism is postulated for increases in tritium levels, Petitioners have failed to show a genuine dispute on a material issue of law or fact with regard to tritium levels.

Having found that none of the scenarios proposed by Petitioners raises any genuine dispute on a material issue of fact or law, we find Contention 8 to be inadmissible. With regard to Petitioners' arguments based on 10 C.F.R. § 52.79(a)(3), as we discuss in our ruling on Contention 2, these essentially raise what would be a new contention, with no showing that it could not have been raised at the time the original Petition was filed.[256]

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[254] *Id.* at 37 (citing ER at 3.5-1 to 3.5-3); *see also* Tr. at 138 (citing ER §§ 3.5.1, 6.2), 158 (explaining that Applicant does "two types of monitoring . . . periodic environmental monitoring of the Squaw Creek Reservoir [and] continuous monitoring of effluents[, or] process monitoring").

[255] Luminant Answer at 39 (citing FSAR § 11.2.3.1; ER at 6.2-2).

[256] *See supra* text accompanying note 158.

9. COLA Underestimates Radiation Doses to Public Using Obsolete LADTAP II Model

In Contention 9 Petitioners assert:

> The Applicant's calculations of radiation doses to the general public as a result of consuming radioactively contaminated fish and invertebrates are incorrect. The calculations are done using the LADTAP II model which is obsolete and systematically underestimates doses to the public.[257]

Petitioners contend that "LADTAP II,"[258] the code used to calculate radiation doses to members of the public, is outdated and systematically undercalculates those doses. They point to a newer version of the code, "LADTAP XL," which they assert has improved calculations and yields more precise dose estimates. Petitioners claim that the ER dose calculations are incorrect and should be replaced by calculations performed using LADTAP XL.[259]

In support of this contention, Petitioners refer to a one-page Declaration of Dr. Arjun Makhijani.[260] In this Declaration, Dr. Makhijani relies on the results of a study calculating doses near the Savannah River Site (SRS) using LADTAP II and LADTAP XL to illustrate the claimed deficiency.[261] According to Petitioners:

> One comparison of the results of the LADTAP II model with an updated version, LADTAP XL, shows that LADTAP II underestimates doses from commercial fish by almost eight times; it underestimates doses from saltwater invertebrates by over 700 times.[262]

Further, Petitioners claim, both versions of the LADTAP code use inappropriate dose conversion factors — those for adults only, and not any for children.[263]

Applicant opposes admission of this contention, stating that "[t]he contention lacks adequate factual or technical support and fails to establish a genuine material dispute."[264] Applicant argues that "Petitioners' criticism of LADTAP II rests solely on the *unexplained* results of an *unidentified* study comparing use of LADTAP

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[257] Petition at 29.

[258] LADTAP is the industry standard code system for calculating radiation exposure to humans from routine releases of nuclear reactor liquid effluents.

[259] Petition at 29 (citing ER, Table 5.4-8).

[260] *Id.* (citing "Makhijani Declaration," i.e., "LADTAP II Model Declaration of Dr. Arjun Makhijani" (undated) [hereinafter LADTAP II Declaration].

[261] LADTAP II Declaration.

[262] Petition at 29.

[263] *Id.*

[264] Luminant Answer at 45.

II with LADTAP XL at the SRS."[265] Applicant hypothesizes that the unidentified reference is to a 1991 report concerning the SRS which compared results from the LADTAP II and XL codes, and attributed the differences in doses through fish and invertebrate ingestion to different consumption assumptions used in the two evaluations.[266] Applicant also notes that there is "no commercial fishing in the area of Comanche Peak or harvesting of shellfish or saltwater invertebrates because of the inland location of Comanche Peak."[267] So, argues Applicant, even if LADTAP II were deficient in calculating doses from these exposure paths, such deficiency would not result in a deficiency in using LADTAP II for the Comanche Peak site.[268]

NRC Staff opposes this contention because "it lacks adequate support and fails to demonstrate a genuine dispute with the applicant on a material issue of law or fact,"[269] noting also that the two dose pathways from ingestion of fish and invertebrates "were not evaluated for Comanche Peak Units 3 and 4 because neither commercial fishing nor commercial harvest of invertebrates occurs in Squaw Creek, the Brazos River below the Paluxy River, or the Whitney Reservoir."[270] Concerning use of allegedly incorrect dose conversion factors, the Staff disagrees, observing that "Table 11.2-15R in the FSAR contains estimated doses from liquid effluents for all four age groups."[271] Thus, the Staff asserts that the COLA includes, among others, doses calculated specifically for children.

In their Reply on Contention 9, Petitioners submit an additional statement of Dr. Makhijani, in which he, among other things, disagrees that his analysis is limited to doses related to commercial fish and saltwater invertebrates;[272] refers to various ICRP documents asserted to support his views;[273] and states that the LADTAP II "systematically underestimate[s] doses,"[274] is "obsolete,"[275] and is currently being revised by the NRC.[276] He also refers to a provision in the Application noting that company employees sometimes fish in Squaw Creek Reservoir,[277]

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[265] *Id.* at 46 (emphasis in original).

[266] *Id.* at 46-47.

[267] *Id.* at 49.

[268] *Id.*; tr. at 250-51.

[269] NRC Staff Answer at 34.

[270] *Id.* at 35 (citing ER at 5.4-4).

[271] *Id.* at 36.

[272] Reply to NRC Staff, "Response of Dr. Arjun Makhijani to the NRC Staff's position on Contention 9 regarding the use of the LADTAP II model" (undated) at 1 [hereinafter Makhijani LADTAP II Response].

[273] *Id.* at 4. (ICRP stands for the International Commission on Radiation Protection).

[274] *Id.* at 5.

[275] *Id.* at 4.

[276] *Id.* at 3.

[277] *Id.* at 2.

and questions whether the ALARA principle "is actually being met by updated methods of calculation."[278] Applicant moves that we strike from our consideration of Contention 9 this second Declaration.[279] NRC Staff at oral argument contended that, in any event, nothing in Dr. Makhijani's Reply Declaration supports the view that LADTAP II is obsolete or based only on adult dose conversion factors.[280]

Licensing Board Ruling on Contention 9

The Board finds this contention inadmissible. First, regardless of the LADTAP II calculations, as Staff points out, the COLA contains estimated doses for all age groups. Second, the study relied upon by Dr. Makhijani,[281] which has been obtained and considered by the Board,[282] does not support Petitioners' claims. One table in this report — Table D-1, Population Dose via Aquatic Foods Ingestion — shows the calculations using LADTAP II and XL for doses due to consumption of commercial fish and saltwater invertebrates.[283] While the table indeed shows a large difference between the calculations of the two codes, the report contains an explanation of the difference.[284] The earlier LADTAP II calculations had assumed that fish and invertebrates were caught by commercial ventures and were consumed by the entire U.S. population. This essentially removed these dose paths from the population within a 50-mile radius of the SRS. The later LADTAP XL calculations assumed that fish and invertebrates caught locally were consumed locally. The study specifically attributes the differences in Table D-1 to the different assumptions underlying the two calculations. Apparently, this explanation was overlooked by Dr. Makhijani. Furthermore, a summary within the study states:

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[278] *Id.* at 5. (ALARA stands for "as low as reasonably achievable," and is incorporated into NRC regulations in 10 C.F.R. Part 50, Appendix I. *See also* Tr. at 172.)

[279] Motion to Strike at 6.

[280] *See* Tr. at 264-65.

[281] During oral argument, Petitioners identified the study used by Dr. Makhijani to support the contention as a 1991 report by the Westinghouse Savannah River Company with the number WSRC-RP-91-9975. Tr. at 249; *see* D.M. Hamby, LADTAP XL: An Improved Electronic Spreadsheet Version of LADTAP II (1991) [hereinafter SRS Study].

[282] As noted above, *see* text accompanying note 68, any study referenced in the pleadings is subject to Board scrutiny in deliberating and ruling on contention admissibility.

[283] SRS Study at 23.

[284] *Id.* at 8.

> Comparisons of LADTAP II and LADTAP XL output show that these enhancements result in an insignificant increase in predictions of total dose to the maximum individual and a 10% increase in total dose to the Savannah River user population.[285]

We find that the statement of Dr. Makhijani is not supported by the SRS study that he cites, nor does his statement contain sufficient support on its own to demonstrate a genuine dispute on a material issue of fact or law.[286] Nor do we find that Dr. Makhijani's second Declaration provides sufficient information to change this conclusion, even had it been timely filed. Although he raises some interesting questions, the contention as submitted has to do with Applicant's dose calculations using LADTAP II, and much of what he raises in the new document is outside the scope of this subject. Moreover, notwithstanding any possible revision of LADTAP or any other documents and regulations based on it, Petitioners have not shown that the use of LADTAP II causes any significant impacts regarding doses in this proceeding; indeed, at oral argument Petitioners' counsel indicated that, while Petitioners would not withdraw Contention 9, it might be appropriate to address the issues raised in it in a petition for rulemaking.[287] To the extent Dr. Makhijani discusses persons fishing in the reservoir, this is, in all fairness, really in the nature of a new contention, and Petitioners have not shown that this could not have been raised at the outset.

Based on the preceding analysis, we find Contention 9 to be inadmissible.

10. COLA Fails to Account for Impacts of MOX Fuel

In this contention Petitioners state:

> Comanche Peak Units 3 and 4 will utilize MOX fuel but the COLA fails to account for the radiological and public health impacts associated with MOX fuel.[288]

Relying on a general discussion in the Application of the uranium fuel cycle in which reference is made to mixed oxide (MOX) fuel sometimes being used in nuclear reactors, Petitioners in Contention 10 claim that the Application does not address the impacts of using MOX fuel at Comanche Peak.[289] After learning,

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[285] *Id.* at 4. We note that Petitioners were unable to answer at oral argument what the impact would be if the doses at issue were increased by 10%; Applicant stated that, even assuming a 10% increase to the maximally exposed individual, this would still be "well below regulatory limits." Tr. at 260.

[286] *See* 10 C.F.R. § 2.309(f)(1)(v), (vi).

[287] *See* Tr. at 255.

[288] Petition at 30.

[289] *Id.*

however, that there are no plans to use such fuel at the proposed units herein at issue, Petitioners during oral argument withdrew this contention.[290]

11. COLA Fails to Analyze Impacts of Global Warming on Availability of Water for Plant Operations

In Contention 11 Petitioners assert:

> The COLA is inadequate because it assumes there will be an adequate supply of fresh water for purposes of plant operations. This assumption is faulty because of the failure of the Comanche Peak Environmental Report to analyze impacts of global warming on rainfall and the hydrological cycle.[291]

Petitioners in this contention argue that the ER should consider the effects of global warming on water availability, stating that "nuclear plants require enormous amounts of water for operations," with the Comanche Peak reactors requiring 30,000 gallons per minute each, approximately one third of which will evaporate.[292] Petitioners contend that "impacts from global warming will include protracted drought that may seriously compromise water resources required for plant operations," and that such "compromised water resources should be considered from a quantitative and a temperature sensitive analysis since plant operations are dependent on a narrow band of water temperatures."[293] Petitioners go on to express a number of additional concerns, including (1) the discharge of radioactive particulate matter and tritium into the Squaw Creek Reservoir, which has "relatively high levels of tritium";[294] (2) the potential for protracted drought, which could expose the Reservoir's sediment layer and cause radioactive dust to be transported by wind;[295] (3) the possibility of dam failure, as a result of drought, seismic activity, or other natural event;[296] (4) questions of post-license security requirements, ownership, and responsibility for SCR;[297] (5) water contamination from chemical treatment;[298] (6) biological impacts on regional waterways used

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[290] Tr. at 197.
[291] Petition at 31.
[292] *Id.* (citing ER, Figure 2.3-30).
[293] *Id.*
[294] *Id.* at 32.
[295] *Id.*
[296] *Id.*
[297] Petition at 32-33.
[298] *Id.* at 33.

for fishing, recreation, and drinking;[299] and (7) the possibility that heat energy emitted by Units 3 and 4 might contribute to global warming.[300]

Petitioners argue in Contention 11 that the COLA should account for these concerns, supporting the contention with a report authored by Joseph F. Trungale, P.E., entitled "Effects of Diversions for the Comanche Peak Nuclear Project on the Ecological Health of the Brazos River," and stating as its main theme that the Comanche Peak COLA "fails to adequately address the instream flow water needs necessary for the protection [*sic*] the ecological health of the Brazos River."[301]

Applicant opposes Contention 11 on several grounds. First, Applicant argues that Petitioners provide no support for the basic notion underlying the contention — that "global warming will impact drought frequency and intensity on the flow of the Brazos River into Lake Granbury, which is the source of cooling water for Comanche Peak Units 3 and 4."[302] Second, Applicant argues that Petitioners ignore "the very portions of the ER that directly address water availability and precipitation trends," which include ER §§ 2.3.1.2.2, 2.7.1.2.8, and 2.7.2.1.5.[303] Third, Luminant urges the Board not to consider the "additional claims" set forth in the body of Contention 11, as these claims do not fall within the stated bounds of the contention itself.[304] According to Applicant, Contention 11, at its core, is concerned with global warming impacts on freshwater availability. Therefore, all other claims, like those regarding chemical contamination and possible dam failure, should not be considered by the Board, but even should they be considered, Applicant argues that Contention 11 is still inadmissible for failure to meet the criteria at 10 C.F.R. § 2.309(f)(1)(i)-(vi).[305]

The NRC Staff also faults Petitioners for failing to provide facts or expert opinion "to support their argument that due to global warming there will not be enough water for operating the proposed plant."[306] The Staff finds irrelevant the Trungale Report offered in support of Contention 11, because it "focuses on 'man made' drought conditions from a decrease in instream flows rather than from global warming."[307] Finally, the Staff states that most of the claims Petitioners set forth "do not provide a basis supporting Contention 11," and in any case "none

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[299] *Id.*

[300] *Id.* at 34.

[301] Petition, Joseph F. Trungale, P.E., Effects of Diversions for the Comanche Peak Nuclear Project on the Ecological Health of the Brazos River (2009).

[302] Luminant Answer at 55.

[303] *Id.* at 55-56.

[304] *Id.* at 54.

[305] *Id.* at 57.

[306] NRC Staff Answer at 42.

[307] *Id.* at 43.

of the claims meet all of the admissibility requirements of Section 2.309(f)(1)."[308] Thus, NRC Staff argues, the Board should reject Contention 11.

In their reply to the NRC Staff's answer to Contention 11, Petitioners do not offer any new arguments or clarifications. Rather, they simply incorporate by reference their reply with regard to Contention 8.[309] At oral argument, counsel for Petitioners stated that Petitioners "referenced the reply related to number 8 for 11, because it's our contention that with inadequate water resources, the dilution factor [for tritium] would be inherently more difficult to achieve."[310]

Licensing Board Ruling on Contention 11

Petitioners provide little support for this contention, instead for the most part merely stating the issues they are concerned about and stating that these matters "should" be considered or examined in the COLA. Several of the assertions they make are essentially the same as those asserted in Contention 8 and the support provided for it. Petitioners refer to a report authored by Joseph F. Trungale, P.E., but it does not actually speak to the effects of climate change or global warming, the subject of the contention.

Moreover, as Applicant points out in its Answer, Petitioners fail to acknowledge those portions of the ER and the FSAR that do address climate, water availability, and precipitation trends, making reference to only two parts of the Application, ER Figure 2.3-30 and ER at 5.11-3, which concern the SCR sediment (already addressed in Contention 8), and disputing nothing in either.

In light of the preceding, we find Contention 11 inadmissible for failure to raise a genuine dispute on a material issue of fact or law, as required by 10 C.F.R. § 2.309(f)(1)(vi). We note, however, that global warming and climate change will be addressed in the environmental impact statement (EIS) process to some extent at least, according to Staff,[311] a process in which Petitioners may wish to participate. In addition, as stated by NRC Staff counsel, the FSAR contains sections describing the minimum water requirements for plant operation, below which the plant would not be permitted to operate, so that Petitioners' concerns are effectively addressed in this context.[312]

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[308] *Id.* at 48.

[309] Reply to NRC Staff at 14.

[310] *Id.*

[311] *See* Tr. at 208, 211, 221-22, 224, 231-33.

[312] *See* Tr. at 213, 218-19 (citing FSAR at 2.4-36 *et seq.*).

12. COLA Fails to Consider Greenhouse Gas Impacts

In this contention Petitioners assert:

> The uranium fuel cycle has substantial greenhouse gas impacts [*sic*] must be considered in each phase of the uranium fuel cycle.[313]

Petitioners in this contention argue that the COLA "should carefully consider the greenhouse gas impacts that are unavoidable as a result of mining, processing, fuel fabrication, transportation, fuel burn up, waste streams management, decommissioning and long-term site maintenance that are an integral part of the uranium fuel cycle."[314] Acknowledging that nuclear power expansion proponents "posit that there will be fewer greenhouse gases produced as a result of the operations of Comanche Peak Units 3 and 4 compared to fossil fueled plants," Petitioners nonetheless claim that there are "inevitable greenhouse gas emissions associated with each phase of the fuel cycle" that "need to be carefully considered to determine the full impact" of the proposed new units.[315] Petitioners assert that carbon dioxide emissions arise in the production of nuclear fuel, in "construction and routine operations of a nuclear plant," and in decommissioning of such plants, citing the ER at page 10.2-4, in which the "Consumption of Energy Used in Constructing the Reactors" is addressed, along with the "small" amount of energy anticipated to be consumed during construction of proposed Units 3 and 4, and the "moderate to large cumulative beneficial impact in terms of energy consumption."[316] Petitioners further contend that the COLA should contain an analysis of "any benefits derived by operation of a nuclear plant in terms of avoidance of greenhouse gases . . . in light of greenhouse gas production as it occurs in various stages in the fuel cycle."[317] As support for this contention, Petitioners rely on *Massachusetts v. U.S. Environmental Protection Agency,*[318] in which the Supreme Court held that carbon dioxide falls within the Clear Air Act's definition of "air pollutants" subject to EPA's regulatory authority.

Applicant argues that this contention, like others, impermissibly challenges 10 C.F.R. § 51.51(b), Table S-3, and must therefore be denied under 10 C.F.R. § 2.335.[319] Applicant points out that, although Table S-3 contains no value for carbon dioxide emissions, note 1 to the table states that, "[i]n some cases where

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[313] Petition at 34.
[314] *Id.*
[315] *Id.*
[316] *Id.*
[317] *Id.*
[318] 549 U.S. 497 (2007).
[319] Luminant Answer at 65.

no entry appears it is clear from the background documents that the matter was addressed and that, in effect, the Table should be read as if a specific zero entry had been made."[320] Applicant states that certain of the background documents "specifically discuss, and in some cases even quantify [carbon dioxide] emissions," but "[n]onetheless, the Commission did not include [carbon dioxide] emissions in Table S-3, and thus, intended a 'zero entry' for [carbon dioxide] emissions."[321]

Further, urges Applicant, the contention is inadequately supported and fails to demonstrate a genuine dispute on a material issue of law or fact.[322] Indeed, Applicant argues, the ER does in fact address greenhouse gases and carbon dioxide emissions in sections 5.7, 10.3, and 10.4.[323] Applicant notes that section 10.4.1.2.4 of the ER states the following:

> [A] nuclear generating facility the size of CPNPP Units 3 and 4, with their combined annual electricity generation, provides substantial emissions avoidance over coal- or gas-powered generation alternatives. The generation of significant air emissions is avoided by forgoing construction of a comparably sized coal- or gas-fired alternative and constructing CPNPP instead. Some of the benefits of reduced emissions related to use of nuclear power for electricity generation are offset by emissions related to the uranium fuel cycle, see Section 5.7 (e.g., emissions from mining and processing the fuel). Similar types of emissions are associated with mining and production of coal and, to some extent, drilling for natural gas.[324]

The NRC Staff also notes various sections of the ER in which gaseous effluents and other impacts of the uranium fuel cycle are discussed, and faults Petitioners for not having presented "a sufficiently specific or supported argument concerning the importance of greenhouse gases for environmental impacts analyses," arguing that the contention fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(vi).[325]

Licensing Board Ruling on Contention 12

We find Contention 12 to be insufficiently specific or supported under the contention admissibility standards of 10 C.F.R. § 2.309(f)(1)(i) and (vi). Petitioners raise a generic issue that concerns the use, costs, benefits, and impacts of nuclear power generally, but fail to dispute specific sections of the Application

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[320] *Id.* at 66 (quoting Table S-3 n.1); *see also supra* note 183.

[321] Luminant Answer at 66.

[322] *Id.* at 65-66.

[323] *Id.* at 67-68.

[324] *Id.* at 68 (citing ER at 10.4-5).

[325] NRC Staff Answer at 49.

that address climate, emissions, and related matters. In the end, they fail to demonstrate any genuine dispute with the Application at issue. The contention is therefore denied.

13. ER Fails to Consider Scenarios and Impacts of Severe Radiological Accident at One Unit on Other Units

Petitioners in Contention 13 assert:

> Impacts from severe radiological accident scenarios on operation of other units at the Comanche Peak site have not been considered in the Environmental Report.[326]

Petitioners argue that colocation of Comanche Peak Units 3 and 4 with Units 1 and 2 would have potentially significant implications in the event that a major accident were to occur at any one of the four operating units, stating that "[t]he Comanche Peak Environmental Report at Chapter 7 deals with severe accidents but has no discussion or analysis of the impact of a severe radiological accident at any one of the four units as it would impact the other remaining three units," including how operations could continue if the site becomes seriously contaminated, or how other units would be protected if there were a major fire or explosion at one unit.[327] Furthermore, Petitioners state:

> [T]he location of the Comanche Peak Units 3 and 4 with Units 1 and 2 should be considered in light of various accident and radiological release scenarios. The Comanche Peak Environmental Report implies by the absence of any discussion or analysis [in] this regard that a serious accident or radiological release at one plant would have no adverse affects on the operations of the remaining units. . . . [T]his is a serious analytical flaw in the Environmental Report.[328]

Petitioners contend that Applicant should have considered in ER Chapter 7 "disruptions in operations due to an accident or radiological release from one unit and the collateral impacts on undamaged units."[329]

Applicant argues that this contention should be rejected because its premise is "unsupported" and it does not raise a material issue.[330] Applicant insists that

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[326] Petition at 34.

[327] *Id.* at 35.

[328] *Id.*

[329] *Id.*

[330] Luminant Answer at 69.

Petitioners provide no references, facts, or expert opinions to support the idea that the probability of an accident at one unit affecting another unit is significant.[331]

Applicant states that FSAR § 3.1 incorporates a provision in the US-APWR DCD that requires that a plant's "structures, systems, and components important to safety be appropriately protected 'from events and conditions outside the nuclear power unit.'"[332] Applicant also disputes Petitioners' statement asserting the absence of any discussion of how other units would be protected if there were a major fire or explosion at one unit, citing FSAR §§ 2.2.3.1.1.2 and 2.2.3.1.4, which evaluate the effects of explosive hazards and fire at Comanche Peak Units 1 and 2 and conclude that those hazards do not pose a threat to Units 3 and 4.[333] According to Applicant, FSAR § 15.6 incorporates by reference additional provisions from the US-APWR that address doses resulting from a loss of coolant accident (LOCA) — specifically, whole-body doses to operators within the main control room from an accident at the other of the two proposed units — indicating they would be less than the 5-rem limit in GDC 19.[334]

Finally, Applicant states it has committed to include additional information in the COLA, stating that the dose at any downwind unit "would be bounded by what has already been evaluated for a single US-APWR unit in the DCD," and that "the dose to either US-APWR unit control room from either existing operating unit would be bounded by a release at the same US-APWR unit."[335] Thus, Applicant argues, "Petitioners have not shown that any of the results or conclusions in Chapter 7 of the ER would be affected if it were to include the information identified in Contention 13."[336]

NRC Staff also opposes admission of Contention 13, arguing that Petitioners cite no "legal requirement why impacts from severe radiological accident scenarios on the operation of other units are required to be discussed in the ER," and thus, the Staff asserts, "Petitioners have not met the requirements of Section 2.309(f)(1)(vi)."[337] The Staff notes that in a separate letter to the NRC, Applicant has provided a specific analysis of radiological impact of one proposed unit on the other unit and of an accident at Unit 1 or Unit 2 on the proposed Units 3 and 4, and has incorporated by reference an analysis of control room habitability found

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[331] *Id.*

[332] *Id.* at 70 (citing US-APWR DCD Tier 2, § 3.1.1.4.1, which requires that a plant satisfy "General Design Criterion [GDC] 4").

[333] *Id.* at 70.

[334] *Id.* (citing US-APWR DCD, Tier 2, §§ 15.6.5.5.1.2 and 15.6.5.5.3).

[335] *Id.* at 71 (quoting Letter from M. L. Lucas, Luminant, to NRC Document Control Desk, Attachment, Resolution of Docketing Issues (Nov. 4, 2008) at 2 (ADAMS Accession No. ML083250068) [hereinafter Resolution of Docketing Issues]).

[336] *Id.*

[337] NRC Staff Answer at 50.

in US-APWR DCD § 6.4.4.1.[338] Regarding Petitioners' assertions on the impact of a severe radiological accident at one unit on other units, the Staff contends that the "safe operation of Units 1 and 2 is governed by their current operating licenses and NRC regulations and is not within the scope of this proceeding," and that any "amendments to the existing Units 1 and 2 licenses and updates to their FSAR are governed by 10 C.F.R. Part 50."[339]

Licensing Board Ruling on Contention 13

This contention concerns the effects of severe radiological accidents at one plant unit on other units, and whether these should be considered in Chapter 7 of the ER, which addresses the "Environmental Impacts of Postulated Accidents [including Severe Accidents] Involving Radioactive Materials." Although Applicant and Staff cite a letter and several sections of the FSAR that address various impacts of fires, explosions, and accidents on colocated units, neither the Staff nor Applicant has pointed to any part of the ER that addresses any such impacts. Both argue to the effect that no such discussion or analysis is required, and Applicant urges that, "[g]iven the requirements in GDC 4 and the provisions in the DCD and FSAR showing compliance with GDC 4, Contention 13 does not raise an issue that is material to the adequacy of the evaluation of environmental impacts of accidents provided in [ER Chapter 7]."[340]

Applicant, however, agreed at oral argument that "conceptually [Contention 13] goes to what the impact would be in a beyond-design-basis accident of the sort [analyzed] at the design-basis level" in the FSAR.[341] When asked why the ER "should not have included [an] analysis of the nature that's provided in the FSAR with regard to beyond-design-basis accidents," Applicant's counsel responded that "[i]t's simply not credible, . . . under NEPA's rule of reason there's no reason to evaluate that," and "Petitioners have not provided any factual support which would substantiate their claims that this is at all a credible event."[342]

In considering the question of the level of credibility of impacts asserted to require consideration in the ER, the Licensing Board has consulted NUREG-1555, the NRC's Standard Review Plans for Environmental Reviews for Nuclear Power

[338] *Id.* at 50-51 (citing Resolution of Docketing Issues at 3; FSAR at 6.4-1).
[339] *Id.* at 51.
[340] Applicant Answer at 70.
[341] Tr. at 318.
[342] *Id.*

Plants.[343] Although it is a guidance document, with no binding effect,[344] it is entitled to special weight, such that it is appropriate to consider in evaluating contentions,[345] and it provides insight into the information the NRC considers necessary for a complete ER. In NUREG-1555, the technical rationale for evaluation of severe accident data in the ER includes the statement that "[t]he events arising from causes external to the plant that are considered possible contributors to the risk associated with the plant should be discussed."[346] Petitioners argue that a severe accident at Unit 1 or 2 could have significant impacts on Unit 3 or 4. NUREG-1555 also describes a 50-mile radius as the area for which Applicants are to "obtain . . . estimated population data and distribution" with regard to severe accidents,[347] and Units 3 and 4 will be about one-quarter of a mile away from Units 1 and 2.[348] These factors suggest that Petitioners' argument that the ER should address the impact of a severe accident at Unit 1 or 2 on Units 3 and/or 4 is reasonable, relevant, and material in this proceeding.

We find Petitioners' argument that the converse — impacts of a severe accident at Unit 3 or 4 on any of the other three units — should be addressed in the ER, to be reasonable, relevant, and material as well. Section 51.45(b) of 10 C.F.R. requires an ER to contain "a description of the environment affected" and to discuss the impact of the proposed action on the environment; and NUREG-1555 § 7.2 directs consideration of severe accidents, and, as indicated above, this includes information on the area within 50 miles of a plant in this regard. If severe accidents must be addressed in the ER, and it is reasonable to address impacts of design-basis accidents on colocated plants in the FSAR, it logically follows that it is appropriate to consider impacts of severe accidents at either of the proposed units on colocated units in the ER, under the circumstances discussed in Contention 13 and its basis.[349]

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[343] Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation, NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants," at 7.2-3 (March 2000) (ADAMS Accession No. ML003701937) [hereinafter NUREG-1555].

[344] *Curators of the University of Missouri* (TRUMP-S Project),CLI-95-1, 41 NRC 71, 150 (1995).

[345] *See Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-33, 60 NRC 581, 596 (2004); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001).

[346] NUREG-1555 at 7.2-3.

[347] *Id.* at 7.2-1; *see also* ER at 7.2-2.

[348] *See* Tr. at 272.

[349] Although not necessary to our ruling, we note, regarding the probability, risk, and credibility of such impacts, that at oral argument Applicant stated that the core damage frequency for each of the two proposed reactors was on the order of 10^{-5}. Tr. at 286. We do not find this to be so low as to remove consideration of the effects of a severe accident at Unit 3 or 4 upon Unit 1 or 2 without further evaluation — or to deny the contention based on such an assertion.

(Continued)

Petitioners provide a straightforward presentation on why consideration of such impacts should be included in the ER. Their fact-based argument that the ER chapter on severe accidents should consider impacts of a severe radiological accident at one unit on other units because of their colocation and resulting close proximity, while simple, is reasonably specific, coherent, logical, and persuasive, sufficient to show a genuine dispute on this material issue and to indicate the appropriateness of further inquiry.

Based on the preceding analysis, we find that in Contention 13, and the fact-based argument offered in support of it, Petitioners have satisfied all the criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi), including demonstrating a genuine dispute on the material issue of whether the ER should contain analysis of the impacts of severe accidents at any one unit on colocated units at Comanche Peak, and identifying the supporting reasons for Petitioners' belief that the ER should contain information on this relevant issue. We therefore admit Contention 13, restated as follows:

> Impacts from a severe radiological accident at any one unit on operation of other units at the Comanche Peak site have not been, and should be, considered in the Environmental Report.

14. COLA Should Consider Consequences of Dependence on Foreign Sources of Uranium

Petitioners in this contention allege:

> Dependence on foreign sources for uranium should be considered for environmental and public health consequences.[350]

Petitioners in Contention 14 state that closure of some domestic uranium mines and "[t]he economic conditions pertaining to the uranium market favor utilization of foreign uranium rather than uranium mined in the United States," and challenge a suggestion in the ER "that these changes have made uranium mining and milling and enrichment more 'environmentally friendly.'"[351] Petitioners contend

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Of course, the probability threshold for considering the impacts of an event in the ER is not fixed by rule, but we may look to NRC case law for comparison purposes. In the *PFS* proceeding, involving an independent spent fuel storage installation (ISFSI), the Commission concluded that "the threshold probability for design basis events should be set at one in a million (1×10^{-6})." *PFS,* CLI-01-22, 54 NRC at 265. In other words, events having less than one in a million probability of occurring are not "credible" enough to warrant consideration in designing an ISFSI. Analogizing to the present case, an event with probability of 1×10^{-5} might easily be found to exceed the "credibility" threshold and thus warrant consideration in an ER, especially at the contention admissibility stage of a proceeding.

[350] Petition at 35.

[351] *Id.* at 35-36 (quoting ER at 5.7-4).

that Applicant should therefore include in the ER analysis of the "environmental or public health impacts of mining and milling uranium in foreign countries," and of possible economic impacts of dependence on foreign sources and related potential interruptions in supply and generating capacity.[352] Finally, Petitioners suggest, the "COLA should also consider the vulnerability of the uranium fuel cycle to disruption by terrorists or others and the radiological, environmental and public health consequences related thereto," which is asserted to be "particularly important in the context of reliance on foreign sources for uranium," in which "[l]ong supply lines make access to foreign sources of uranium especially vulnerable to attack by terrorists or others."[353]

Applicant challenges this contention as:

> (1) present[ing] an impermissible challenge to Table S-3 in 10 C.F.R. § 51.51, contrary to 10 C.F.R. § 2.335(a); (2) call[ing] for consideration of impacts not required under NEPA, contrary to 10 C.F.R. § 2.309(f)(1)(iv); (3) lack[ing] adequate support, contrary to 10 C.F.R. § 2.309(f)(1)(v); and (4) fail[ing] to demonstrate a genuine material issue of law or fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).[354]

Applicant argues that, because Petitioners have not sought or received a waiver to challenge Table S-3, pursuant to 10 C.F.R. § 2.335(b), the contention is outside the scope of this proceeding.[355] Further, Applicant argues, its ER does address environmental impacts of the uranium fuel cycle, in accordance with 10 C.F.R. § 51.51, in sections 5.7.1, 10.2.1.6, and 10.2.2.4;[356] and, even if uranium fuel cycle impacts were not determined in Table S-3 or discussed in the ER, the contention is "contrary to NEPA precedent," because "controls other countries may chose [*sic*] to impose on mining and milling, and the impacts of such activities, fall far afield from . . . issuance of a COL in Texas"; the "NRC has no authority to [address such] activities in foreign countries"; and "issuance of the Comanche Peak COL cannot be considered the proximate cause of such impacts."[357] Thus, according to Applicant, the issue raised in the contention is not a material issue in this proceeding as required at 10 C.F.R. § 2.309(f)(1)(iv). In addition, Applicant argues that the Commission has barred consideration of environmental impacts

[352] *Id.* at 36.
[353] *Id.*
[354] Luminant Answer at 72.
[355] *Id.*
[356] *Id.* at 74.
[357] *Id.* at 72-73 (citing *Department of Transportation v. Public Citizen,* 541 U.S. 752, 769 (2004)).

of terrorism in its *Oyster Creek* decision,[358] and that Petitioners have not provided adequate support for Contention 14 as required under section 2.309(f)(1)(v).[359]

The NRC Staff contests Contention 14 on largely the same bases: failure to demonstrate a genuine material issue of law or fact, failure to show the contention is within the scope of the proceeding, and lack of adequate support, among other things.[360] Staff argues that the contention meets none of the requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).[361]

Licensing Board Ruling on Contention 14

We find that in Contention 14 Petitioners have failed to show the issue they raise is within the scope of the proceeding, failed to dispute specific sections of the Application relating to the uranium fuel cycle, and failed to show a genuine dispute on a material issue of fact or law.[362] We therefore deny admission of the contention.

15. COLA Should Consider Radiological, Environmental, and Public Health Impacts of Decommissioning

In this contention Petitioners claim the following:

> The COLA should consider all radiological, environmental and public health impacts related to decommissioning of Comanche Peak Units 3 and 4.[363]

Petitioners fault the ER for providing only an initial projection of expected impacts of decommissioning, and no statement on the methods of decommissioning, instead putting this off to a later date.[364] Petitioners criticize the assumption in the ER that the impacts of decommissioning will be negligible, as well as Applicant's alleged failure to analyze various environmental and health impacts.[365] In Petitioners' view, the COLA should "carefully consider decommissioning impacts," including: "the likelihood that a decommissioned plant will be disassembled and transported to a site that will be the recipient of highly irradiated materials";

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[358] *Id.* at 74 (citing *Oyster Creek,* CLI-07-8, 65 NRC at 124, *aff'd sub nom., New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132 (3d Cir. 2009)).

[359] *Id.* at 74-75.

[360] NRC Staff Answer at 52-55.

[361] *Id.* at 56.

[362] 10 C.F.R. § 2.309(f)(1)(iii), (vi).

[363] Petition at 36.

[364] *Id.* (citing ER at 5.11-3).

[365] *Id.* at 37 (citing ER at 5.9-1).

the possibility "that off-site removal of a decommissioned nuclear plant will not be a practicable alternative" and the "environmental consequences and public health impacts of the *in situ,* long-term radioactive decay of Comanche Peak units 3 and 4"; and several impacts of "various decommissioning waste streams."[366] In addition, Petitioners argue, the following matters should be considered: the feasibility of "off-site disposition of decommissioning materials"; the "probability that there will be significant resistance to transportation and disposition of highly irradiated decommissioned plant materials to a remote site"; the possibility that "adequate technologies for decommissioning are not developed in the future or proved to be inadequate for the task"; as well as "contingencies that would require long-term storage of [*sic*] Comanche Peak Units 3 and 4 because either decommissioning technology is inadequate or there is no remote site available to disposition wastes from decommissioning activities," and the "public health and environmental consequences related thereto."[367]

Applicant objects to Contention 15, asserting that it lacks adequate support, fails to establish a genuine dispute on a material issue of fact or law, and is "inconsistent with the commission's regulatory structure governing decommissioning."[368] Calling Petitioners' various claims "bald assertions," Applicant argues that "Petitioners simply ignore relevant information presented in the ER."[369] Regarding the regulatory framework on decommissioning, Applicant refers to the Commission's Generic Environmental Impact Statement (GEIS) for decommissioning of nuclear power plants, and points out that 10 C.F.R. §§ 50.82(a)(4), 52.110(d), 51.53(d), and 51.95 all contemplate decommissioning plans being provided in the post-shutdown phase of a plant.[370] Thus, Applicant states, there is no need at the COLA stage to provide any decommissioning plans or "describe in detail the site-specific impacts of decommissioning," and Contention 15 is effectively an attack on the NRC decommissioning rules.[371]

Moreover, according to Applicant, Petitioners fail to controvert relevant information in the ER that does in fact provide information on the impacts of decommissioning, and thus fail to provide "sufficient information" under 10 C.F.R. § 2.309(f)(1)(vi) to show a genuine dispute on a material issue of fact or law.[372] Applicant notes that the ER cites the Decommissioning GEIS — which

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[366] *Id.* at 37.

[367] *Id.* at 37-38.

[368] Luminant Answer at 75.

[369] *Id.*

[370] *Id.* at 76 (citing Office of Nuclear Reactor Regulation, NUREG-0586, "Generic Environmental Impact Statement on Decommissioning of Nuclear Facilities" at xiv (Supp. 1, Nov. 2002) (ADAMS Accession No. ML013090364) [hereinafter Decommissioning GEIS].

[371] *Id.* at 77.

[372] *Id.* (citing ER at 5.9-1, 5.9-3, Table 5.9-1); *id.* at 79 (citing ER at 5.9-1).

"discusse[s] in detail the NRC's evaluation of the radiological impacts of nuclear power plant decommissioning activities, including radiological doses to workers and members of the public," and concludes that various radiological and other impacts of decommissioning activities are "SMALL" — and that the ER states that detailed plans are to be developed in accordance with NRC rules prior to decommissioning.[373] Applicant also points out that the decommissioning GEIS specifically "takes into account different reactor designs (including [pressurized water reactors]) and advances in decommissioning technology."[374]

The NRC Staff argues that Petitioners have failed to show that the issues raised in Contention 15 are within the scope of this proceeding or material, and have failed to support the contention sufficiently to show a genuine dispute on a material issue of fact or law.[375] Pointing out that NRC regulations require, among other things, "a licensee to notify the NRC in writing within thirty days of permanently ceasing operations, and to submit a post-shutdown decommissioning activities report (PSDAR) . . . within two years following permanent cessation of operations," the Staff also notes that, "[i]f after public notice and review the NRC approves the decommissioning plan at that time, the licensee has sixty years to complete decommissioning."[376] Staff argues that Petitioners provide "no alleged facts, documents, sources, or expert opinions to support" their allegations of "long-term radioactive decay of Units 3 and 4" and associated health impacts.[377] Finally, the Staff also cites the Decommissioning GEIS noted above, in which environmental impacts of decommissioning activities are evaluated.[378]

Licensing Board Ruling on Contention 15

As demonstrated by Applicant and the NRC Staff in their Answers, the rules regarding decommissioning, along with the Decommissioning GEIS, address the concerns Petitioners raise, and provide that licensees address these matters at the time of, and after, shutdown of operations at a nuclear power plant. Thus, Petitioners' concerns as they have stated them are neither material nor within the scope of this proceeding, nor have Petitioners supported them sufficiently to show

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[373] *Id.* at 78 (citing ER at 5.9-1, and discussing the Decommissioning GEIS §§ 4.3.8, 4.3.8.4, 4.3.17, 4.3.18).

[374] *Id.* at 79-80 (citing Decommissioning GEIS at xi-xii; NRC Fact Sheet, Decommissioning Nuclear Power Plants, at 10, *available at* http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/decommissioning.pdf; 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1).

[375] NRC Staff Answer at 57.

[376] *Id.* at 58 (citing 10 C.F.R. § 52.110(a)(1), (c), (d)(1)).

[377] *Id.* at 58; Petition at 37.

[378] NRC Staff Answer at 59.

a genuine dispute on a material issue of fact or law. We therefore deny admission of Contention 15.

16. Decommissioning Funding Assurance in COLA Is Inadequate

In this contention Petitioners contend:

> The Decommissioning Funding Assurance described in the application is inadequate to assure sufficient funds will be available to fully decontaminate and decommission Comanche Peak Units 3 and 4. Applicant must use the prepayment method of assuring decommissioning funding.[379]

At oral argument, Petitioners through counsel "concede[d] . . . that [Applicant and NRC Staff] have answered the questions that we raised in the original petition," and withdrew Contention 16.[380]

17. ER Makes Unrealistic Assumptions About Emergency Evacuation Model and Plan

In this contention Petitioners assert:

> The Comanche Peak Environmental Report makes unrealistic assumptions about the efficacy of the emergency evacuation model and plan.[381]

Petitioners in this contention challenge the assumption that 100% of the affected population in the event of a radiological emergency would be evacuated, and allege that dose and dollar risk assessments for the Application's severe accident analysis are understated because the model used "does not adequately account for evacuees that are transported over 25 miles from the Comanche Peak site because they 'disappear' from the emergency evacuation analysis."[382]

After the filing of this contention, Applicant filed information indicating that a new sensitivity study had been performed, relating to Contention 17 and the effects of changes in evacuation parameters on doses to evacuees, and indicating certain planned changes to ER § 7.2 to reflect the sensitivity study.[383] At oral argument, counsel for Petitioners did not dispute that the new study addresses the

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[379] Petition at 38.

[380] Tr. at 357.

[381] Petition at 41.

[382] *Id.* (citing ER at 7.2-3).

[383] *See* Letter from Steven P. Frantz, Counsel for Luminant, to Office of the Secretary (Apr. 29, 2009), with attached Letter from Rafael Flores to NRC Document Control Desk (Apr. 28, 2009).

specific concerns stated in Contention 17, with counsel stating that a question remained whether the sensitivity analysis itself was "adequately supported to arrive at the conclusions that it did."[384] Petitioners did not, however, challenge the sensitivity analysis, and have indicated that they do not intend to do so.[385]

Licensing Board Ruling on Contention 17

It appears to the Board that Contention 17 has been rendered moot by the new information filed by Applicant, and we therefore deny its admission in this proceeding.

18. ER Fails to Make Reasonable Assumptions About Alternatives to Constructing and Operating Units 3 and 4

In this contention Petitioners assert:

> The Comanche Peak Environmental Report is inadequate because it fails to make reasonable assumptions about alternatives to the proposed action of constructing and operating Comanche Peak Units 3 and 4.[386]

Petitioners in Contention 18 claim that the ER "generally understates the efficacy of alternative sources of electric power generation," arguing that the "COLA should evaluate alternative sources of generating capacity based on the current data available regarding capacity factors, technological advances that overcome intermittency objections regarding wind and solar power, and historical operational experience."[387] Petitioners point out that the ER "assumes that renewable fuels such as wind and solar cannot provide adequate baseload generating capacity," but contend that "recent advances in technology such as compressed air energy storage and improved battery storage capacity cast doubt on . . . assumptions concerning problems with intermittency."[388] Asking that the COLA "evaluate the competing technologies in light of current energy policy that places a greater emphasis on renewable fuels than on previous energy policy that favored nuclear power and fossil fuels," Petitioners challenge the analysis technique used in the ER to compare the advantages of nuclear and renewable fuels.[389]

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[384] Tr. at 361; *see also id.* at 360.
[385] *Id.* at 361-62.
[386] Petition at 42.
[387] *Id.* (citing ER at 9.2-1 *et seq.*).
[388] *Id.* at 42.
[389] *Id.* (citing ER at 9.2-3).

Petitioners challenge the ER's rationale that, because the units will be merchant power plants, conservation and demand side management programs "are not within the capability or responsibility of the wholesale baseload merchant generator."[390] Asserting that Applicant ignores the effectiveness of alternative programs, Petitioners also contend that the ER "fails to make a realistic comparison between the environmental impacts and public health consequences of nuclear power compared to renewable fuels," and advocates a "side-by-side comparison of mortality and morbidity consequences of nuclear power compared to renewable fuels," as well as a comparison of the effects of catastrophic accidents and greenhouse gases with each.[391] Petitioners assert that such an analysis is "crucial because of the relationship between greenhouse gases and global warming and because it is expected that the use of fossil fuels to support the uranium fuel cycle will become more expensive over time."[392] It is claimed that this "circumstance will be aggravated by the anticipated use of foreign produced uranium that will have a greater greenhouse gas impact because of, among other reasons, a longer transportation supply line."[393] In contrast, Petitioners assert, "renewable fuel technologies are expanding manufacturing capacities domestically."[394]

Petitioners support Contention 18 with a 43-page report on "Nuclear Costs and Alternatives" prepared by Dr. Arjun Makhijani and the SEED Coalition.[395] In this report, in addition to arguing that additional generation is not needed,[396] and comparing cost and emission amounts,[397] the authors discuss wind and solar power,[398] arguing that these can be used for reliable power generation, when combined with natural gas and various storage methods.[399] Specific reference is made to storage requirements under consideration in the Texas legislature and to molten salt storage, for example.[400] It is suggested that a combination of natural gas, wind, solar, and storage sites in Texas could also produce baseload power,[401] and stated that the National Renewable Energy Laboratory has "developed a

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[390] *Id.* at 42-43 (quoting ER at 9.2-3).

[391] *Id.* at 43.

[392] *Id.*

[393] Petition at 43-44.

[394] *Id.* at 44.

[395] *Id.,* Arjun Makhijani and SEED Coalition, "Nuclear Costs and Alternatives" (2009) [hereinafter Costs and Alternatives].

[396] Costs and Alternatives at 1-5.

[397] *Id.* at 5-25.

[398] *Id.* at 25-43.

[399] *Id.* at 35-43.

[400] *Id.* at 35.

[401] *Id.* at 42.

scheme for using wind power, compressed air energy storage, and natural gas for heating the compressed air as a baseload system."[402]

Applicant opposes Contention 18, arguing that wind and solar power and energy conservation are not reasonable alternatives for producing baseload power, and that it is "not required, as a matter of law, to evaluate in depth any energy alternative or energy-efficient or conservation measure that cannot produce baseload power."[403] Applicant cites the Commission's decision in the *Clinton* early site permit proceeding, in which it stated that the applicant was "not obliged to examine general efficiency or conservation proposals that would do nothing to satisfy [the] particular project's goals [of producing baseload power]."[404] Applicant points out that the Commission in addition "rejected wind and solar power on the same grounds," namely, "[b]ecause a solely wind- or solar-powered facility could not satisfy the project's purpose [of providing baseload power]."[405]

Applicant challenges Petitioners' claims regarding the use of compressed air and batteries to supplement wind and solar power, as lacking adequate support and failing to establish a genuine dispute on a material issue of law or fact.[406] Characterizing Petitioners' statement that recent technology advances "cast doubt on some of the [ER's] assumptions" as "vague and conclusory," Applicant asserts that Dr. Makhijani's report provides insufficient information or analysis to establish a genuine dispute, because he "does not assert, much less demonstrate, that 'dispatchable electricity' from those sources is anywhere near equivalent to 3200 MWe of baseload power."[407] Applicant avers that references to "experiments," "plans," "scheme[s]," and "concept[s]," do not provide sufficient support for the contention.[408]

Applicant also points out that the COLA does contain an explicit discussion of the "relative environmental impacts of an array of alternative energy sources for comparably-sized (i.e., 3200 MWe) facilities," citing various sections of the ER, including sections 9.2.2.1 through 9.2.2.5 and section 9.2.3.3.[409] Further, Applicant notes, there is no requirement that comparisons as to mortality, morbidity, accidents, and greenhouse gases be done regarding renewable energy sources.[410]

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[402] *Id.* at 40.

[403] Luminant Answer at 94.

[404] *Id.* (quoting *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 808 (2005), *aff'd sub nom. Environmental Law & Policy Center v. NRC,* 470 F.3d 676 (7th Cir. 2006)).

[405] *Id.* at 94-95 (quoting *Clinton,* CLI-05-29, 62 NRC at 810).

[406] *Id.* at 96.

[407] *Id.* at 96-97.

[408] *Id.* at 97.

[409] *Id.* at 98.

[410] *Id.* at 98-99.

Finally, at oral argument Applicant emphasized that in its view Petitioners have not shown that the alternatives they propose are commercially viable, and therefore they are not "reasonable alternatives."[411]

The NRC Staff argues that Contention 18 is inadmissible for many of the same reasons put forward by Applicant (also citing the Commission's *Clinton* decision), noting that under 10 C.F.R. § 51.45(b)(3), only "appropriate alternatives" must be explored,[412] and that under Supreme Court case law, "the concept of alternatives must be bounded by some notion of feasibility."[413] The Staff also challenges the reasonableness of the alternatives proposed by Petitioners, emphasizing, again, the Applicant's goal of baseload power generation, and asserting that Petitioners have "failed to challenge the analysis by the applicant that renewable energy resources are not currently available for baseload power."[414]

Licensing Board Ruling on Contention 18

Before making our ruling on Contention 18, we find it appropriate to review the NEPA and NRC standards for an alternatives review, and for this purpose find that the following discussion of another licensing board in a recent decision in the *Levy County* proceeding provides a good overview of these standards:

> The duty to consider alternatives originates with two provisions of NEPA — (1) 42 U.S.C. § 4322(2)(C)(iii), which requires that an agency's environmental impact statement (EIS) include "a detailed statement [of the] alternatives to the proposed action," and (2) 42 U.S.C. § 4322(2)(E), which requires that an agency "study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." The NRC and the [Council on Environmental Quality (CEQ)] agree that the NEPA alternatives analysis is the "heart of the environmental impact statement." [10 C.F.R. Part 51, Subpart A, Appendix A, § 5; 40 C.F.R. § 1502.14; *City of Shoreacres v. Waterworth,* 420 F.3d 440, 450 (5th Cir. 2005).] Likewise, they agree that the law requires that the EIS identify and discuss "all reasonable alternatives." 10 C.F.R. Part 51, Subpart A, Appendix A, § 5; 40 C.F.R. § 1502.14.

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[411] Tr. at 375; *see* Tr. at 371-72. We note that Applicant also cited NUREG-1555 to us in a letter submitted after oral argument. *See* Letter from Jonathan M. Rund, Counsel for Applicant, to Licensing Board (June 17, 2009) (quoting, *inter alia,* NUREG-1555 at 9.2.2-4 (Oct. 1999) (To be considered a competitive (i.e., reasonable) alternative, an "energy conversion technology should be developed, proven, and available in the relevant region")).

[412] NRC Staff Answer at 66-67.

[413] *Id.* at 67 (quoting *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.,* 435 U.S. 519, 551 (1978)).

[414] *Id.* at 68. Staff counsel added at oral argument that in its view Petitioners had not shown the viability of the alternatives they propose. Tr. at 379-80.

This does not mean, however, that every conceivable alternative must be included in the EIS [quoting language from *Vermont Yankee,* 435 U.S. at 551]. . . . [T]he "rule of reason" governs the agency's duty to identify and consider all reasonable alternatives under NEPA. [*Westlands Water District v. U.S. Department of Interior,* 376 F.3d 853, 868 (9th Cir. 2004); *City of Bridgeton v. Federal Aviation Administration,* 212 F.3d 448, 458 (8th Cir. 2000).]

The goals of the project's sponsor are given substantial weight in determining whether an alternative is reasonable. *City of New York v. U.S. Department of Transportation,* 715 F.2d 732, 742 (2d Cir. 1983). In this regard, "[a]n agency cannot redefine the [applicant's] goals," [*Citizens Against Burlington, Inc. v. Busey,* 938 F.2d 190, 199 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)], and the EIS alternatives analysis should be based around the applicant's goals, including its economic goals. *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001) (internal citations omitted).

Commission decisions follow the foregoing principles. "When reviewing a discrete license application filed by a private applicant, a federal agency may appropriately 'accord substantial weight to the preferences of the applicant,' and may take into account the 'economic goals of the project's sponsor.'" *Id.* Likewise, the Commission has stated that "[i]n considering alternatives under NEPA, an agency must 'take into account the needs and goals of the parties involved in the application.'" [*Private Fuel Storage, L.L.C.*] (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 146 (2006) (quoting *Citizens Against Burlington, Inc.,* 938 F.2d at 199). In addition, the NRC regulations state that "[a]n otherwise reasonable alternative will not be excluded from discussion solely on the ground that it is not within the jurisdiction of the NRC." 10 C.F.R. Part 51, Subpart A, Appendix A, § 5.

Although the applicant's goals are given substantial weight, NEPA does not allow the applicant to define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered under 42 U.S.C. § 4322(2)(C)(iii) and (E). "[B]lindly adopting the applicant's goals is a 'losing proposition' because it does not allow for the full range of alternatives required by NEPA." [*Environmental Law & Policy Center v. NRC,* 470 F.3d 676, 683 (7th Cir. 2006); *Simmons v. U.S. Army Corps of Engineers,* 120 F.3d 664, 669 (7th Cir. 1997).] Furthermore, "NEPA requires an agency to 'exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of the project' and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals." *Envtl. Law & Policy Ctr.,* 470 F.3d at 683 (quoting *Simmons,* 120 F.3d at 669). An applicant "may not define the objectives of its action in terms so unreasonably narrow that only one alternative . . . would accomplish the [applicant's] goals," because this would make the agency's EIS alternatives analysis a "foreordained formality." *Citizens Against Burlington,* 938 F.2d at 199. As the CEQ has said, "reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant." [Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,027 (Mar. 23, 1981).] While NRC

> does not consider CEQ pronouncements to be binding, [Environmental Protection Regulations for Domestic Licensing and Related Conforming Amendments, 49 Fed. Reg. 9352 (Mar. 12, 1984)], they are entitled to substantial deference. *See* [*Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 725, 743 (3d Cir. 1989)].[415]

Taking these principles as well as the Commission's *Clinton* decision[416] into account, we find that some parts of Contention 18 are not admissible. These include Petitioners' references to alternatives that do not address baseload power generation, such as demand-side management and conservation. Nor do we find that a "side-by-side comparison of mortality and morbidity consequences of nuclear power compared to renewable fuels" generally, or a comparison of the effects of catastrophic accidents and greenhouse gases with regard to each generally, falls under the types of alternatives that must be discussed under NEPA and Commission authority.

Petitioners do, however, provide a "fact-based argument," through the report attached to their Petition, to the effect that combinations of wind, solar, storage options, and supplemental natural gas would be able to produce viable baseload power generation in Texas. This alternative would not be excluded under relevant authority as quoted above, and indeed, not to permit Petitioners to challenge the lack of any discussion of such alternatives would be tantamount to "allow[ing] the applicant to define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered."

We therefore admit the portion of Contention 18 that asserts the following, and admit the contention as so reformulated:

> The Comanche Peak Environmental Report is inadequate because it fails to include consideration of alternatives to the proposed Comanche Peak Units 3 and 4, consisting of combinations of renewable energy sources such as wind and solar power, with technological advances in storage methods and supplemental use of natural gas, to create baseload power.

19. ER Fails to Consider Methods to Prevent Aircraft Attack on Units 3 and 4

In Contention 19 Petitioners state:

> The Comanche Peak Environmental Report fails to consider methods to prevent an

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[415] *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 126-28 (2009).

[416] CLI-05-29, 62 NRC at 801.

aircraft attack on Comanche Peak Units 3 and 4 and the resulting environmental and public health consequences.[417]

Petitioners acknowledge the NRC's decision that NEPA does not require consideration of the impacts of terrorist attacks on nuclear power plants.[418] Petitioners point out, however, that this decision was rejected by the Ninth Circuit in *San Luis Obispo Mothers for Peace.*[419] Thus, Petitioners conclude, "the COLA for Comanche Peak Units 3 and 4 should include a detailed analysis of the potential threats represented by terrorist attacks."[420] Petitioners further "urge the Commission to reconsider" its decision on remand from the Ninth Circuit in the same case,[421] on the grounds that Comanche Peak "is in close proximity (about 58 miles) to Dallas-Forth Worth International Airport."[422] Given this close proximity, Petitioners argue, "[t]he frequency of flights in the area increases the probability that an aircraft attack or accident might occur on the Comanche Peak site."[423]

In opposition to the admissibility of Contention 19, both Applicant and the NRC Staff cite the Commission's 2007 decision in *Oyster Creek,*[424] in which "the Commission expressly rejected the assertion that the Ninth Circuit's decision in *San Luis Obispo Mothers for Peace* requires the NRC and its licensees to address the environmental impacts of a successful terrorist attack on a nuclear plant."[425] Applicant and NRC Staff note that *Oyster Creek* was recently upheld by the Third Circuit in *New Jersey Department of Environmental Protection.*[426]

Licensing Board Ruling on Contention 19

In *Oyster Creek,* the Commission stated explicitly that, notwithstanding the Ninth Circuit's decision in *San Luis Obispo Mothers for Peace,* "we reiterate

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[417] Petition at 44.

[418] *Id.*

[419] *Id.* (citing *San Luis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016 (9th Cir. 2006), *cert. denied,* 549 U.S. 1166 (2007)).

[420] *Id.* at 44.

[421] *Id.* (citing *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509 (2008)).

[422] *Id.* at 44.

[423] *Id.*

[424] Luminant Answer at 102; NRC Staff Answer at 70 (citing *Oyster Creek,* CLI-07-8, 65 NRC at 124).

[425] Luminant Answer at 102.

[426] Luminant Answer at 103; NRC Staff Answer at 70-71 (citing *N.J. Dep't of Envtl. Prot.,* 561 F.3d at 132).

our longstanding view that NEPA demands no terrorism inquiry."[427] This Commission precedent compels us to reject Contention 19. Under *Oyster Creek,* we are obliged to find that the contention raises issues beyond the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii), and thus fails to raise a genuine dispute with the COLA on a material issue of fact or law, contrary to 10 C.F.R. § 2.309(f)(1)(vi). Regarding Petitioners' request that the Commission reconsider its decision in *Diablo Canyon,* it is obvious that a licensing board lacks the authority to overturn a Commission decision.

Based on the foregoing, we deny admission of Contention 19.

VI. CONCLUSION

Having found standing on the part of all Petitioners, and admitted two of their contentions, we conclude that the requested hearing in this proceeding should be granted.

VII. ORDER

Based on the preceding findings, rulings, and conclusion, we hereby ORDER the following:

A. Petitioners SEED Coalition, Public Citizen, True Cost of Nukes, and State Representative Lon Burnam are admitted as parties in this proceeding, and their Petition for Intervention and Request for Hearing is granted in part and denied in part. A hearing is GRANTED with respect to their Contentions 13 and 18, reframed and limited as follows:

> Contention 13. Impacts from a severe radiological accident at any one unit on operation of other units at the Comanche Peak site have not been, and should be, considered in the Environmental Report.
>
> Contention 18. The Comanche Peak Environmental Report is inadequate because it fails to include consideration of alternatives to the proposed Comanche Peak Units 3 and 4, consisting of combinations of renewable energy sources such as wind and solar power, with technological advances in storage methods and supplemental use of natural gas, to create baseload power.

[427] *Oyster Creek,* CLI-07-8, 65 NRC at 126; *see also id.* at 128-29 (stating that the NRC "is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question").

B. The Board will issue its ruling on Contention 7, and whether information provided by Applicant renders it moot, at a later date. All other contentions are DENIED.

C. Applicant's Motion to Strike is GRANTED, to the extent stated in Section IV, *supra.*

D. Regarding the conduct of the hearing in this proceeding, as Petitioners have not requested that the hearing be conducted under 10 C.F.R. Part 2, Subpart G, and as it appears, to the effect argued by Applicant,[428] that neither admitted contention would require eyewitness testimony or other fact-specific testimony pertaining to a past activity, motive, or intent, we ORDER that the proceeding be conducted under the procedures set forth at 10 C.F.R. Part 2, Subparts C and L.

E. In September the Licensing Board will set a prehearing telephone conference to discuss with the parties relevant scheduling matters in the proceeding, and thereafter issue an Order setting forth a schedule of further proceedings in this matter. Prior to such time, the parties shall confer in the interest of reaching consensus on scheduling matters and submitting a joint proposal to the Board for its consideration.

F. We note that the Parties have indicated that they expect certain "SUNSI" contentions may be filed in this proceeding, and through issuance of a Protective Order proposed by the parties, we have approved the parties' proposed deadlines for the filing of the same.[429] With regard to any other future contentions, the parties are advised that any contentions based on new information should be filed within thirty (30) days of the information becoming available to Petitioners in order to be considered timely under 10 C.F.R. § 2.309(f)(2).

G. This Order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.311. Any petitions for review meeting applicable requirements set forth in that section must be filed within ten (10) days of service of this Memorandum and Order. In addition, interlocutory review may also be requested as provided by 10 C.F.R. § 2.341(f)(2).

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[428] Applicant Answer at 105-06.

[429] *See supra* note 20.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Ann Marshall Young, Chair
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Dr. Alice C. Mignerey
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 6, 2009[430]

[430] Copies of this Order were filed this date with the agency's E-filing system for service to all parties.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

William J. Froehlich, Chairman
Dr. Michael F. Kennedy
Dr. Randall J. Charbeneau

In the Matter of **Docket No. 52-039-COL**
(ASLBP No. 09-890-10-COL-BD01)

PPL BELL BEND, LLC
(Bell Bend Nuclear Power Plant) **August 10, 2009**

This case arises from an application by PPL Bell Bend, LLC (PPL) for a combined license (COL) to construct and operate one U.S. Evolutionary Power Reactor (U.S. EPR) which it proposes to locate adjacent to the PPL Susquehanna Steam Electric Station (SSES or Susquehanna) in Luzerne County, Pennsylvania. Petitions to intervene and requests for hearing were timely filed by Gene Stilp and Taxpayers and Ratepayers United (Stilp/TRU) and Eric Joseph Epstein (Mr. Epstein). The Board found that (1) Stilp/TRU have standing to participate but have not proffered any admissible contentions, and (2) Mr. Epstein does not have standing and has not proffered any admissible contentions. Based on these rulings, the Board did not admit either Stilp/TRU or Mr. Epstein as parties and terminated this proceeding.

RULES OF PRACTICE: INTERVENTION

Any person or organization that seeks to intervene as a party in an adjudicatory proceeding addressing a proposed licensing action must: (1) establish that it has standing; and (2) proffer at least one admissible contention.

RULES OF PRACTICE: STANDING TO INTERVENE

Under NRC regulations, a petitioner must provide certain basic information to demonstrate that it has standing to intervene in the licensing process. This information includes: (1) the nature of the petitioner's right under the governing statutes to be made a party; (2) the nature of the petitioner's interest in the proceeding; and (3) the possible effect of any decision or order on the petitioner's interest. In determining whether an individual or organization should be granted party status "as of right," the NRC applies judicial standing concepts that require a participant to establish: (1) it has suffered or will suffer a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statutes (*e.g.,* the Atomic Energy Act of 1954 (AEA) and the National Environmental Policy Act of 1969 (NEPA)); (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision.

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

The Commission recognizes that a petitioner may have standing based upon its geographic proximity to the proposed facility. In certain circumstances, a petitioner's proximity to the facility triggers a presumption that it has standing to intervene without the need to specifically plead injury, causation, and redressability if the petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm. In reactor licensing proceedings, that zone is generally deemed to constitute the area within a 50-mile radius of the site.

RULES OF PRACTICE STANDING TO INTERVENE (REPRESENTATIONAL)

When an organization wants to intervene in a representational capacity it must: (1) demonstrate that the licensing action will affect at least one of its members; (2) identify that member by name and address; and (3) show that it is authorized by that member to request a hearing on his or her behalf. Additionally, the member must qualify for standing in his or her own right, the interests that the organization seeks to protect must be germane to its own purpose, and neither the petitioner's contentions nor the requested relief must require an individual member to participate in the proceeding. In determining whether a petitioner has established standing, the Commission has directed us to construe the petition in favor of the petitioner.

RULES OF PRACTICE: AMENDMENT OF PETITIONS; *PRO SE* PETITIONERS

Licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing. The benefit of the doubt should be given to the potential intervenor in order to prevent the dismissal of a petition due to inarticulate draftsmanship or procedural or pleading defects. Petitioners are usually permitted to amend petitions containing curable defects and *pro se* petitioners are held to a less rigorous standard.

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

Because agencies are not constrained by Article III of the Constitution; nor are they governed by judicially created standing doctrines restricting access to federal courts. The criteria for establishing administrative standing may permissibly be less demanding than the criteria for judicial standing.

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

The proximity presumption is neither outdated nor overly simplified and obsolete.

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

Every petitioner bears the burden of demonstrating standing in order to participate in hearings before a licensing board. When a petitioner lives more than 50 miles from the proposed site, he must explain the extent of his day-to-day activities within the vicinity of the plant site in order to demonstrate he has standing in this proceeding.

RULES OF PRACTICE: STANDING TO INTERVENE

However, a petitioner has an affirmative duty to demonstrate that it has standing in each proceeding in which it seeks to participate because a petitioner's status can change over time and the bases for its standing in an earlier proceeding may no longer apply.

RULES OF PRACTICE: STANDING TO INTERVENE

It is the burden of the petitioner to clearly state the distance from his home to the proposed facility, the extent, frequency, and duration which the petitioner's business and community service work take him to the vicinity, etc., in a petition to intervene. Merely because a petitioner might have had standing in an earlier proceeding does not automatically grant standing in subsequent proceedings. Absent a showing of specific information regarding the geographic proximity, the timing and the duration of a petitioner's visits, the Board is unable to conclude that a petitioner has standing to intervene.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

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)(1). An admissible contention must: (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) 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 (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or if the application is alleged to be deficient, the identification of such deficiencies and the supporting reasons for this allegation.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

A contention that attacks applicable statutory requirements, challenges the basic structure of the NRC's regulatory process, or merely expresses generalized policy grievances is not appropriate for a licensing board hearing. A contention that attacks a Commission rule, or seeks to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, is inadmissible.

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)

A petitioner must provide some minimal basis indicating the potential validity of the contention. The Commission's rules bar contentions where petitioners have only what amounts to generalized suspicions, hoping to substantiate them later.

Although a petitioner does not have to prove its contention at the admissibility stage, mere notice pleading is insufficient. If a petitioner fails to provide the requisite support for its contentions, the Board may not make assumptions of fact that favor the petitioner or supply information that is lacking. Simply attaching materials or documents, without explaining their significance, is also insufficient. Moreover, any contention that fails to controvert the application directly, or that mistakenly asserts the application fails to address an issue that the application does address, is defective. A petitioner cannot demonstrate the existence of a genuine issue of material fact by simply restating information provided in the application and asserting that further analysis is required.

COMBINED LICENSE: WASTE CONFIDENCE RULE

The Commission in its Waste Confidence Rule has determined that there is reasonable assurance that a geologic repository will be available by 2025 and that sufficient repository capacity will be available within 30 years beyond the licensed life to dispose of high-level waste and spent fuel generated by any reactor up to that time. The Commission has also determined that spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years in an onsite spent fuel pool or an onsite or offsite independent spent fuel storage installation.

COMBINED LICENSE APPLICATIONS: WASTE CONFIDENCE RULE

The Waste Confidence Rule is applicable to all new reactor proceedings, and contentions challenging the rule or seeking its reconsideration are inadmissible.

RULES OF PRACTICE: CHALLENGE TO COMMISSION REGULATIONS

In order to challenge a regulation, a petitioner must submit a supporting affidavit setting forth "with particularity" the special circumstances that justify the waiver or exception requested.

RULES OF PRACTICE: CONTENTIONS (ABEYANCE)

The Commission recently ruled that for a contention to be held in abeyance, it must otherwise be admissible. A decision may be referred to the Commission if it raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding.

COMBINED LICENSE APPLICATIONS: ENVIRONMENTAL ISSUES (SCOPE)

The Commission has made its position clear that — outside the Ninth Circuit — NEPA does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks on NRC-licensed facilities. Furthermore, the Third Circuit upheld the Commission's determination that NEPA does not demand any terrorism inquiry. Licensing boards lack the authority to reconsider these legal rulings and must apply the Commission's directive that outside the Ninth Circuit, NEPA does not require the evaluation of the impact of terrorist attacks by aircraft or other means.

COMBINED LICENSE APPLICATIONS: REFERENCE TO DESIGN CERTIFICATION APPLICATIONS

NRC regulations in Part 52 allow a COLA to reference a certified design that has been docketed but not yet approved. Until the design is certified and the rulemaking proceeding concluded, the design continues to change, creating potentially new safety and environmental concerns. Petitioners can challenge any generic issues as part of the design certification rulemaking process and will have an opportunity to file new contentions related to material new information regarding site-specific plant design issues.

COMBINED LICENSE APPLICATIONS: DECOMMISSIONING FUNDING ASSURANCES

The regulations require that at the time the combined license application is submitted, it must identify the method of decommissioning funding assurance that the applicant proposes to use and to show that the method complies with any applicable financial test. Thus a parent company guarantee is only acceptable if it and the financial test are as contained in Appendix A to 10 C.F.R. Part 30.

COMBINED LICENSE APPLICATIONS: DECOMMISSIONING FUNDING ASSURANCES

The regulations are clear that a COL applicant does not need to provide the NRC, at the time the application is submitted, with its final signed documents assuring the decommission funding, and that the holder of a COL must do so 30 days after notice is published regarding the fuel load. The role of a licensing board is to decide whether an applicant has supplied the requisite information to the NRC, and whether the petitioners have identified any defect in that information.

COMBINED LICENSE APPLICATIONS: DECOMMISSIONING FUNDING ASSURANCES

The regulations do not dictate which financial assurance method an applicant must use. Instead, an applicant can choose "one or more" of the funding methods provided in 10 C.F.R. § 50.75(e). It is beyond the authority of this Board to say which method an applicant must use to fulfill the decommissioning funding assurance requirement. The Board can only decide whether or not the current funding proposal fulfills NRC requirements. Thus, a petitioner's assertion that an applicant must submit prepayment is inadmissible.

COMBINED LICENSE APPLICATIONS: FOREIGN OWNERSHIP

The AEA states that a license may not be issued "to an 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." The Commission makes clear that a foreign entity must be able to control or dominate an applicant in order for it to be considered a foreign owner. When the entity in question is simply a contractor working for an applicant that has no ownership, control, or domination over the applicant, they cannot be considered foreign owners.

COMBINED LICENSE APPLICATIONS: ENVIRONMENTAL JUSTICE

NEPA is the only legal grounds for an admissible contention relating to environmental justice issues. To qualify as an environmental justice contention, a petitioner must show that the affected local population qualifies as a minority or low-income population. Second, an admissible environmental justice contention must allege with the requisite documentary basis and support as required by 10 C.F.R. Part 2, that the proposed action will have significant adverse impacts on the physical or human environment that were not considered because the impacts to the community were not adequately evaluated. Accordingly, to be admissible, an environmental justice contention must show there are significant, adverse, environmental impacts that will result from the licensing of the reactor that will disproportionately affect minority and low-income populations.

MEMORANDUM AND ORDER
(Ruling on Petitions to Intervene and Requests for Hearing)

This case arises from an application by PPL Bell Bend, LLC (PPL or Ap-

plicant)[1] for a combined license (COL) to construct and operate one U.S. Evolutionary Power Reactor (U.S. EPR) which it proposes to locate adjacent to the PPL Susquehanna Steam Electric Station (SSES or Susquehanna) in Luzerne County, Pennsylvania. In response to a March 18, 2009, notice of opportunity for hearing in the *Federal Register,*[2] petitions to intervene and requests for hearing were timely filed on May 18, 2009, by Gene Stilp and Taxpayers and Ratepayers United (Stilp/TRU)[3] and Eric Joseph Epstein (Epstein).[4]

In this Memorandum and Order, we conclude that (1) Stilp/TRU have standing to participate but have not proffered any admissible contentions, and (2) Mr. Epstein does not have standing and has not proffered any admissible contentions. Based on these rulings, we do not admit either Stilp/TRU or Mr. Epstein as parties and terminate this proceeding.

I. BACKGROUND

The Bell Bend Application was filed by PPL on October 10, 2008, supplemented by several letters, and revised on February 27, 2009. The application was submitted pursuant to NRC's combined license regulations in 10 C.F.R. Part 52, Subpart C, which establish the procedures for the issuance of a combined

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[1] The Applicant is a single-purpose limited liability company created for the purpose of owning and operating the Bell Bend Nuclear Power Plant. PPL Bell Bend, LLC is a Delaware limited liability company. It is a subsidiary of PPL Bell Bend Holdings, LLC, which was created to facilitate the proposed development and financing of the Bell Bend unit. PPL Bell Bend Holdings, LLC is a subsidiary of PPL Nuclear Development, LLC. PPL Nuclear Development, LLC is a subsidiary of PPL Generation, LLC, which in turn is a subsidiary of PPL Energy Supply, LLC. PPL Generation, LLC owns and controls generating capacity of 11,556 MW in the United States. PPL Energy Supply, LLC is engaged in the generation of electric power in the U.S. and the delivery of electricity in the United Kingdom and is a subsidiary of PPL Energy Funding Corporation. PPL Energy Funding Corporation is the parent company for various finance and service companies serving PPL Corporation and certain of its affiliates, and is a subsidiary of PPL Corporation. PPL Corporation is the ultimate parent for all PPL's generation assets, generating operating companies, marketing and trading activities, and distribution companies. Bell Bend Nuclear Power Plant, Combined License Application, Part 1, General and Administration Information, Rev. 1, § 1.2 [Bell Bend Application].

[2] PPL Bell Bend, LLC; Combined License Application for the Bell Bend Nuclear Power Plant; Notice of Hearing, Opportunity to Petition for Leave to Intervene, and Associated Order, 74 Fed. Reg. 11,606 (Mar. 18, 2009).

[3] Petition to Intervene in the Radioactive Bell Bend Nuclear Power Plant Combined Construction and License Application by Gene Stilp and Taxpayers and Ratepayers United (TRU) (May 18, 2009) [Stilp/TRU Petition]. Two identical petitions were filed by Mr. Stilp. The first petition was submitted by Gene Stilp on behalf of Taxpayers and Ratepayers United. The second petition was submitted by Gene Stilp, on a *pro se* basis. For the purposes of this decision, we consider these to be one petition.

[4] Eric Joseph Epstein's Petition for Leave to Intervene, Request for Hearing, and Contentions with Supporting Factual Data (May 18, 2009) [Epstein Petition].

construction permit and operating license for a nuclear power plant. The Application incorporates by reference the design certification application submitted on December 11, 2007, by AREVA NP (AREVA) for the U.S. EPR, and the proposed design control document (DCD) that is part of the design certification application.[5] The COL, if issued, would authorize PPL to construct and operate the Bell Bend Nuclear Power Plant (BBNPP). The general requirements for the contents of a COL application (COLA) are set forth in 10 C.F.R. §§ 52.77-52.80.

The NRC Staff published a "Notice of Receipt and Availability of Application for a Combined License" for the proposed facility in the *Federal Register* on November 13, 2008.[6] The NRC accepted the Application for docketing on December 29, 2008,[7] and published a "Notice of Hearing on the Application" on March 18, 2009, which provided members of the public 60 days to file petitions for leave to intervene in this proceeding.[8] Mr. Epstein and Stilp/TRU timely submitted their petitions to intervene.

The Applicant and the NRC Staff each filed answers on June 12, 2009.[9] Both the NRC Staff and the Applicant challenge the standing of Messrs. Stilp and Epstein. The Applicant also challenges the standing of TRU. The NRC Staff, however, concluded that TRU has established representational standing (through its member Adam Helfrich, who the NRC Staff admits has established standing to intervene in his own right and authorized TRU to represent his interests). Both the NRC Staff and the Applicant oppose the admission of all nine proffered contentions.

Mr. Epstein filed a joint reply on June 19, 2009.[10] Stilp/TRU filed an unopposed motion on June 16, 2009, to file its reply on June 26, 2009.[11] By order issued June 17, 2009, the Board granted the motion.[12] Stilp/TRU filed its joint reply

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[5] Bell Bend Application, Part 2: Final Safety Analysis Report, Rev. 1, § 1.1 [Bell Bend FSAR].

[6] 73 Fed. Reg. 67,214 (Nov. 13, 2008).

[7] Acceptance for Docketing of an Application for Combined License for Bell Bend Nuclear Power Plant, 73 Fed. Reg. 79,519 (Dec. 29, 2008).

[8] 74 Fed. Reg. at 11,606.

[9] Applicant's Answer to Petitions to Intervene (June 12, 2009) [PPL Answer]; NRC Staff's Answer to "Petition to Intervene in the Radioactive Bell Bend Nuclear Power Plant Combined Construction and License Application by Gene Stilp and Taxpayers and Ratepayers United (TRU)" (June 12, 2009) [NRC Staff Stilp/TRU Answer]; NRC Staff Answer to "Eric Joseph Epstein's Petition for Leave to Intervene, Request for Hearing, and Presentation of Contentions with Supporting Factual Data" (June 12, 2009) [NRC Staff Epstein Answer].

[10] Eric Joseph Epstein's Reply to Applicant's Answers and the Nuclear Regulatory Commission Staff's Answer to Eric Joseph Epstein Petition for Leave to Intervene, Request for Hearing, and Presentation of Contentions with Supporting Factual Data (June 19, 2009) [Epstein Reply].

[11] Unopposed Motion for Extension of Time to File Reply to Applicant's and NRC Staffs' Answer to Petition to Intervene in Bell Bend Combined Construction and License Proceeding (June 26, 2009).

[12] Licensing Board Order (Granting Extension of Time to File Reply) (June 17, 2009).

on June 26, 2009.[13] Stilp/TRU included five exhibits in their reply consisting of relevant pleadings from the *Calvert Cliffs* COL proceeding.[14]

On June 26, 2009, Stilp/TRU also filed a motion to file supplemental pleadings on standing[15] and a supplemental standing declaration.[16] The NRC Staff and the Applicant filed answers on July 6, 2009.[17] The NRC Staff opposed the motion because Stilp/TRU did not address the nontimely filing factors of 10 C.F.R. § 2.309(c).[18] The Applicant did not object to the motion, but argued that even with the supplemental declaration, Stilp/TRU's petition did not establish standing.[19]

This Licensing Board was established by the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel on May 28, 2009, to preside over the Petitioners' challenges to the Application.[20]

II. ANALYSIS

Any person or organization that seeks to intervene as a party in an adjudicatory proceeding addressing a proposed licensing action must: (1) establish that it has standing; and (2) proffer at least one admissible contention.[21]

A. Standards Governing Standing

Under NRC regulations, a petitioner must provide certain basic information to demonstrate that it has standing to intervene in the licensing process.[22] This information includes: (1) the nature of the petitioner's right under the governing statutes to be made a party; (2) the nature of the petitioner's interest in the

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[13] Petitioners Gene Stilp, Pro Se, and Taxpayers and Ratepayers United (TRU)'s Reply Brief to Answers of Applicant and NRC Staff (June 26, 2009) [Stilp/TRU Reply].

[14] *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170 (2009).

[15] Motion for Permission to File Supplemental Standing Declaration for Gene Stilp and Taxpayers and Ratepayers United (TRU) (June 26, 2009).

[16] Supplemental Declaration of Standing of Gene Stilp, Pro Se, Individually, and as the Representative for Taxpayers and Ratepayers United (TRU) (June 26, 2009) [Supplemental Standing Decl.].

[17] NRC Staff's Answer to "Motion for Permission to File Supplemental Standing Declaration for Gene Stilp and Taxpayers and Ratepayers United (TRU)" (July 6, 2009) [NRC Staff Standing Answer]; Applicant's Answer to Motion to File Supplemental Declaration and Reply to Declaration (July 6, 2009) [PPL Standing Answer].

[18] NRC Staff Standing Answer at 2-3.

[19] PPL Standing Answer at 2-4.

[20] PPL Bell Bend LLC, Bell Bend Nuclear Power Plant; Establishment of Atomic Safety and Licensing Board, 74 Fed. Reg. 26,893 (June 4, 2009).

[21] 10 C.F.R. § 2.309(a).

[22] *Id.*

proceeding; and (3) the possible effect of any decision or order on the petitioner's interest.[23] In determining whether an individual or organization should be granted party status "as of right," the NRC applies judicial standing concepts[24] that require a participant to establish: (1) it has suffered or will suffer "a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute[s]" (*e.g.,* the Atomic Energy Act of 1954 (AEA) and the National Environmental Policy Act of 1969 (NEPA)); (2) the injury is fairly traceable to the challenged action; and (3) "the injury is likely to be redressed by a favorable decision."[25]

The Commission recognizes that a petitioner may have standing based upon its geographic proximity to the proposed facility.[26] In certain circumstances, a petitioner's proximity to the facility triggers a presumption that it "has standing to intervene without the need specifically to plead injury, causation, and redressability if the petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm."[27] In reactor licensing proceedings, that zone is generally deemed to constitute the area within a 50-mile radius of the site.[28]

When an organization wants to intervene in a representational capacity it must: (1) demonstrate that the licensing action will affect at least one of its members; (2) identify that member by name and address; and (3) show that it is authorized by that member to request a hearing on his or her behalf.[29] Additionally, the member must qualify for standing in his or her own right, the interests that the organization seeks to protect must be germane to its own purpose, and neither the petitioner's contentions nor the requested relief must require an individual member to participate in the proceeding.[30] In determining whether a petitioner has

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[23] 10 C.F.R. § 2.309(d)(1)(ii)-(iv).

[24] *Nuclear Management Co., LLC* (Monticello Nuclear Generating Plant), CLI-06-6, 63 NRC 161, 163 (2006).

[25] *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

[26] *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989).

[27] *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146 (2001).

[28] *Id.* at 149. *See also Duke Energy Carolinas, LLC* (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431, 438-39 (2008); *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 378-80 (2008); *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 303 (2008); *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 66 NRC 41, 52 (2007).

[29] *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000).

[30] *Consumers Energy Co.* (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409 (2007).

established standing, the Commission has directed us to "construe the petition in favor of the petitioner."[31]

B. Rulings on Standing

1. Gene Stilp

The Stilp/TRU petition states that Mr. Stilp owns a house and property less than 20 miles from the proposed BBNPP and his business activities frequently require him to travel within a 50-mile radius of this proposed plant.[32] The petition does not state whether Mr. Stilp resides at this property, nor does it identify his residence.[33] The NRC Staff and PPL note that the petition does not describe Mr. Stilp's contacts with this property, the actual property, or the nature of his interest in it.[34] Furthermore, according to both the NRC Staff and PPL, the petition does not describe the locations within a 50-mile radius of the proposed facility that Mr. Stilp visits for his business interests, or the nature of these visits — i.e., how often they occur, how long they last, etc.[35] Based on the petition alone, it would be difficult for us to find that Mr. Stilp has shown he has standing to participate in this proceeding. Stilp/TRU's Supplemental Standing Declaration, however, included additional information supporting Mr. Stilp's standing.

The Board grants Stilp/TRU's motion to file supplemental pleadings on standing. Licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing.[36] The benefit of the doubt should be given to the potential intervenor in order to prevent the dismissal of a petition due to inarticulate draftsmanship or procedural or pleading defects.[37] Petitioners are usually permitted to amend peti-

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[31] *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

[32] Stilp/TRU Petition at 2-3; Declaration of Gene Stilp in Support of Petitioners' Contention Regarding Environmental Policy of Low Level Radioactive Waste Storage in Pennsylvania ¶1 (May 18, 2009) [Stilp Decl.].

[33] PPL indicates that Mr. Stilp resides in Harrisburg, which is more than 50 miles from the proposed Bell Bend site. PPL Answer at 15.

[34] NRC Staff Stilp/TRU Answer at 9; PPL Answer at 16.

[35] NRC Staff Stilp/TRU Answer at 9; PPL Answer at 17.

[36] *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-91-7, 33 NRC 179, 195 (1991) (citing *Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-146, 6 AEC 631 (1973)).

[37] *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-8, 39 NRC 116, 120 (1994).

tions containing curable defects and *pro se* petitioners are held to a less rigorous standard.[38]

The Board notes that the Supplemental Standing Declaration explains in greater detail Mr. Stilp's connection to the home he owns at 275 Poplar Street in Wilkes Barre. The declaration states that the home serves as both a storage center for one of Mr. Stilp's businesses and as an office for TRU.[39] Mr. Stilp also states in his supplemental declaration that he stays at the home on a weekly basis and regularly visits to take care of the house and surrounding grounds.[40] Mr. Stilp asserts that he travels to areas within 50 miles of the proposed plant on regular basis for business meetings, social events, and lectures.[41]

The Board disagrees with both the NRC Staff's and the Applicant's conclusion concerning Mr. Stilp's standing. We find the material in Mr. Stilp's Supplemental Standing Declaration addresses his personal, present, and future activities in sufficient detail to establish standing based on the proximity presumption. Having established proximity standing, Mr. Stilp need not separately establish the requisite injury, causation, and redressability elements.[42]

We emphatically disagree with PPL's judicial standing argument and reject PPL's attack on the Commission's proximity presumption.[43] Because agencies "are not constrained by Article III of the Constitution; nor are they governed by judicially-created standing doctrines restricting access to federal courts . . . . [t]he criteria for establishing 'administrative standing' . . . may permissibly be less demanding than the criteria for 'judicial standing.'"[44] We find, based on his activities within a 50-mile radius of the proposed facility and the other facts set forth in his Supplemental Standing Declaration, that Mr. Stilp has standing in this proceeding and need not make individual showings of injury, causation, and redressability.

2. TRU

TRU states it is a Pennsylvania corporation with members in the PPL service territory.[45] TRU states that its purpose for intervening in this proceeding is

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[38] *See, e.g., Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 NRC 397, 401 (1991).

[39] Supplemental Standing Decl. at 4-5, 9.

[40] *Id.* at 5.

[41] *Id.* at 6-8.

[42] *See St. Lucie,* CLI-89-21, 30 NRC at 329.

[43] We agree with the reasoning of the *Calvert Cliffs* Licensing Board in rejecting a similar argument put forth by the applicant in that proceeding. *Calvert Cliffs,* LBP-09-4, 69 NRC at 181-87.

[44] *Envirocare of Utah, Inc. v. NRC,* 194 F.3d 72, 74 (D.C. Cir. 1999).

[45] Stilp/TRU Petition at 4.

"fighting the 40% rate increase scheduled for all PPL customers on December 31, 2009" and that it "has an ongoing interest in costs associated with taxpayer and ratepayer economics, safety, nuclear power, energy efficiency, radioactive nuclear waste, alternative energy, and the risks posed by radioactive nuclear plants and radioactive nuclear waste dumps in all of Pennsylvania, including [BBNPP]."[46] TRU seeks representational standing to intervene in this proceeding based on the declaration of one of its members, Adam Helfrich.[47] Mr. Helfrich states in his declaration that he is a member of TRU, living within 17 miles of the proposed BBNPP.[48] The declaration includes his home address and states he is concerned that the construction and operation of the proposed plant could adversely affect his health and safety and the integrity of the environment where he lives.[49] Mr. Helfrich has authorized TRU to represent him in this proceeding.[50]

The NRC Staff does not challenge the representational standing of TRU because Mr. Helfrich established standing to intervene in his own right, authorized TRU to represent his interests in this proceeding, and because TRU's organizational interests are germane to Mr. Helfrich's interests.[51] PPL, however, argues that TRU does not have standing because, in PPL's view, Mr. Helfrich has not demonstrated that he has standing to intervene in his own right.[52] PPL would require TRU to elaborate on the injury-in-fact it (and Mr. Helfrich) would suffer under what PPL refers to as "contemporaneous concepts of standing."[53] PPL argues that the Commission's long-standing proximity presumption is outdated and overly simplified.[54] PPL would have any petitioner (in his/her own right or in a representational capacity) elaborate on detailed specific injury-in-fact, even if within the 50-mile proximity presumption.[55]

As stated above, this Board rejects the argument put forth by the Applicant concerning the proximity presumption.[56] The proximity presumption is neither "outdated" nor "overly simplified" and "obsolete."[57] We find, based on Mr.

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[46] *Id.* at 4-6.

[47] *Id.* at 4-7; Declaration of Adam Helfrich in Support of Taxpayers and Ratepayers United Association's Petition to Intervene in Bell Bend Licensing Proceeding (May 15, 2009) [Helfrich Decl.].

[48] Helfrich Decl. ¶¶ 1-2.

[49] *Id.* ¶ 3.

[50] *Id.* ¶ 4.

[51] NRC Staff Stilp/TRU Answer at 12.

[52] PPL Answer at 19-20.

[53] *Id.* at 20.

[54] *Id.* at 13.

[55] *Id.* at 20.

[56] *See* discussion *supra* at p. 397.

[57] PPL Answer 13-14.

Helfrich's residence within a 50-mile radius of the proposed facility and the other facts set forth in his declaration, that he need not make individual showings of injury, causation, and redressability. Mr. Helfrich has shown standing to participate in this proceeding in his own right, and, accordingly, TRU has established representational standing through him.[58] TRU and Mr. Helfrich are concerned about the proposed new reactor's effects upon their health and safety and the environment in which they live. An alleged injury to health and safety, shared equally by many, can form the basis for standing.[59] The Board finds that TRU has met the standards for representational standing set forth in *Palisades.*[60]

3. Eric Joseph Epstein

Appearing *pro se,* Eric Joseph Epstein, states that he meets the Commission's proximity presumption for standing regarding the proposed BBNPP.[61] He argues he was accorded standing in prior proceedings involving PPL's SSES plant located near the Bell Bend site.[62] He further states that he "routinely pierces the 50-mile proximate rule during his day-to-day activities simply by traveling to Lebanon, Schuylkill and northern [*sic*] and Dauphin counties."[63] Mr. Epstein notes the BBNPP is actually closer in proximity to his business and professional interests than the SSES.[64] He also states that he commutes to the township building in Grantville and "site visits occur at a minimum of once a week."[65] Finally, he states he commutes to the Sustainable Energy Fund (SEF) office in Allentown, and to meetings at offsite locations; therefore he must "necessarily pierce the 50-mile proximity zone for substantial periods of time."[66]

The NRC Staff observes that, with respect to his activities near the BBNPP, Mr. Epstein does not state where he lives or how far he resides from the proposed site.[67] The NRC Staff also notes Mr. Epstein's petition "does not provide details about how often or for what period of time his profession and interests cause

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[58] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999).

[59] *See Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1434 (1982). *See also Massachusetts v. U.S. Environmental Protection Agency,* 549 U.S. 497, 517-18 (2007).

[60] *See Palisades,* CLI-07-18, 65 NRC at 409.

[61] Epstein Petition at 9.

[62] *Id.* at 7.

[63] *Id.* at 8.

[64] *Id.*

[65] *Id.*

[66] *Id.* at 9.

[67] NRC Staff Epstein Answer at 8.

him to travel within 50 miles of the site."[68] The NRC Staff points out that Mr. Epstein also indicates that he commutes to the SEF office and to meetings at offsite locations that bring him within the 50-mile zone "for substantial periods of time," but he does not indicate how often he travels to Allentown or how long he stays in Berwick.[69]

PPL argues that Mr. Epstein has failed to establish sufficient contacts to the affected area to establish standing.[70] PPL observes that "simply piercing the 50-mile radius does not constitute sufficient contacts to establish a 'bond' between Mr. Epstein and the proposed reactor — particularly in the absence of information regarding the length of time that he is within the 50-mile radius or any indication of his closest proximity to the site."[71] Like the NRC Staff, PPL points out that the petition does not go into the details regarding the duration of Mr. Epstein's commute to Allentown, how close Mr. Epstein comes to BBNPP, and the number of such commutes in a given period of time.[72] Finally, PPL argues that Mr. Epstein fails to make the required showings of an injury-in-fact, causation, and redressability.[73]

Public participation through intervention is a positive factor in the licensing process and is to be encouraged.[74] That said, every petitioner bears the burden of demonstrating standing in order to participate in hearings before a licensing board.[75] A petitioner must be able to show how it would have "personally" suffered or will suffer a "distinct and palpable" harm that constitutes injury in fact.[76] Because Mr. Epstein apparently lives more than 50 miles from the proposed Bell Bend site, he must explain the extent of his day-to-day activities within the vicinity of the plant site in order to demonstrate he has standing in this proceeding. Mr. Epstein has sought, and been granted, standing to participate in NRC proceedings in the past. However, a petitioner has an affirmative duty to demonstrate that it has standing in each proceeding in which it seeks to participate

[68] *Id.*

[69] *Id.* at 8-9.

[70] PPL Answer at 21-22.

[71] *Id.* at 22.

[72] *Id.*

[73] *Id.*

[74] Final Rule: "Changes to Adjudicatory Process," 69 Fed. Reg. 2182 (Jan. 14, 2004).

[75] *See Babcock and Wilcox* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 81, *appeal dismissed,* CLI-93-9, 37 NRC 190 (1993).

[76] *Dellums v. NRC,* 863 F.2d 968, 971 (D.C. Cir. 1988). *See generally* Atomic Energy Act § 189a, 42 U.S.C. § 2239(a); 10 C.F.R. § 2.309(d).

because a petitioner's status can change over time and the bases for its standing in an earlier proceeding may no longer apply.[77]

In the *Susquehanna* license renewal proceeding, the Licensing Board granted Mr. Epstein standing only after he was able to demonstrate, during oral argument, a significant pattern of regular contacts within the 50-mile radius around the plant.[78] We note that the record compiled in that case was much more detailed and comprehensive as to the proximity, timing, and duration of his contacts than the showing here.[79] Mr. Epstein was also granted standing in the *Susquehanna* extended power uprate (EPU) case.[80] In that case, the Board patiently articulated the standards regarding standing[81] and stated:

> A very much closer question is the sufficiency of Petitioner Epstein's showing regarding his activities within such a radius of the SSES as a basis for invoking the presumption. As PPL pointed out, the *Susquehanna* life extension proceeding Board's standing ruling is not dispositive of our determination here because that decision was not the subject of appellate review. Rather, we must make a finding based on the factual circumstances presented by the information before the Board regarding his activities, which, as the Commission has noted in the past, may include consideration of the proximity (i.e., is the activity within the presumption zone), timing, and duration of those activities.[82]

Furthermore, the EPU Board reiterated to Mr. Epstein that "the better practice for a petitioner is to submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings."[83] The EPU Board also found that, "[n]ot unexpectedly, this process of sifting and weighing the participants' factual proffers often calls upon a Board to make difficult choices, so that a petitioner who fails to provide specific

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[77] *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-4, 37 NRC 156, 162-63 (1993).

[78] *PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 296 (2007).

[79] *Id.* at 294-96.

[80] *PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 21 (2007).

[81] *Id.* at 21. The Board stated, "we consider the activities specified by Petitioner Epstein within a 50-mile radius of the SSES to be of *minimally sufficient* regularity and duration to establish his injury in fact" (emphasis added). *See also id.* at 21 nn.13-14.

[82] *Id.* at 19 (internal citations omitted).

[83] *Id.* at 19 n.9.

information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself."[84]

In this case, the Petitioner, Mr. Epstein, has complicated matters for himself and this Board. We are unable to make the difficult choices necessary to weigh accurately the number, length, and frequency of his trips to or near the Bell Bend site. The distances from where Mr. Epstein lives to the proposed facility and the location of the towns and landmarks cited in his pleadings are not sufficiently explained for this Board to understand Mr. Epstein's relationship to the proposed facility at Bell Bend. We are also unable to gauge the extent, frequency, and duration which Mr. Epstein's business and community service work take him to the Bell Bend site or the vicinity of the proposed plant. It is the burden of the petitioner to clearly state these facts in a petition to intervene.[85] Further, Mr. Epstein did not avail himself of the opportunity to cure this omission in his reply by supplying more specific information regarding the frequency, nature, and length of his contacts within the zone of the BBNPP site. Instead, he simply referred to the prior *Susquehanna* decisions and his original petition.[86] It was imperative for Mr. Epstein to provide the requisite information or update the information provided over 2 years ago in the *Susquehanna* proceedings. Merely because a petitioner might have had standing in an earlier proceeding does not automatically grant standing in subsequent proceedings.[87] Absent a showing of specific information regarding the geographic proximity, the timing, and the duration of his visits,[88] we are unable to conclude, based on the record before us, that Mr. Epstein has standing to participate in this proceeding.[89]

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[84] *Id.* at 19 (internal citations omitted).

[85] A lack of specificity will be sufficient to reject a claim of standing. *See Shieldalloy Metallurgical Corp.* (Cambridge, Ohio Facility), CLI-99-12, 49 NRC 347, 354-55 (1999); *Private Fuel Storage,* CLI-99-10, 49 NRC at 324.

[86] Epstein Reply at 6-9.

[87] *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-92-27, 36 NRC 196, 198 (1992) (citing *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Units 1, 2, and 3), LBP-92-4, 35 NRC 114, 125-26 (1992)).

[88] In addressing Mr. Epstein's standing, the Board in the *Susquehanna* EPU case clearly stated:

> Ultimately, in seeking to establish standing to intervene in a licensing adjudication based on regular activities within a proximity zone (including business, recreational, or personal activities), a petitioner, whether *pro se* or otherwise, is best served by accurately delineating in as much detail as practicable the particulars associated with the proximity, timing, and duration of those activities.

PPL Susquehanna, LBP-07-10, 66 NRC at 21 n.13.

[89] We have found that the material in Mr. Stilp's supplemental declaration addresses his personal, present, and future activities in sufficient detail to establish standing in this proceeding. Indeed, this Board declines to accord Mr. Epstein standing, in large part, because he did not submit such information in his pleadings, even though previous licensing boards have explained the Commission's requirements for demonstrating standing.

C. Standards Governing Contention Admissibility

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)(1). An admissible contention must: (1) provide a specific statement of the legal or factual issue sought to be raised; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) 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 (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or if the application is alleged to be deficient, the identification of such deficiencies and the supporting reasons for this allegation.[90]

In explaining these requirements, the Commission has said 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."[91] In other words, by complying with the six contention requirements, an admissible contention must raise an issue that is both within the scope of the proceeding (normally defined by the hearing notice) and material to the findings the NRC must make to support the action involved.[92] A contention that attacks applicable statutory requirements, challenges the basic structure of the NRC's regulatory process, or merely expresses generalized policy grievances is not appropriate for a licensing board hearing.[93] A contention that attacks a Commission rule, or seeks to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, is inadmissible.[94]

Likewise, a petitioner must provide some "minimal basis indicating the potential validity of the contention."[95] The Commission's rules "bar contentions where petitioners have only 'what amounts to generalized suspicions, hoping

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[90] 10 C.F.R. § 2.309(f)(1)(i)-(vi).

[91] 69 Fed. Reg. at 2202.

[92] 10 C.F.R. § 2.309(f)(1)(iii), (iv).

[93] *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 & n.33 (1974).

[94] *See* 10 C.F.R. § 2.335; *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999) (citing *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1974)).

[95] Final Rule: ''Rules of Practice for Domestic Licensing Proceedings, Procedural Changes in the Hearing Process," 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989).

to substantiate them later.'"[96] Although a petitioner does not have to prove its contention at the admissibility stage,[97] "[m]ere 'notice pleading' is insufficient."[98] If a petitioner fails to provide the requisite support for its contentions, the Board may not make assumptions of fact that favor the petitioner or supply information that is lacking.[99] Simply attaching materials or documents, without explaining their significance, is also insufficient.[100] Moreover, any contention that fails to controvert the application directly, or that mistakenly asserts the application fails to address an issue that the application does address, is defective.[101] A petitioner cannot demonstrate the existence of a genuine issue of material fact by simply restating information provided in the application and asserting that further analysis is required.[102]

Applying these standards, we analyze the nine contentions proffered by the petitioners[103] and conclude that they are not admissible as described below.

D. Rulings on Contentions

1. Stilp/TRU Contentions

a. Proposed Contention 1: High Level Radioactive Waste Generated by PPL at Bell Bend

> The contention is that the PPL Construction and Licensing Application for a new radioactive nuclear plant cannot be granted because there is no reasonable or technical confidence or belief that the high level radioactive waste from the Bell Bend's radioactive nuclear power plant will be disposed of, or can be disposed of in a safe way, and that PPL has not addressed this issue in its Application, and that PPL's Bell Bend high level radioactive nuclear waste disposal problem has

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[96] *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 424 (2003) (quoting *Oconee,* CLI-99-11, 49 NRC at 337-39).

[97] *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004).

[98] *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003).

[99] *See Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

[100] *See Fansteel,* CLI-03-13, 58 NRC at 204-05.

[101] *See Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined,* CLI-94-2, 39 NRC 91 (1994).

[102] *See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 NRC 509, 521 & n.12 (1990) (stating that an allegation that some aspect of a license application is inadequate or unacceptable does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect).

[103] Although we hold that Mr. Epstein has not demonstrated that he has standing in this proceeding, we nonetheless evaluate each of his four proffered contentions against the standards set forth in 10 C.F.R. § 2.309(f)(1).

unique, special and site specific, safety, health and environmental issues that allow the ASLB to consider this contention at this time as specific and non-generic or allows the ASLB to delay their deliberations on this contention until the rulemaking on the Rule for the Proposed Temporary Spent Fuel Storage proposal and the Waste Confidence Decision that is proposed are ruled on because any license granted to PPL must be in compliance with the National Environmental Policy Act.[104]

(i) DISCUSSION

Stilp/TRU assert that there is no place in the United States where PPL can store or dispose of the high-level waste that will be generated by BBNPP since the proposed Yucca Mountain repository, according to Stilp/TRU, "is dead," and PPL will therefore have to store this waste onsite.[105] Petitioners argue that, because there is no high-level waste repository being developed at this time, the storage of high-level waste at BBNPP cannot be called "temporary" but must be considered "permanent" and evaluated as such.[106] Stilp/TRU also maintain that the NRC no longer has a basis for its Waste Confidence Rule and that Table S-3 must be reevaluated.[107] Stilp/TRU argue that this contention should be admitted in accordance with 10 C.F.R. § 2.335(b) because a "'unique' and 'special circumstance'" exists because the Environmental Report (ER) submitted by the Applicant does not deal with "the site specific environmental situation that is created by the total lack of any foreseeable high level radioactive permanent waste dump . . . during the licensed life of [BBNPP]."[108] In the alternative, Stilp/TRU argue that if the Board determines this contention to be inadmissible, it should nevertheless hold it in abeyance or refer it to the Commission for its consideration.[109]

The NRC Staff and PPL argue that Stilp/TRU Contention 1 should not be admitted because it is an impermissible attack on Commission rules and because no unique or special circumstances exist with regard to the application of 10 C.F.R. § 51.23 and Table S-3.[110] Both also assert that Stilp/TRU fail to meet the requirements of 10 C.F.R. § 2.335(b).[111] The NRC Staff and PPL also contend that Stilp/TRU Contention 1 is an impermissible attack on an ongoing Commission

[104] Stilp/TRU Petition at 7-8.
[105] *Id.* at 8-10.
[106] *Id.* at 17.
[107] *Id.* at 18.
[108] *Id.* at 18-19.
[109] *Id.* at 25.
[110] NRC Staff Stilp/TRU Answer at 13-24; PPL Answer at 25-28.
[111] NRC Staff Stilp/TRU Answer at 16-22; PPL Answer at 27-28.

rulemaking, is outside the scope of this proceeding, and is contrary to Commission precedent.[112]

(ii) BOARD DECISION

This Board holds that this contention is an impermissible attack on the Waste Confidence Rule and Table S-3 of 10 C.F.R. § 51.51(b), and is therefore inadmissible. The Commission in its Waste Confidence Rule has determined that there is reasonable assurance that a geologic repository will be available by 2025 and that sufficient repository capacity will be available within 30 years beyond the licensed life to dispose of high-level waste and spent fuel generated by any reactor up to that time.[113] The Commission has also determined that, "spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years" in an onsite spent fuel pool or an onsite or offsite independent spent fuel storage installation.[114] Furthermore the regulations state that no discussion of environmental impacts of spent fuel storage for the specified period is required in an ER or an Environmental Impact Statement (EIS) prepared in connection with the requested action.[115]

As the Licensing Board in *Calvert Cliffs* pointed out, many other boards in COL proceedings have considered contentions much like this one, and have consistently rejected them.[116] They have uniformly held that the Waste Confidence Rule is applicable to all new reactor proceedings and have not admitted contentions challenging the rule or seeking its reconsideration.[117] As one Licensing Board explained:

> In its Waste Confidence Rule, the Commission has made a determination, on a generic basis, that spent fuel generated by "any reactor" can be safely managed and that sufficient repository capacity will be available. When the Commission promulgated a revised Waste Confidence Rule in 1990, it expressly stated that its conclusions should apply to "the spent fuel discharged from any new generation of reactor designs." The Commission reaffirmed its 1990 findings in a 1999 status

[112] NRC Staff Stilp/TRU Answer at 13-26; PPL Answer at 25.

[113] 10 C.F.R. § 51.23(a).

[114] *Id.*

[115] *Id.* § 51.23(b).

[116] *See Calvert Cliffs,* LBP-09-4, 69 NRC at 217-18; *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 587 (2008); *Bellefonte,* LBP-08-16, 68 NRC at 456-57; *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 267-68 (2007); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 246-47 (2004); *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-69 (2004); *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 296-97 (2004).

[117] *See North Anna,* LBP-08-15, 68 NRC at 336-37; *North Anna,* LBP-04-18, 60 NRC at 268-70.

> report, in which it concluded that "no significant and unexpected events have occurred . . . that would cast doubt on the Commission's Waste Confidence findings or warrant a detailed reevaluation at this time." More recently, in 2007, the Commission amended the Waste Confidence Rule to clarify that the rule encompasses COL applications . . . . In light of the plain language of the rule and its regulatory history, the Waste Confidence Rule applies to this proceeding.[118]

This Board holds that Stilp/TRU Contention 1 is an impermissible challenge to the Waste Confidence Rule, and as such is inadmissible under 10 C.F.R. § 2.335.

This contention is also an impermissible attack on 10 C.F.R. § 51.51 and Table S-3. The Commission has recently held that a licensing board may not admit a contention that directly or indirectly challenges Table S-3,[119] and we are bound by that ruling. Therefore, Stilp/TRU's assertions regarding Table S-3 are outside the scope of this COL proceeding.[120]

Stilp/TRU have failed to show special circumstances that would support the waiver required by 10 C.F.R. § 2.335(b). In order to challenge a regulation, Stilp/TRU must submit a supporting affidavit setting forth "with particularity" the special circumstances that justify the waiver or exception requested.[121] Stilp/TRU did not submit such an affidavit, which is fatal to the request for a waiver. Stilp/TRU have not met the requirements of 10 C.F.R. § 2.335(b) necessary to receive a waiver.

The Board also denies the request by Stilp/TRU to hold the contention in abeyance or refer it to the Commission.[122] The Commission recently ruled that for a contention to be held in abeyance, it must otherwise be admissible.[123] A decision may be referred to the Commission if it "raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding."[124] This contention does not raise novel legal or policy issues and Stilp/TRU has not provided any information to indicate that resolution of this contention would materially advance the orderly disposition of this proceeding.[125]

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[118] *William States Lee,* LBP-08-17, 68 NRC at 456-57 (footnotes and citations omitted).

[119] *See Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 75 (2009).

[120] 10 C.F.R. § 2.309(f)(1)(iii).

[121] *Id.* § 2.335(b).

[122] Stilp/TRU Petition at 25.

[123] *See Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-09-8, 68 NRC 317, 322 (2009) (citing Conduct of New Reactor Licensing Proceedings; Final Policy Statement, 73 Fed. Reg. 20,963, 20,972 (Apr. 17, 2008)).

[124] *See* 10 C.F.R. § 2.341(f)(1).

[125] *See id.* §§ 2.323(f)(1), 2.341(f)(1); *see, e.g., Calvert Cliffs,* LBP-09-4, 69 NRC at 217-18; *Clinton,* LBP-04-17, 60 NRC at 246-47.

Finally, in October 2008, the Commission issued a proposed rule and a proposed update regarding the Waste Confidence Rule.[126] If Stilp/TRU and others believe the Waste Confidence Rule needs revision they should use those proceedings to express their concerns.[127] If new information becomes available in the course of those proceedings that contravenes PPL's COLA for the BBNPP, Stilp/TRU may file a motion to admit a new or amended contention.[128]

Stilp/TRU Contention 1 is inadmissible because it raises issues that are beyond the scope of this proceeding, fails to identify any specific deficiency in the Application, and impermissibly challenges Commission regulations.

b. Proposed Contention 2: Low Level Radioactive Nuclear Waste Generated by PPL at Bell Bend

> PPL's application to construct and operate the radioactive nuclear power plant know[n] as the Bell Bend Nuclear Power Plant violates the National Environmental Policy Act (NEPA) by failing to clearly address the serious environmental, health and safety impacts of the radioactive nuclear waste that it will generate in the absence of licensed low level radioactive nuclear waste disposal facilities or capability to isolate the radioactive waste from the environment. The utility's self generated and prejudiced environmental report on the radioactive nuclear power plant know[n] as Bell Bend (ER) does not address the environmental, health, safety, security, environmental justice or economic consequences that will result from the lack of a permanent disposal facility.[129]

(i) DISCUSSION

Stilp/TRU contend that "[a]fter June 30, 2008 no facility in the United States is licensed to accept and able to accept Class B and Class C radioactive waste" from the BBNPP[130] and that "many generators will likely need to store a portion of their [low-level radioactive waste (LLRW)] for an indefinite period."[131] Stilp/TRU assert that the Applicant's ER "fails to offer a complete and viable plan for the disposal of Class B and Class C radioactive waste, along with Greater than Class

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[126] Consideration of Environmental Impacts of Temporary Storage of Spent Fuel After Cessation of Reactor Operation, 73 Fed. Reg. 59,547 (Oct. 9, 2008); Waste Confidence Decision Update, 73 Fed. Reg. 59,551 at 59,557, 59,561 (Oct. 9, 2008).

[127] *See Oconee,* CLI-99-11, 49 NRC at 345 ("If Petitioners are dissatisfied with our generic approach to the problem, their remedy lies in the rulemaking process, not in this adjudication").

[128] *See* 10 C.F.R. § 2.309(f)(2).

[129] Stilp/TRU Petition at 26-27.

[130] *Id.* at 27.

[131] *Id.* at 28.

C [GTCC] waste."[132] They also take issue with the Applicant's future plans for the disposal of waste offsite because of the closure of the Barnwell, South Carolina, waste facility.[133] The Petitioners identify numerous sections of the ER where onsite treatment and storage of LLRW are discussed, including options for waste minimization to extend onsite storage capabilities, but fault the Applicant for not naming the licensed waste processor or the site for final waste disposal.[134] The Petitioners argue that the "ER does not contain the needed facts to provide for a complete and comprehensive understanding of the health effects of extended on site storage" of LLRW and GTCC nuclear waste.[135] The Petitioners further assert that this contention is site-specific and note that similar contentions were recently accepted in the *Calvert Cliffs* and *North Anna* COL proceedings.[136]

In response, the Applicant states that "[c]ontrary to the Petitioners' arguments, the ER does describe the plan for managing Class B and C waste at Bell Bend, and Petitioners' unsupported allegations regarding potential health impacts fail to provide adequate support to demonstrate a genuine dispute with the application."[137] The Applicant argues that there is no requirement that the ER specify exactly how LLRW will be managed based on future contingencies regarding access to disposal sites.[138] Furthermore, in addition to discussion of onsite management options, PPL argues that the Application does mention the option for shipment of LLRW to a licensed waste processor for additional processing and ultimate disposal.[139] With regard to possible health effects, the Applicant asserts that "the Petitioners do not provide any facts or expert opinion to demonstrate that any health impacts were underestimated or overlooked."[140]

The NRC Staff argues that this contention is not "properly framed and supported" because "it does not meet the requirements of 10 C.F.R. § 2.309(f)(1), and therefore is not admissible."[141] The NRC Staff suggests that, unlike the *Calvert Cliffs* application which did not acknowledge possible long-term onsite management of LLRW, PPL's Application discusses onsite storage of LLRW in section 3.5.4.3 of the ER, including additional measures for waste minimization

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[132] *Id.*

[133] *Id.* at 28-29.

[134] *Id.* at 29-30.

[135] *Id.* at 31.

[136] *Id.* at 31-32.

[137] PPL Answer at 29-30.

[138] *Id.* at 30.

[139] *Id.* at 31-32 (citing Bell Bend Application, Part 3: Environmental Report, Rev. 1, § 3.5.4.2 [Bell Bend ER]).

[140] *Id.* at 32.

[141] NRC Staff Stilp/TRU Answer at 28.

to reduce or eliminate the generation of Class B and C waste.[142] The NRC Staff states that "[i]f additional onsite capacity is needed, the ER states that additional storage facilities would be built in accordance with NRC guidance."[143] The NRC Staff notes that the ER does include an assessment of doses to the public and workers in sections 5.4, 5.5.2, 5.7.6, and 5.7.7, and that the Petitioners do not reference or dispute these portions.[144] The NRC Staff maintains that the "Petitioners have not provided any information to demonstrate the impacts long term, onsite storage of LLRW may have on the environment,"[145] and that Petitioners have failed to demonstrate that the issues raised are material to NRC findings. Finally, the NRC Staff challenges the declarations provided in support of this contention as unsupported statements that lack a regulatory basis and factual or expert support.[146]

(ii) BOARD DECISION

The Board finds Stilp/TRU Contention 2 inadmissible. This contention fails to demonstrate a genuine dispute with the Application as required by 10 C.F.R. § 2.309(f)(1)(vi) and lacks the alleged facts or expert opinion to support this contention.[147] Stilp/TRU Contention 2 is framed as a NEPA contention of omission; however, this is not supported by the alleged facts asserted by the Petitioners.[148] The ER discusses options for short-term and long-term storage of LLRW, including options for eliminating Class B and C waste streams or transferring wastes to a licensed offsite processor for disposition.[149] The Petitioners have not cited any requirement that was not met by PPL in its Application, nor provided any support for the proposition that the material presented is not sufficient for the findings that are necessary in this proceeding.

Petitioners' reference to *North Anna*[150] and *Calvert Cliffs*[151] is unavailing. While true that LLRW contentions were admitted in those proceedings (though on a limited basis), the applications in *North Anna* and *Calvert Cliffs* can be distinguished from the Bell Bend Application. In those proceedings, the Licensing Boards found that LLRW disposal issues were not sufficiently discussed in the applications and there was no mention of the closure of the Barnwell

[142] *Id.* at 30-32.
[143] *Id.* at 31.
[144] *Id.* at 33.
[145] *Id.* at 34.
[146] *Id.* at 38-41.
[147] This contention is similar to Epstein Contention 2, which is discussed *infra.*
[148] 10 C.F.R. § 2.309(f)(1)(v).
[149] Bell Bend ER §§ 3.5.4.2-3.5.4.3.
[150] *North Anna,* LBP-08-15, 68 NRC at 312-21.
[151] *Calvert Cliffs,* LBP-09-4, 69 NRC at 220-31.

facility.[152] Here, the Bell Bend Application discusses the LLRW issue in detail and specifically states what "additional waste minimization measures" will be implemented "[i]n the event no offsite disposal facility is available to accept Class B and C waste from BBNPP when it commences operation."[153] Further, PPL provides that if additional storage were necessary, it would build an additional storage facility in accordance with NRC guidelines.[154] Such a facility, PPL states, would have "minimal" impacts and "would provide appropriate protection against releases, maintain exposures to workers and the public below applicable limits, and result in no significant environmental impact."[155] We fail to see any omission in the Application on the LLRW issue, nor have Stilp/TRU shown that this plan is inadequate.

Stilp/TRU Contention 2 also asserts that the ER does not address the environmental, health, safety, security, environmental justice, or economic consequences that will result from the lack of a permanent disposal facility. However, Stilp/TRU do not provide any support for this assertion. The Petitioners have made no references to the FSAR to demonstrate that a genuine safety dispute exists, nor have they provided any citations to where the COLA is deficient. To satisfy section 2.309(f)(1)(i)-(ii), the contention must identify the information that should have been included in the ER and provide the legal basis that requires the omitted information to be included. The Petitioners have failed to do so, and thus Stilp/TRU Contention 2 is inadmissible.

c. Proposed Contention 3: Terrorism and Bell Bend: Health, Safety, and Environmental Impacts

> The Applicant, PPL's, Environmental Report (ER) is deficient because it does not look at the environmental, health and safety effects of a terrorist attack against the proposed radioactive nuclear power plant at Bell Bend or its proposed high level and possibly de facto permanent radioactive nuclear waste facility or its proposed low level radioactive low level nuclear waste storage area.[156]

(i) DISCUSSION

Stilp/TRU frame this contention as a contention of omission and assert that the ER is deficient because it does not address the environmental or health and safety impacts of terrorist actions against BBNPP and any waste that will be

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[152] *North Anna,* LBP-08-15, 68 NRC at 318; *Calvert Cliffs,* LBP-09-4, 69 NRC at 226-27.

[153] Bell Bend ER § 3.5.4.3.

[154] *Id.*

[155] *Id.*

[156] Stilp/TRU Petition at 38.

stored there.[157] The Petitioners argue that there is "little doubt that a terrorist attack could result is radiological releases that could affect the population and surrounding environment."[158] Stilp/TRU suggest that the ER does not take a "hard look" at the environmental effects of a terrorist attack as required by NEPA.[159] They argue that there should be a "'full and fair discussion,' supported by clear evidence that the necessary environmental analysis has been accomplished."[160] Stilp/TRU assert that the NRC should be prudent and cautious and properly assess the environmental, health, and safety impacts from a terrorist attack at BBNPP.[161]

The NRC Staff opposes the admission of Stilp/TRU Contention 3 because "it raises issues that are outside the scope of the proceeding and not material to the decision the NRC must make to grant or deny the application."[162] Further the NRC Staff states the contention fails to raise a genuine issue with the Application on a material issue of law or fact.[163] The NRC Staff asserts that there is settled Commission precedent that "NEPA does not require the NRC to consider the environmental impacts of terrorist attacks as part of its environmental review of license applications."[164] PPL adds that this contention must be rejected as "directly contrary" to Commission precedent.[165]

(ii) BOARD DECISION

Stilp/TRU Contention 3 is inadmissible. The contention raises an issue that is outside the scope of this proceeding and does not present a genuine dispute regarding a material issue of law or fact.[166] Stilp/TRU allege that NEPA requires the Applicant to address the environmental, health, and safety impacts of a terrorist attack on BBNPP.[167] However, the Commission has made its position clear that — outside the Ninth Circuit — NEPA "does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks at NRC-licensed facilities."[168] Furthermore, the Third Circuit — within whose jurisdiction the

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[157] *Id.* at 38, 45.

[158] *Id.* at 48.

[159] *Id.* at 50.

[160] *Id.*

[161] *Id.* at 57.

[162] Staff Answer at 41.

[163] *Id.*

[164] *Id.* at 48-49.

[165] PPL Answer at 34.

[166] *See* 10 C.F.R. § 2.309(f)(1)(iii), (vi).

[167] Stilp/TRU Petition at 50 (citing *San Luis Obispo Mothers for Peace v. NRC,* 449 F.3d 1016 (9th Cir. 2006), *cert. denied,* 549 U.S. 1166 (2007)).

[168] *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-10, 65 NRC 144, 146 (2007).

BBNPP will be located — upheld the Commission's determination that NEPA does not demand any terrorism inquiry.[169] We lack authority to reconsider these legal rulings. We must apply the Commission's directive that outside the Ninth Circuit, NEPA does not require the evaluation of the impact of terrorist attacks by aircraft or other means.[170] Accordingly, this contention is inadmissible.

d. Proposed Contention 4: Uncertified Nuclear Reactor in Bell Bend Application

> This entire proceeding for approval of a combined construction and licensing application, is, at this time, premature and must be suspended or held in abeyance because the redesign of radioactive European Pressurized Reactor that PPL wants to use at the proposed radioactive nuclear plant at Bell Bend is not approved by the Nuclear Regulatory Commission under the Nuclear Regulatory Commission design certification process.[171]

(i) DISCUSSION

Stilp/TRU allege that because the Bell Bend Application incorporates the EPR design that has not as yet been certified by the NRC, the application is incomplete.[172] Petitioners argue the Application violates the AEA and NEPA.[173] Stilp/TRU further argue that because "[t]he outcome of the proceedings governing the design and certification of the proposed new French reactor that is untested has to be completed" for petitioners to have all the requisite information on "how the final design relates to radioactive waste characteristics, accident types, radioactive emissions, control mechanisms and cyber systems changes, security concerns, etc, [*sic*] so that the changed health, safety and environmental impacts and facts are correctly addressed."[174]

The NRC Staff argues that Stilp/TRU Contention 4 is a challenge to the design certification process that "specifically allows an applicant to reference a certified design that has been docketed but not approved."[175] The NRC Staff

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[169] *See New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132, 140 (3d Cir. 2009).

[170] *See Grand Gulf,* CLI-07-10, 65 NRC at 146-47; *Nuclear Management Co., LLC* (Palisades Nuclear Plant), CLI-07-9, 65 NRC 139, 141-42 (2007); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 128-34 (2007).

[171] Stilp/TRU Petition at 58-59.

[172] *Id.* at 60-62.

[173] *Id.* at 60.

[174] *Id.* at 61.

[175] NRC Staff Stilp/TRU Answer at 51 (citing 10 C.F.R. § 52.55(c)).

further asserts that a petitioner must request a waiver in order to challenge Commission regulations.[176] The Petitioners, according to the NRC Staff, did not request such a waiver or attempt to satisfy the requirements in 10 C.F.R. § 2.335(b) for considering a request for waiver.[177] The NRC Staff also maintains that the Petitioners did not identify any dispute with any particular portion of the Application or with the EPR design certification application, and therefore Contention 4 does not satisfy 10 C.F.R. § 2.309(f)(1)(vi).[178] Finally, the NRC Staff asserts that the Commission stated in *Shearon Harris* that a contention that raises a design issue on a docketed design certification application in a COL proceeding should be held in abeyance by the licensing board, if it is otherwise admissible.[179] Given that it does not believe that the Petitioners have proffered an admissible contention, the NRC Staff asserts that there is no contention that could then be held in abeyance.[180] PPL also maintains that the contention is an impermissible challenge to the Commission regulations regarding the design certification process and is contrary to the Commission's decisions in *Fermi* and *Shearon Harris.*[181]

(ii) BOARD DECISION

We find this contention inadmissible for the following reasons. The Petitioners' major issue in this contention is that PPL has submitted a COLA referencing a reactor design that has not yet been approved by the NRC and they are therefore not able to "have complete final facts" on a number of design issues.[182] NRC regulations in Part 52 allow a COLA to reference a certified design that has been docketed but not yet approved.[183] This contention is a direct and impermissible challenge to the Commission's regulations.[184] As noted in *Shearon Harris,* until the design is certified and the rulemaking proceeding concluded, "the design continues to change, creating potentially new safety and environmental concerns."[185]

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[176] *Id.*

[177] *Id.*

[178] *Id.* at 52.

[179] *Id.*

[180] *Id.* at 52-53.

[181] PPL Answer at 35-36 (citing *Detroit Edison Co.* (Fermi Nuclear Power Plant, Unit 3), CLI-09-4, 69 NRC 80, 85 (slip op. at 7) (2009); *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1, 2-3 (2008)).

[182] Stilp/TRU Petition at 57.

[183] 10 C.F.R. § 52.55(c) ("An applicant for a [COL] may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted").

[184] 10 C.F.R. § 2.335(a).

[185] *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-09-8, 69 NRC 736, 745 (2009).

Petitioners can challenge any generic issues as part of the design certification rulemaking process and "will have an opportunity to file new contentions related to material new information regarding site-specific plant design issues."[186] Stilp/TRU's request that this Application be held in abeyance until the design certification is completed must also be denied. The Commission recently rejected a similar request in *Shearon Harris.*[187] Finally, the Petitioners have made a number of bare conclusory statements in their petition that lack any basis or supporting information, and do not provide any dispute with the application. Therefore, these assertions do not satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(ii), (v), and (vi). Stilp/TRU Contention 4 is inadmissible.

e. Proposed Contention 5: Inadequate PPL Funds for Radioactive Decommissioning of Bell Bend

> The interveners contend that the decommissioning Funding Assurance in Application [*sic*] is not enough and the Applicant must immediately show that the Applicants [*sic*] selected method of funding must pass an immediate financial test to assure adequate funding. If the proposed radioactive nuclear power plant at Bell Bend and all the related radioactive parts are to be cleaned and decontaminated of all radioactivity and decommissioned at the end of a forty year license or at the end of sixty years as PPL depicts the possible active life of this plant to be, the interveners contend that the amount of money that PPL says it is required to assure sufficient funds for the decommissioning of this radioactive nuclear plant will not be enough and that the Applicant PPL Bell Bend LLC must show that the method of assurance is financially possible now.[188]

(i) DISCUSSION

Stilp/TRU assert in Contention 5 that the decommissioning funding assurance provided by the Applicant is not enough under NRC regulations because the parent company providing the guarantee is already committed to funding the decommissioning of the nuclear power reactors at the SSES site.[189] Stilp/TRU maintain that the Applicant does not show that it is possible to provide this funding.[190] Stilp/TRU argue that there is a factual dispute "as to when the Applicant must show that it can meet the criteria for funding assurance for

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[186] *Id.*

[187] *See Shearon Harris,* CLI-08-15, 68 NRC at 3-4 (citing 10 C.F.R. §§ 2.335(a), 52.55(c)).

[188] Stilp/TRU Petition at 66.

[189] *Id.* at 67.

[190] *Id.*

decommissioning."[191] Further, Stilp/TRU assert that the Application is deficient because the Applicant has not provided "actual figures" proving that it has the "financial ability to assure decommissioning."[192]

PPL asserts that Contention 5 is not admissible. PPL maintains that its Application "clearly contains the information that Petitioners assert is missing."[193] The Applicant points out that, contrary to the assertions made by Stilp/TRU, the Application specifically notes that the parent company's guarantee "is demonstrated by compliance with the test specified" in the regulations.[194] Therefore, according to the Applicant, there is no omission and the contention is not admissible.[195] The Applicant asserts that the regulations do not require the parent company guarantee to be in place when the application is filed. Instead, the Applicant maintains that it only needs to file a "decommissioning report" that certifies that "financial assurance for decommissioning will be provided no later than 30 days after the Commission publishes notice of initial fuel loading . . . using one of the specified methods."[196] Therefore, PPL asserts there is no requirement at this stage for the Applicant to show that the parent guarantee would satisfy the financial test. PPL also argues that Stilp/TRU has not provided adequate support for Contention 5 and its challenge to the use of the decommissioning formula is an impermissible challenge to an NRC regulation.[197]

The NRC Staff, like the Applicant, asserts that the contention is an impermissible challenge to NRC regulations.[198] In addition, the NRC Staff points out that in order for the Commission to grant or deny a COLA, no findings about the financial instrument proposed to assure decommissioning funding must be made. Therefore, they argue, these issues are not material to this proceeding.[199] Finally, the NRC Staff asserts that Stilp/TRU have failed to identify a factual dispute besides stating that they believe the Applicant must show in the Application that it can meet the criteria for providing financial assurance for decommissioning funding.[200] However, the NRC Staff argues that since the regulations do not require an applicant to do so, Stilp/TRU's assertions that it should do so nonetheless "do not qualify as sufficient support."[201]

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[191] *Id.* at 68.
[192] *Id.*
[193] PPL Bell Bend Answer at 37.
[194] *Id.* at 37-38.
[195] *Id.* at 38.
[196] *Id.* (citing 10 C.F.R. § 50.75(b)).
[197] *Id.* at 39-40.
[198] NRC Staff Answer at 64-66.
[199] *Id.* at 61-62.
[200] *Id.* at 62.
[201] *Id.*

In its reply, Stilp/TRU describe the Applicant's and the NRC Staff's position as "absurd" and maintains that it is "obvious that a question of fact and law exists."[202] Stilp/TRU assert that a similar contention was admitted in the *Calvert Cliffs* COLA proceeding.[203] In that case, Stilp/TRU explain, the Board admitted part of a contention regarding the proper timing for submission of the financial tests for a parent company and asked the parties to file briefs on the subject.[204] As part of its reply, Stilp/TRU attach the briefs filed in that case and presents similar arguments.[205] Stilp/TRU maintain that it "makes no sense to hold up the requirements for reasonable assurance of financial ability until right before the fuel is loaded" and argues that petitioners should be permitted to raise material issues "as to whether PPL has provided reasonable assurance that the decommissioning funds will be available."[206]

(ii) BOARD DECISION

The regulatory requirements regarding decommissioning funding assurance are found in 10 C.F.R. §§ 50.33(k)(1), 50.75, and 50.82. Section 50.33(k)(1) provides that an application for a COL must include a "report" that indicates "how reasonable assurance will be provided that funds will be available to decommission the facility." That report is described in section 50.75(b) and has four parts, each describing a requirement of the report or the amount of financial assurance in the report. First, the regulations state that for COLAs, the report "must contain a certification that financial assurance for decommissioning will be provided no later than 30 days after the Commission publishes notice in the *Federal Register*" of the initial fuel load.[207] The second part deals with the amount that must be provided.[208] The third part provides that the amount "must be covered by one or more of the methods described in paragraph (e)"[209] including prepayment,[210] an external sinking fund,[211] and a "surety method, insurance, or

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[202] Stilp/TRU Reply at 9-10.

[203] *Id.* at 10 (citing *Calvert Cliffs,* LBP-09-4, 69 NRC at 200.

[204] *Id.* at 10-11.

[205] *Id.* at 11-14. Applicants' Brief on Contention 2 (May 15, 2009); NRC Staff's Brief on Decommissioning Funding Assurance (May 15, 2009); Joint Intervenors' Brief Regarding Decommissioning Funding Questions Raised in LBP-09-04 (May 22, 2009); Joint Intervenors' Reply Brief Regarding Decommissioning Funding Questions Raised in LBP-09-04 (May 22, 2009); Applicants' Reply Brief on Contention 2 (May 26, 2009).

[206] *Id.* at 14-15.

[207] 10 C.F.R. § 50.75(b)(1).

[208] *Id.* § 50.75(b)(2).

[209] *Id.* § 50.75(b)(3).

[210] *Id.* § 50.75(e)(1)(i).

[211] *Id.* § 50.75(e)(1)(ii).

other guarantee"[212] including a parent company guarantee.[213] The parent company guarantee is based on a financial test and may only be used "if the guarantee and test are as contained in appendix A to 10 [C.F.R.] part 30."[214]

We agree with the Licensing Board in *Calvert Cliffs* that the regulations require that at the time the COLA is submitted, it must identify the method of decommissioning funding assurance that the applicant proposes to use and to "show that the method complies with any applicable financial test."[215] Thus a parent company guarantee is only acceptable if it and the financial test are "as contained in appendix A" to 10 C.F.R. Part 30.[216]

Under the fourth part of the regulation, an applicant for a COL must obtain the financial instrument and submit a copy to the NRC as provided in 10 C.F.R. § 50.75(e)(3). Under that provision, an applicant, 2 years before and 1 year before the scheduled date for the initial fuel loading, shall "submit a report to the NRC containing a certification updating the information described under paragraph (b)(1) of this section, including a copy of the financial instrument to be used."[217] Further, no later than 30 days after the NRC publishes the notice regarding the initial fuel load, the applicant "shall submit a report containing a certification that financial assurance for decommissioning is being provided in an amount specified in the licensee's most recent updated certification, including a copy of the financial instrument obtained."[218] The regulations are clear that a COL applicant does not need to provide the NRC, at the time the application is submitted, with its final signed documents assuring the decommission funding, and that the holder of a COL must do so 30 days after notice is published regarding the fuel load.

In this instance, PPL has complied with their regulatory requirements, and Stilp/TRU's assertions to the contrary are unpersuasive. The Applicant states that it intends to utilize a parent company guarantee from PPL Energy Supply, LLC, and certifies that "financial assurance for decommissioning will be provided no later than 30 days after the NRC publishes a notice of intended operation for BBNPP."[219] The Application further demonstrates that the parent company

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[212] *Id.* § 50.75(e)(1)(iii).

[213] *Id.* § 50.75(e)(1)(iii)(B).

[214] *Id.*

[215] *Calvert Cliffs 3 Nuclear Project, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-15, 70 NRC 198, 218-19 (2009). ("A parent company guarantee, standing alone, is not a funding method identified in section 50.75(e) as acceptable to the NRC. A parent company guarantee is only an acceptable method of providing financial assurance 'if the guarantee and test are as contained in appendix A to 10 CFR part 30'").

[216] 10 C.F.R. § 50.75(e)(1)(iii)(B).

[217] *Id.* § 50.75(e)(3).

[218] *Id.*

[219] Bell Bend Application § 1.6.2.

guarantee complies with the test laid out in Appendix A to 10 C.F.R. Part 30.[220] The Applicant includes a worksheet showing that the parent company meets the test.[221]

The role of a licensing board is to decide whether an applicant has supplied the requisite information to the NRC, and whether the petitioners have identified any defect in that information.[222] The only issue in the filings of Stilp/TRU that could possibly be considered a challenge to the information provided in the Application is the assertion that the Applicant cannot pass a financial test because the parent company is already committed to providing funding for the decommissioning of the Susquehanna site. This argument, however, is an impermissible challenge to NRC regulations.[223] The worksheet provides the information required by Appendix A to 10 C.F.R. Part 30 and demonstrates that the parent company meets the financial test. Since the Applicant has followed the regulations and provided all of the information required to show that the parent company can pass the financial test imposed by the regulations, Stilp/TRU's wholly unsupported assertion that the parent company cannot pass a financial test is a challenge to the test itself and therefore inadmissible in this proceeding. For the above mentioned reasons, Stilp/TRU Contention 5 is inadmissible.

2. Epstein Contentions

a. Proposed Contention 1

> PPL has stated in Part 1 of the General Information section of its Bell Bend COL Application that PPL Bell Bend, LLC will use a parent company guarantee from PPL Energy Supply, LLC to provide reasonable assurance of decommissioning funding as required by 10 CFR 50.75. Part 1: General Information 1.6.2. The Decommissioning Funding Assurance described in the Application is grossly inadequate to provide "assurance" that PPL can provide "minimum certification amounts" or "assure sufficient funds will be available" to fully decontaminate and decommission Bell Bend. The Applicant must submit prepayment for more than "minimum certification amount," and the proposed certified amount must be adjusted upward to account for: PPL's declining financial performance; PPL's mismanagement of the Susquehanna Steam Electric Station's current decommissioning fund; Financial Accounting Standards Board ("FASB") accounting methods; increased low-level radioactive waste costs; and, cost escalator percentages associated with labor,

[220] *Id.*

[221] Bell Bend Application, Appendix A at 1-28.

[222] *Calvert Cliffs,* LBP-09-15, 70 NRC at 223 n.83.

[223] *See* 10 C.F.R. § 2.335(a).

provided by Applicant's contractor — TLG, Inc. — should supplant the generic estimates provided by the U.S. Department of Labor, Bureau of Labor Statistics.[224]

(i) DISCUSSION

Mr. Epstein asserts that the decommissioning funding assurance described by the Applicant is "grossly inadequate to provide 'assurance' that PPL can provide 'minimum certification amounts' or 'assure sufficient funds will be available'" for the decommissioning of Bell Bend.[225] The COLA states that the Applicant will be utilizing a parent company guarantee from PPL Energy Supply, LLC.[226] According to Mr. Epstein, PPL must submit prepayment for more than the minimum certification amount, and that amount should be increased to deal with (1) PPL's financial performance, (2) PPL's alleged mismanagement of the decommissioning fund for the Susquehanna Steam Electric Stations, (3) Financial Accounting Standards Board accounting methods, (4) increased low-level waste costs, and (5) the need, according to Mr. Epstein, to supplant the Department of Labor's statistics with cost escalator percentages associated with labor.[227] Mr. Epstein argues that the Applicant has provided dated financial information which does not accurately reflect PPL's current financial position and asserts that PPL cannot pay for construction and operation and still guarantee that decommissioning costs will be paid.[228] Mr. Epstein maintains that this contention is material because NRC regulations lay out numerous requirements regarding decommissioning that an applicant for a combined operating license must provide.[229]

PPL argues that Epstein Contention 1 is inadmissible. First, PPL asserts that 10 C.F.R. § 50.75(b) requires an applicant to submit a decommissioning report that certifies that financial assurance for decommissioning will be provided by one of the methods found in 10 C.F.R. § 50.75(e). PPL states in its Application that it would use one of these authorized methods — the parent guarantee. Thus, according to PPL, Mr. Epstein's challenge to its use of the parent guarantee is an impermissible attack on NRC regulations.[230] Second, the Applicant asserts that the contention impermissibly challenges the decommissioning amount in the Application, which, according to the Applicant, is based on the formula provided

[224] Epstein Petition at 12.
[225] *Id.*
[226] Bell Bend Application § 1.6.2.
[227] *Id.* at 12.
[228] *Id.* at 13.
[229] *Id.* at 18 (citing 10 C.F.R. §§ 50.33, 50.75).
[230] PPL Answer at 42.

by the regulations in 10 C.F.R. § 50.75(c)(1) and (2).[231] This part of the contention, the Applicant argues, is simply another impermissible attack on the regulations. Lastly, Mr. Epstein's argument regarding the state of the stock market and PPL's share price raises an issue, PPL states, that is not material to this proceeding. PPL argues that Mr. Epstein merely offers "speculation" and "bare assertions" and does not present a "litigable issue."[232]

The NRC Staff also opposes the admission of this contention. The NRC Staff makes similar arguments regarding Mr. Epstein's allegedly impermissible attacks on NRC regulations as those put forth by the Applicant.[233] In addition, the NRC Staff asserts that the contention is outside the scope of this proceeding because it is based on the "incorrect assumption" that an application must include a financial instrument certifying that financial assurance for decommissioning will be provided.[234] Instead, the NRC Staff maintains, a COL applicant is only required to provide a report indicating how reasonable assurance will be provided that decommissioning funds will be available.[235] The NRC Staff believes that the financial instrument, the test to be used to determine if that instrument is sufficient, and the timing of that test, are outside the scope of this proceeding and not material to the findings that the NRC must make to grant or deny a COLA.[236] Finally, the NRC Staff asserts that the facts and information provided by Mr. Epstein do not adequately support the admission of the contention.[237]

In his reply, Mr. Epstein argues that the nature of his challenge has been misrepresented by PPL.[238] Mr. Epstein asserts that the contention is actually a challenge to the substance of the parent guarantee, namely, that it is not a viable plan.[239] According to Mr. Epstein, PPL must demonstrate that it has a viable financial proposal to deal with decommissioning costs.[240] Additionally, Mr. Epstein defends his argument regarding the financial downturn and its effect on PPL and argues that it is material to the issues in this proceeding.[241] Mr. Epstein asserts that by citing to relevant annual reports submitted by PPL, he has provided adequate support for Contention 1.[242]

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[231] *Id.* at 42-43.
[232] *Id.* at 43-44.
[233] NRC Staff Epstein Answer at 18-20.
[234] *Id.* at 12.
[235] *Id.* at 12-13.
[236] *Id.* at 14-16.
[237] *Id.* at 16-18.
[238] Epstein Reply at 11.
[239] *Id.*
[240] *Id.*
[241] *Id.* at 12-13.
[242] *Id.* at 13.

As discussed above,[243] and contrary to the assertions made by the NRC Staff, the Board agrees with the reasoning of the Licensing Board in *Calvert Cliffs,*[244] that at the time the COLA is submitted, an applicant must specify the method for decommissioning funding assurance that it proposes to use and must show that the method satisfies the applicable financial test. We find that the Applicant has provided this information in the Application.

The regulations do not dictate which financial assurance method an applicant must use. Instead, an applicant can choose "one or more" of the funding methods provided in 10 C.F.R. § 50.75(e).[245] In this proceeding, the Applicant has chosen to use the parent company guarantee as its financial assurance method. It is "beyond the authority" of this Board to say which method the Applicant must use to fulfill the decommissioning funding assurance requirement.[246] "The Board can only decide whether or not the current funding proposal fulfills NRC requirements."[247] Thus, Mr. Epstein's assertion that the Applicant "must submit prepayment" is inadmissible. Since we have already found that the Applicant has met the requirements regarding its decommissioning funding assurance, Mr. Epstein's other challenges — PPL's mismanagement of the decommissioning fund for Susquehanna, the Financial Accounting Standards Board accounting rule changes, etc. — are essentially impermissible challenges to NRC regulations, as they simply argue that even though the Applicant has adhered to the regulations, its decommissioning funding assurance is still inadequate. As such, the Board finds Epstein Contention 1 inadmissible.

b. Proposed Contention 2

> The Application to build and operate Bell Bend violated the National Environmental Policy Act ("NEPA") and NRC COLA guidelines by failing to demonstrate that the site has the capability to store Class B and C low level radioactive waste ("LLRW") during the entire operating life of the plant and beyond in the event Barnwell remains closed to PPL, Clive, Utah operated by Energy Solutions "no longer becomes cost effective," or no other waste disposal options are developed or available. Bell Bend Environmental Report ("ER") is deficient in discussing its plans for management of Class B and C wastes. In light of the current lack of a licensed offsite disposal facility, and the uncertainty of whether a new disposal facility will become available during the license term, the ER must either describe how Applicant will store Class

[243] *See* discussion *supra* pp. 417-19.

[244] *Calvert Cliffs,* LBP-09-15, 70 NRC at 214-19.

[245] 10 C.F.R. § 50.75(b)(3).

[246] *Calvert Cliffs,* LBP-09-4, 69 NRC at 199.

[247] *Id.*

B and C wastes onsite and the environmental consequences of extended onsite storage by transferring its Class B and C wastes to another facility for storage of LLRW.[248]

(i) DISCUSSION

Mr. Epstein asserts in Contention 2 that the ER is deficient because "it fails to offer a realistic plan for disposal of Class B and C [LLRW]."[249] Petitioner notes that the Barnwell facility in South Carolina is now closed to noncompact members, and that there might be economic barriers to disposal at Energy Solutions in Clive, Utah.[250] Mr. Epstein asserts that PPL failed to provide an adequate plan in the Application "that details how it will safely dispose of LLRW or safely store waste on site for during [*sic*] the operational life of the plant, and for an indefinite period of time following cessation of operations."[251]

In response, PPL states that this contention is inadmissible as a contention of omission.[252] The Applicant notes that LLRW management is discussed in the Application (section 3.5.4.3), including the option for offsite processing (section 3.5.4.2).[253] The NRC Staff concurs that, whether interpreted as a safety or environmental contention, the contention is inadmissible because the Petitioner has failed to show that it is a contention of omission, raises an issue material to this proceeding, presents a genuine dispute, and is supported by facts or expert opinions.[254] Finally, the NRC Staff states that Mr. Epstein "has not provided a specific regulatory basis to support his assertion that the Applicant is required to provide detailed plans for and an assessment of impacts from onsite LLRW storage for the entire operational life of the plant and for an indefinite period of time after operations cease."[255]

(ii) BOARD DECISION

The Board finds Mr. Epstein's Contention 2 inadmissible. The Board reaches the same conclusion with regard to this contention as we did with Stilp/TRU

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[248] Epstein Petition at 20.

[249] *Id.*

[250] *Id.* The Board notes that the Energy Solutions facility in Clive, Utah, is licensed to receive only Class A low-level radioactive waste. As such, it is not pertinent to the discussion of this contention. *See EnergySolutions, LLC* (Radioactive Waste Import/Export Licenses), CLI-08-24, 68 NRC 491, 493 (2008).

[251] *Id.* at 21.

[252] PPL Answer at 45.

[253] *Id.*

[254] NRC Staff Epstein Answer at 22.

[255] *Id.* at 24.

Contention 2, for many of the same reasons.[256] Mr. Epstein has provided no alleged facts or expert opinion in support of the assertions in the contention and has failed to demonstrate a genuine dispute with the Application. This contention, therefore, does not meet the standards set forth in 10 C.F.R. § 2.309(f)(1)(v) and (vi) and is inadmissible.

The Petitioner correctly asserts the uncertainty in offsite disposal of Class B and C LLRW with closure of the Barnwell facility to noncompact states, and with possible disposal of such wastes at Clive, Utah. His argument that there is a significant omission in the discussion of LLRW management in the Application, however, is not supported. Onsite processing and storage of LLRW is discussed in the ER in section 3.5.4.[257] Mr. Epstein does not directly raise a conflict with this discussion, though there is a general suggestion that the Applicant's presentation is insufficient. Presumably, this concern is raised with regard to the possible requirement of long-term onsite storage. However, as the NRC Staff correctly notes, "[t]he Commission's regulations do not dictate the duration and capacity for onsite LLRW storage that COL applicants must provide. Applicants must simply comply with [10 C.F.R.] Part 20 dose limits."[258] The COLA discusses plans for short-term operational storage and options for waste minimization and extended storage.[259] Furthermore, as acknowledged by the Petitioner, the Application discusses the possibility that no offsite disposal facility will be available for Class B and C waste when operations commence.[260] In this regard, references in the proposed contention to the admitted, but greatly constrained, contention in *Calvert Cliffs*[261] are not material to our decision. The Licensing Board in *Calvert Cliffs* focused on that application's lack of consideration of any alternative to offsite disposal of LLRW.[262] This is not the case for the present COLA, and the Petitioner has not cited any regulatory requirement that suggests that additional detail is required in the ER beyond the discussion that the Applicant has already provided.

For the above-mentioned reasons, Epstein Contention 2 is inadmissible.

e. Proposed Contention 3: Foreign Ownership

> PPL Bell Bend claims that PPL Corporation is the ultimate parent for all PPL's generation assets (fossil, renewable and nuclear), generating operating companies,

[256] *See* discussion *supra* at pp. 410-11.
[257] Bell Bend ER § 3.5.4.
[258] NRC Staff Epstein Answer at 31.
[259] Bell Bend Application, ER § 3.5.4.3.
[260] Epstein Petition at 22; Bell Bend ER § 3.5.4.3.
[261] *Calvert Cliffs,* LBP-09-4, 69 NRC at 220-31.
[262] *Id.* at 224-25.

> marketing and trading activities and distribution companies. (Final Safety Analysis Report, Chapter 1, 1.4.1.7) However, PPL identifies UniStar Nuclear Services, LLC as a contractor/participant (1.4.2). UniStar Nuclear is owned 50 percent by Constellation Energy ("Constellation"), and 50 percent by the French company Électricité de France ("EDF"), which is 84.85 percent owned by the government of France.[263]

(i) DISCUSSION

Mr. Epstein argues in support of Contention 3 that the Applicant violates the AEA because it lists UniStar Nuclear Services, LLC (UniStar), a company that he alleges is partially owned by the French company Électricité de France (EDF), as a contractor/participant.[264] Under the AEA, Mr. Epstein maintains, foreign ownership or control of a nuclear power plant is prohibited.[265] Mr. Epstein argues that, because PPL has stated in the past that it will only build a new reactor in a joint venture, it is looking for "a corporate mask provided by a foreign corporation."[266] Mr. Epstein further alleges that EDF is "being investigated for engaging in espionage" and that France "has consistently . . . taken military, political, and diplomatic positions that insulate itself with nations and organization that support state sponsored terrorism."[267]

PPL asserts that Contention 3 is inadmissible. The Applicant maintains that the contention is based on a "flawed premise" and has no "legal basis."[268] PPL argues that the AEA focuses on the issue of control and an applicant is only considered to be foreign owned if the foreign entity has the power to direct or decide matters affecting the operations of the applicant.[269] The Applicant contends that Mr. Epstein fails to provide "any colorable argument that would suggest even a modicum of foreign ownership in or control of Bell Bend."[270] According to the Applicant, PPL Bell Bend is a wholly owned subsidiary of PPL Corporation and there are no other participants in the project.[271] UniStar, the Applicant points out, "is not an owner, applicant, or proposed licensee for the Bell Bend project," but merely a contractor.[272]

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[263] Epstein Petition at 24.
[264] *Id.*
[265] *Id.* at 25.
[266] *Id.*
[267] *Id.* at 25, 27.
[268] PPL Answer at 46.
[269] *Id.* at 47.
[270] *Id.*
[271] *Id.* at 48. *See also supra* note 1.
[272] PPL Answer at 48.

The NRC Staff also asserts that the contention should be rejected, arguing that Mr. Epstein has "misread and incorrectly referenced the Application."[273] UniStar, the NRC Staff points out, is not mentioned in the general and financial information section of the Application but only in the section identifying contractors and other participants, "none of which has an ownership interest in the Applicant or its parent companies."[274] The NRC Staff asserts that Mr. Epstein's speculation based on partial quotes from two sources suggesting that the reactor will be built or run by a joint venture with a foreign corporation does not raise a genuine dispute with the Application.[275] Finally, the NRC Staff faults Mr. Epstein for not identifying the specific sources of documents on which he proposes to rely.[276] The NRC Staff asserts that Mr. Epstein must explain the significance of the supporting information he offers, and cannot simply incorporate large documents by reference.[277]

In his reply, Mr. Epstein goes back to the language of the AEA, which does not permit a license to be issued if the Commission "knows or has reason to believe" that the applicant "is owned, controlled or dominated" by a foreign entity.[278] Based on PPL's previous assertions that it would only proceed with a new reactor in a joint venture and the recent joint ventures between foreign entities and Pennsylvania utilities, Mr. Epstein asserts that foreign ownership is a valid issue.[279] Mr. Epstein added that PPL could have said in its answer that it would never partner with a foreign entity but did not do so.[280]

(ii) BOARD DECISION

The Board concludes that Mr. Epstein's Contention 3 is inadmissible. PPL clearly lays out its ownership structure in its Application.[281] In Section 1.1 it states that PPL Bell Bend, LLC is the Applicant for the BBNPP and is not acting as the agent or representative of another person. Section 1.2 describes the ownership structure of PPL Bell Bend in detail. PPL Bell Bend is a wholly owned subsidiary of PPL Corporation.[282] That section also makes clear that there "are no participants in the BBNPP project that are not part of the PPL Corporation or subsidiaries of

[273] NRC Staff Answer at 33.
[274] *Id.* at 34.
[275] *Id.* at 35-36.
[276] *Id.* at 36.
[277] *Id.* at 36-37.
[278] Epstein Reply at 18 (quoting 42 U.S.C. § 2133(d)).
[279] *Id.* at 18-19.
[280] *Id.* at 19.
[281] *See* note 1, *supra.*
[282] Bell Bend Application § 1.2.

the PPL Corporation."[283] The Application further breaks down the organization and management of PPL Bell Bend and provides that all of the officers involved are U.S. citizens.[284] UniStar, however, is nowhere to be found in this detailed breakdown of the ownership structure of PPL Bell Bend. The Application, in the "Other Contractors and Participants" section of the FSAR, explains that UniStar is a contractor on the Bell Bend project and responsible for the COLA, providing "Quality Assurance oversight" and "performing audits and surveillances of the contractors involved in developing the technical input."[285]

The AEA states that a license may not be issued "to an 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."[286] The Commission elaborated on its view on what foreign ownership entails when it issued its Final Standard Review Plan on Foreign Ownership, Control, or Domination by stating:

> 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. The Commission has stated that the words "owned, controlled, or dominated" mean relationships where the will of one party is subjugated to the will of another.[287]

The Commission makes clear that a foreign entity must be able to control or dominate an applicant in order for it to be considered a foreign owner.[288] In this instance, however, the entity in question, UniStar, is simply a contractor working for the Applicant. UniStar has no ownership, control, or domination over the Applicant.[289]

Mr. Epstein has provided no evidence to show that UniStar has any interest in this project beyond its role as a contractor. Mr. Epstein's suggestion that UniStar and PPL are going to engage in a joint venture to build a new reactor at Bell Bend simply because PPL Bell Bend has indicated that it would only build a new reactor as part of a joint venture, and UniStar happens to be a contractor on the Bell Bend project, is speculative. As such, the Petitioner has not shown that there is a genuine dispute on a material issue of law or fact as required by 10

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[283] *Id.*

[284] *Id.* § 1.3.

[285] Bell Bend FSAR § 1.4.2.

[286] 42 U.S.C. § 2133(d).

[287] 64 Fed. Reg. 52,355, 52,358 (Sept. 28, 1999).

[288] *Id.*

[289] Since the Board finds that UniStar is not an owner or in control, we will not make any determination as to the nationality of its ownership.

C.F.R. § 2.309(f)(1)(vi). Furthermore, the issue is not ripe. If, at some point in the future, PPL were to decide to change the ownership structure of Bell Bend and to enter into a joint venture with another entity, NRC regulations would require it to amend its license to reflect this change.[290] If this should transpire, Mr. Epstein would be able to challenge the new ownership structure in that licensing action. For the above-mentioned reasons, Epstein Contention 3 is inadmissible.

d. Proposed Contention 4

> Conclusions in PPL's Application, Part 3: Environmental Report, Rev. 1, Chapter 4 and 5, relating to Socio Economic Impacts: Labor Force Availability and Possible Composition 4.4.2.2.1., Employment and Income 5.8.2.2.3 and Police, EMS and Fire suppression Services 2.5.2 and 4.4.2., are based on flawed assumptions and specious conclusions, and have omitted key data and statistics that undermine the Applicant's determinations.[291]

(i) DISCUSSION

Mr. Epstein raises an environmental justice issue in Contention 4. Mr. Epstein alleges that the ER fails to address the large aging population near the BBNPP, which "has unique and sensitized needs that were not factored, considered, or analyzed in the Application."[292] Mr. Epstein alleges, as a basis for this contention, that the Applicant failed to consider the impact an aging population has on staffing, response times, emergency planning and social services.[293] Mr. Epstein claims that many seniors are on fixed incomes and will be faced with rate shock and increased health care premiums.[294] In addition, Mr. Epstein asserts that the Application has "omitted key data and statistics that undermine the Applicant's determinations."[295] Specifically, Petitioner asserts that an analysis of the "impact of Bell Bend on an aging, impoverished and less ambulatory population base" has not been conducted. Petitioner maintains that PPL "must demonstrate that the construction and operation of the Bell Bend facility will not adversely impact police, fire, EMS, and other vital services."[296] The Petitioner argues that the Application does not provide a plan to staff the construction and operation of BBNPP, as well as the local emergency services.[297] Finally, Mr. Epstein argues

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[290] *See* 10 C.F.R. § 50.80.
[291] Epstein Petition at 29.
[292] *Id.*
[293] *Id.*
[294] *Id.* at 30.
[295] *Id.* at 29.
[296] *Id.* at 29.
[297] *Id.* at 33-35.

that a genuine dispute exists regarding the demographics in the area surrounding the proposed plant and lists nine specific socioeconomic issues that the Applicant purportedly failed to address.[298]

The NRC Staff opposes the admission of Contention 4, arguing that Mr. Epstein has failed to: (1) proffer an admissible environmental justice (EJ) contention; (2) show that the issues raised are material to the NRC's licensing decision; (3) show that the issues raised are within the scope of this proceeding; and (4) provide alleged facts or expert opinions to support admission of this contention.[299] The NRC Staff further asserts that Contention 4 cannot be construed as a contention of omission because there is no requirement that the nine socioeconomic questions raised by Mr. Epstein be addressed in an ER or EIS.[300]

PPL states that many of the asserted "impacts" highlighted by the Petitioner are "unrelated to Bell Bend and therefore outside the scope of the proceeding."[301] PPL also asserts that Mr. Epstein does not point to any particular impacts that are not considered adequately in the ER.[302] PPL points out that in section 2.5.2.3, the ER describes both the income and age distributions for the two-county region of influence, specifically notes the aging populations in those counties, and considers the impacts of construction of Bell Bend on the available labor force, regional demography, housing, and public services.[303] Finally, PPL notes the Application does discuss "the relationship between an aging and out-migrating population and public services," even though there is no requirement or obligation on a COL applicant to develop a staffing plan in its Application.[304]

In his reply, Mr. Epstein again states that the Applicant has not demonstrated that it can adequately staff its Bell Bend and Susquehanna facilities.[305] Mr. Epstein states that the NRC's fitness-for-duty rule,[306] released on March 31, 2009, is "designed to avoid fatigue yet it is not worked into the COLA, factored into the Applicant's staffing strategy, or considered under socioeconomic [*sic*]."[307]

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[298] *Id.* at 37-39.

[299] NRC Staff Epstein Answer at 38-49.

[300] *Id.* at 39 (citing 10 C.F.R. § 2.309(f)(1)(vi); *Pa'ina Hawaii, LLC,* LBP-06-12, 63 NRC 403, 414 (2006)).

[301] PPL Answer at 49.

[302] *Id.* at 50.

[303] *Id.*

[304] *Id.* at 50-51.

[305] Epstein Reply at 22.

[306] Fitness for Duty Programs, 73 Fed. Reg. 16,966 (Mar. 31, 2008). The new rule became effective on April 30, 2008, but licensees had the option to defer implementation until March 31, 2009. *Id.*

[307] Epstein Reply at 22.

(ii) BOARD DECISION

We find this contention inadmissible for a number of reasons. First, the contention, as it refers to the local elderly population, cannot be construed as an environmental justice contention. Mr. Epstein fails to point to any statute, regulation, or case to support his contention. NEPA is "the only legal grounds for an admissible contention relating" to environmental justice issues.[308] To qualify as an environmental justice contention, a Petitioner must show that the affected local population qualifies as a minority or low-income population.[309] Petitioner has made no such showing.

Second, an admissible environmental justice contention must "allege with the requisite documentary basis and support as required by 10 C.F.R. Part 2, that the proposed action will have significant adverse impacts on the physical or human environment that were not considered because the impacts to the community were not adequately evaluated."[310] Accordingly, to be admissible, an environmental justice contention must show there are significant, adverse, environmental impacts that will result from the licensing of BBNPP that will disproportionately affect minority and low-income populations. The Petitioner has failed to make that showing.

Third, Mr. Epstein's concerns are either adequately discussed in the Application or are beyond the scope of this proceeding. For example, in section 2.5.2.3, the ER describes both the income distribution and age distribution for the two-county region, noting the aging populations in those counties. Section 4.4.2 of the ER describes the impacts of construction of Bell Bend on the available labor force, regional demography, housing, and public services. Assertions such as "the ER fails to include the fact that PPL is cutting off more customers for unpaid bills" or "Applicant fails to consider the average age of the SSES work force and average overtime logged" are irrelevant to this proceeding and not material to the NRC's licensing decision. Thus, they do not meet the requirements of 10 C.F.R. § 2.309(f)(1)(iv) and (v). Petitioner's reply, arguing that "Applicant has not demonstrated it can adequately staff Bell Bend or Susquehanna," is unsupported and fails to raise a material issue of law or fact as required by 10 C.F.R. § 2.309(f)(1)(vi).

Finally, the issues raised by Petitioner are immaterial to the findings that must be made in this proceeding or beyond the scope of the proceeding. The regulations require a contention to demonstrate that the issue raised "is material

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[308] *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 199 (2008).

[309] *Id.*

[310] Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040, 52,047 (Aug. 24, 2004).

to the findings the NRC must make to support the action that is involved in the proceeding."[311] The regulations also require that the contention raise issues that are within the scope of the proceeding.[312] Among the issues raised by Mr. Epstein that are immaterial is the claim that the "aging population will be impacted by increased health care premiums and property taxes."[313] This claim is unsupported and the relationship of this issue to the Bell Bend project is not clear. The scope of an adjudicatory proceeding is specified by the Notice of Hearing and contentions that raise matters outside that defined scope must be rejected.[314] These issues are beyond the scope of the proceeding and do not comply with 10 C.F.R. § 2.309(f)(1)(iii). Finally, there are no alleged facts or expert opinion in the Petition to support this contention as required by 10 C.F.R. § 2.309(f)(1)(v). Therefore, Contention 4 is inadmissible.

III. CONCLUSION

While Mr. Stilp, individually, and TRU have standing to participate, Mr. Epstein has not demonstrated that he has satisfied the requirements for standing. In any event, neither the joint petition submitted by Mr. Stilp and TRU nor the petition submitted by Mr. Epstein proffers an admissible contention. Because no petitioner has submitted an admissible contention, as required by 10 C.F.R. § 2.309(f), the Board denies the hearing requests and terminates this proceeding.

IV. ORDER

For the foregoing reasons, it is on this 10th day of August 2009, ORDERED that:

1. The June 26, 2009 motion of Gene Stilp and Taxpayers and Ratepayers United (TRU) to file Supplemental Standing Declaration is *granted.*

2. The May 18, 2009, "Petition to Intervene in the Radioactive Bell Bend Nuclear Power Plant Combined Construction and License Application" filed by Gene Stilp and Taxpayers and Ratepayers United (TRU) is *denied.*

3. The May 18, 2009, "Petition for Leave to Intervene, Request for Hearing, and Contentions with Supporting Factual Data Re: PPL Bell Bend LLC: Combined

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[311] 10 C.F.R. § 2.309(f)(1)(iv); *see also Pa'ina Hawaii,* LBP-06-12, 63 NRC at 414 (stating that a petitioner must show that missing information is required by the Commission's regulations).

[312] 10 C.F.R. § 2.309(f)(1)(iii).

[313] Epstein Petition at 30.

[314] *Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976).

License Application for the Bell Bend Nuclear Power Plant Docket No. 52-039" filed by Eric Joseph Epstein is *denied.*

4. This Order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.311, as it relates to intervention petitions. Any appeals to the Commission from this Order, meeting the applicable requirements set forth in that section, must be submitted within ten (10) days of service of this Memorandum and Order.

THE ATOMIC SAFETY AND
LICENSING BOARD[315]

William J. Froehlich, Chairman
ADMINISTRATIVE JUDGE

By E. Roy Hawkens for
Dr. Michael F. Kennedy
ADMINISTRATIVE JUDGE

By E. Roy Hawkens for
Dr. Randall J. Charbeneau
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 10, 2009

[315] A copy of this Memorandum and Order was sent this date by the Agency's E-Filing System to: (1) Counsel for the NRC Staff; (2) Counsel for PPL; (3) Gene Stilp/TRU; and (4) Eric Joseph Epstein.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

G. Paul Bollwerk, III, Chairman
Nicholas G. Trikouros
Dr. James F. Jackson

In the Matter of **Docket No. 52-011-ESP**
(ASLBP No. 07-850-01-ESP-BD01)

SOUTHERN NUCLEAR OPERATING COMPANY
(Early Site Permit for Vogtle ESP Site)

August 17, 2009

In this 10 C.F.R. Part 52 proceeding regarding the application of Southern Nuclear Operating Company (SNC) for an early site permit (ESP), and an associated limited work authorization (LWA), for two additional reactors at the existing Vogtle Electric Generating Plant (VEGP) site, in a second and final partial initial decision regarding the mandatory or uncontested portion of the proceeding, based on its review of the pending SNC ESP application and its LWA supplement, as well as the NRC Staff's final environmental impact statement (FEIS) and final safety evaluation report (FSER) regarding these SNC licensing requests, the Board concludes that Staff issuance of the ESP and the LWA for the Vogtle ESP site should be authorized, effective immediately.

EARLY SITE PERMIT(S) (ESP): AVAILABILITY

Under the Commission's 10 C.F.R. Part 52 regulations, an applicant who may apply for a construction permit under Part 50, or a combined license (COL) under Part 52, may apply for an ESP. *See* 10 C.F.R. § 52.15(a). If granted, an ESP, which

is defined as "a partial construction permit," evidences Commission approval of a site for one or more nuclear power facilities. *Id.* § 52.1(a).

LIMITED WORK AUTHORIZATION (LWA): AVAILABILITY

An ESP applicant may also request that an LWA under 10 C.F.R. § 50.10 be issued in conjunction with the ESP. *See id.* § 52.17(c).

ATOMIC ENERGY ACT: REQUIREMENT OF HEARING

RULES OF PRACTICE: HEARING REQUIREMENT (EARLY SITE PERMIT APPLICATIONS)

The Atomic Energy Act (AEA) of 1954, as amended, provides that "[t]he Commission shall hold a hearing . . . on each application under section 2133 or 2134(b) of this title for a construction permit for a facility." 42 U.S.C. § 2239(a)(1)(A). ESP applications, as partial construction permit applications, *see* 10 C.F.R. § 52.1(a), are subject to the AEA hearing requirement, as well as "all procedural requirements in 10 CFR part 2," *id.* § 52.21; *see also System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-07-1, 65 NRC 27, 35, *permit issuance authorized,* CLI-07-14, 65 NRC 216 (2007).

EARLY SITE PERMIT HEARINGS: SCOPE (MANDATORY/UNCONTESTED HEARINGS)

When reviewing an ESP application in an uncontested proceeding, licensing boards are instructed to "conduct a simple 'sufficiency' review" rather than a de novo review on both AEA and National Environmental Policy Act (NEPA) of 1969 issues. *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39 (2005). Thus, boards "should decide simply whether the safety and environmental record is 'sufficient' to support license issuance. In other words, the boards should inquire whether the NRC Staff performed an adequate review and made findings with reasonable support in logic and fact." *Id.* With respect to certain NEPA findings, boards are instructed to make independent environmental judgments, though they "need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities." *Id.* at 44; *see also Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 559-60, *permit issuance authorized,* CLI-07-27, 66 NRC 215 (2007). The board's role is to "carefully probe [Staff] findings by asking appropriate questions and by requiring supplemental information when necessary," but "the NRC Staff's underlying technical and factual findings are not open to board reconsideration unless, after

a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient." *Clinton ESP,* CLI-05-17, 62 NRC at 39-40.

EARLY SITE PERMIT HEARINGS: SCOPE (MANDATORY/UNCONTESTED HEARINGS)

In a mandatory hearing, a licensing board "must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance." *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006).

EARLY SITE PERMIT PROCEEDING(S): SAFETY FINDINGS

Pursuant to the AEA and agency regulations in effect at the time the notice of hearing for this proceeding was published, the board was required to make two safety findings — answering the first in the negative and the second in the affirmative — before an ESP could be issued:

> (1) Whether the issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public (Safety Issue 1); and (2) whether, taking into consideration the criteria contained in 10 CFR part 100, a reactor, or reactors, having characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public (Safety Issue 2).

Notice of Hearing and Opportunity to Petition for Leave to Intervene on an [ESP] for the Vogtle ESP Site, 71 Fed. Reg. 60,195, 60,195 (Oct. 12, 2006) [hereinafter ESP Hearing Notice]. Subsequent to the publication of the notice of hearing in this proceeding, the 10 C.F.R. Part 52 regulations were revised to, among other things, clarify what is required in the findings associated with the issuance of an ESP. *See* Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,524 (Aug. 28, 2007). Under a new section 52.24, an ESP may issue if the Commission, or, presumably, the Licensing Board, as the Commission's delegate, finds, among other things, that:

> (1) [The ESP application] meets the applicable standards and requirements of the [AEA] and the Commission's regulations;
>
> (2) Notifications, if any, to other agencies or bodies have been duly made;
>
> (3) There is reasonable assurance that the site is in conformity with the provisions of the Act, and the Commission's regulations;

(4) The applicant is technically qualified to engage in any activities authorized;

(5) The proposed inspections, tests, analyses and acceptance criteria, including any on emergency planning, are necessary and sufficient, within the scope of the early site permit, to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the Act, and the Commission's regulations; [and]

(6) Issuance of the permit will not be inimical to the common defense and security or to the health and safety of the public.

10 C.F.R. § 52.24(a)(1)-(6). In addition, section 52.24 states that if the Commission decides to authorize issuance of the ESP, the issued ESP "must specify the site characteristics, design parameters, and terms and conditions of the [ESP] the Commission deems appropriate." *Id.* § 52.24(b).

EARLY SITE PERMIT PROCEEDING(S): SAFETY FINDINGS

Because the substantive findings that must be made under the pre-2007 regime overlap to a significant degree those required under the current regulations, and the Applicant has both revised its application to reflect the new rule and provided information in this proceeding to address both sets of provisions, the Board will address the findings outlined in each.

EARLY SITE PERMIT PROCEEDING(S): ENVIRONMENTAL FINDINGS

In authorizing issuance of an ESP, to fulfill its NEPA obligations the Board must:

(1) Determine whether the requirements of Sections 102(2)(A), (C), and (E) of NEPA and the [10 C.F.R. Part 51, Subpart A] regulations have been met;

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken;

(3) Determine, after . . . considering reasonable alternatives, whether the [ESP] should be issued, denied, or appropriately conditioned to protect environmental values; [and]

(4) Determine, in an uncontested proceeding, whether the NEPA review conducted by the NRC Staff has been adequate.

Id. § 51.105(a)(1)-(4); *see also* ESP Hearing Notice, 71 Fed. Reg. at 60,195. These findings are consistent with the requirement under 10 C.F.R. § 52.24(a) that, prior to issuance of an ESP, "[t]he findings required by subpart A of 10 CFR Part 51 have been made." 10 C.F.R. § 52.24(a)(8).

EARLY SITE PERMIT PROCEEDING(S): ENVIRONMENTAL FINDINGS

With regard to the first three of these findings, i.e., the "baseline" NEPA issues, the Board must reach its own independent determination, but should do so without "second-guess[ing] underlying technical or factual findings by the NRC Staff." *Clinton ESP,* CLI-05-17, 62 NRC at 45.

LIMITED WORK AUTHORIZATION (LWA): REQUIRED DETERMINATIONS

An ESP applicant may request that an LWA be issued in conjunction with the ESP. *See* 10 C.F.R. § 52.17(c). Before the LWA can issue, the Staff must issue an FEIS in connection with the LWA, and the Board must perform essentially the same NEPA analysis described above for the ESP, with respect to the LWA activities, although, instead of making a finding on NEPA Baseline Issue 3, the Board is to "[d]etermine whether the redress plan will adequately redress the activities performed under the [LWA]" should the activities be terminated by either the holder of the LWA or by Commission denial of any corresponding ESP or COL. *See id.* §§ 50.10(e)(1)(ii), 51.105(c); *see also* Supplementary Notice of Hearing and Opportunity to Petition for Leave to Intervene on an [ESP] for the VOGTLE ESP Site, 72 Fed. Reg. 64,686, 64,686 (Nov. 16, 2007) [hereinafter LWA Hearing Notice]. Finally, the Board must find that (1) "the applicable standards and requirements of the Act, and the Commission's regulations applicable to the activities to be conducted under the [LWA] have been met"; (2) "[t]he applicant is technically qualified to engage in the activities authorized"; (3) "[i]ssuance of the [LWA] will provide reasonable assurance of adequate protection to public health and safety and will not be inimical to the common defense and security"; and (4) "there are no unresolved safety issues relating to the activities to be conducted under the [LWA] that would constitute good cause for withholding the authorization." 10 C.F.R. § 50.10(e)(1)(iii)-(iv); *see* LWA Hearing Notice, 72 Fed. Reg. at 64,686.

LIMITED WORK AUTHORIZATION (LWA): REQUIRED DETERMINATIONS (LICENSING BOARD AUTHORIZATION TO MAKE)

Although section 50.10(e)(1)(iii) and the LWA hearing notice give the responsibility in the first instance for making three of these findings to the Director, Office of New Reactors (NRO), *see* 10 C.F.R. § 50.10(e)(1)(iii); LWA Hearing Notice, 72 Fed. Reg. at 64,686, in light of the fact that the LWA hearing notice attributes to the Board the authority to make the three additional ESP safety

findings found in section 52.24(a)(1), (4), (6) in the context of the LWA, *see* LWA Hearing Notice, 72 Fed. Reg. at 64,686, which, in turn, are essentially the same as the three findings in section 50.10(e)(iii), the Board likewise will make these findings in accord with 10 C.F.R. § 50.10(e)(iii) and the LWA hearing notice.

LIMITED WORK AUTHORIZATION (LWA): REQUIRED DETERMINATIONS

In an instance when an ESP is issued with an associated LWA, the Board must find relative to the LWA that "[a]ny significant adverse environmental impact resulting from activities requested under § 52.17(c) can be redressed." 10 C.F.R. § 52.24(a)(7). In addition, if LWA activities are approved by the NRC in conjunction with an ESP, the ESP as issued "shall specify those 10 CFR 50.10 [authorized] activities." 10 C.F.R. § 52.24(c).

EARLY SITE PERMIT PROCEEDING(S): IMMEDIATE EFFECTIVENESS OF DECISION

RULES OF PRACTICE: IMMEDIATE EFFECTIVENESS OF DECISION

Licensing board initial decisions in earlier ESP proceedings have not been effective until they were reviewed by the Commission. *See, e.g., North Anna ESP,* LBP-07-9, 65 NRC at 629. Subsequently, however, the 10 C.F.R. Part 2 regulations were revised to provide for immediate effectiveness of initial decisions in certain proceedings. *See* 72 Fed. Reg. at 49,416, 49,475-76. Accordingly, under the current rules, "[a]n initial decision directing the issuance or amendment of a limited work authorization under 10 CFR 50.10 [or] an early site permit under subpart A of part 52 of this chapter . . . is immediately effective upon issuance unless the presiding officer finds that good cause has been shown by a party why the initial decision should not become immediately effective." 10 C.F.R. § 2.340(f).

NEPA: EARLY SITE PERMIT REVIEW; REQUIREMENT FOR IMPACT STATEMENT (EARLY SITE PERMIT)

The agency's NEPA regulations require that the Staff prepare an environmental impact statement (EIS) in connection with the issuance of an ESP. *See* 10 C.F.R. § 51.20(b)(1). The Staff must first prepare a draft EIS (DEIS), *see id.* §§ 51.70, 51.75(b), that includes, among other things,

> an evaluation of the environmental effects of construction and operation of a reactor, or reactors, which have design characteristics that fall within the site characteristics and design parameters for the [ESP] application, but only to the extent addressed in the [ESP] environmental report [(ER)] or otherwise necessary to determine whether there is any obviously superior alternative to the site proposed.

Id. § 51.75(b). Though the DEIS may rely in part on the applicant's ER, the regulations require the Staff to "independently evaluate and be responsible for the reliability of all information used in the [DEIS]." *Id.* § 51.70(b). The DEIS is then distributed for public comment and, based on the comments received, a review of information provided by the applicant, and supplemental independent information and analysis, the Staff prepares and issues an FEIS. *See id.* §§ 51.73, 51.91.

NEPA: CEQ REGULATIONS; CONSIDERATION OF IMPACTS (DIRECT, INDIRECT, AND CUMULATIVE)

Additionally, in implementing NEPA, the NRC uses certain of the definitions provided in Council on Environmental Quality regulations. *See id.* § 51.14(b). Among those is section 1508.25, which states that an agency EIS must consider direct, indirect, and cumulative impacts of an action. *See* 40 C.F.R. § 1508.25. Direct impacts are those caused by the federal action, and occurring at the same time and place as that action, while indirect impacts are caused by the action at a later time or more distant place, yet are still reasonably foreseeable. *See id.* § 1508.8. In addition, cumulative impacts are defined as

> the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Id. § 1508.7.

NEPA AND AEA: DIFFERENCE IN REVIEW APPROACHES

The NEPA-driven environmental review is more outward looking and involves a one-time impacts evaluation emphasizing a "reasonableness" approach. In contrast, the AEA-driven safety review, which is both more inward looking and ongoing, takes a "conservative" approach.

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (RADIOLOGICAL IMPACTS)

Potential radiological impacts of the proposed units have both environmental and safety aspects. On the safety side, 10 C.F.R. § 52.17 specifies that an ESP application must contain "[a] description and safety assessment of the site" that includes "an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequence evaluation factors identified in paragraphs (a)(1)(ix)(A) and (a)(1)(ix)(B) of this section." 10 C.F.R. § 52.17(a)(1)(ix). That section requires that "[t]he applicant . . . perform an evaluation and analysis of the postulated fission product release . . . to evaluate the offsite radiological consequences." *Id.* Under 10 C.F.R. § 52.17, individuals located at the boundary of the exclusion area cannot be exposed to more than 25 rem total effective dose equivalent (TEDE) in any 2-hour period, and any individual located at the outer boundary of the low population zone cannot be exposed to more than 25 rem TEDE during the entire period of any radioactive release. *See id.* § 52.17(a)(1)(ix)(A)-(B).

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (RADIOLOGICAL IMPACTS)

Additionally, 10 C.F.R. § 52.18 directs the Staff to review ESP applications "according to the applicable standards set out in 10 CFR part 50 and its appendices and 10 CFR part 100." *Id.* § 52.18. Section 50.34a, in turn, directs an applicant to describe "equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences," and, for applications filed after January 2, 1971, directs the applicant to identify design objectives and means to maintain levels of radioactive effluents "as low as is reasonably achievable [(ALARA)]." *Id.* § 50.34a(a). Part 50, Appendix I, sets forth numerical guidelines for meeting the ALARA standard. *See id.* Part 50, App. I. Further, Part 100 instructs the Staff to consider physical characteristics of the site, specifically noting that "[f]actors important to hydrological radionuclide transport . . . must be obtained from on-site measurements." *Id.* § 100.20(c)(3). Finally, Part 20 sets out numerical limits for radiation exposure, including occupational dose limits and radiation dose limits for members of the public. *See id.* §§ 20.1201 to .1302.

EARLY SITE PERMIT PROCEEDING(S): ENVIRONMENTAL REVIEW (RADIOLOGICAL IMPACTS)

On the environmental side, the Environmental Protection Agency (EPA) has

established radiation exposure standards under 40 C.F.R. Part 190, the applicability of which the Commission has acknowledged in Part 20 of the agency's regulations. *See id.* § 20.1003 (defining "generally applicable environmental radiation standards" as the "standards issued by the [EPA]"); *id.* § 20.1301(e) (providing that "licensee[s] subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR part 190 shall comply with those standards"). Additionally, the Staff evaluates individual and population exposure under the 10 C.F.R. Part 20 and the ALARA standards discussed above in connection with safety.

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (GROUNDWATER IMPACTS)

Among other things, pursuant to section 52.17(a)(1) the site safety analysis report (SSAR) submitted with an ESP application must contain "[t]he seismic, meteorological, hydrologic, and geologic characteristics of the proposed site" and "[a] description and safety assessment of the site on which a facility is to be located." *Id.* § 52.17(a)(1)(vi), (ix). In addition, section 100.20 states that the Commission, "in determining the acceptability of a site for a stationary power reactor," will consider the "[p]hysical characteristics of the site, including seismology, meteorology, geology, and hydrology." *Id.* § 100.20(c).

EARLY SITE PERMIT PROCEEDING(S): ENVIRONMENTAL REVIEW (ALTERNATIVES ANALYSIS)

NEPA § 102(2)(C)(iii) requires that an EIS address alternatives to the proposed action. *See* 42 U.S.C. § 4332(2)(C)(iii). NRC's regulations implementing this NEPA provision require an applicant for an ESP to file an environmental report (ER), *see* 10 C.F.R. § 51.50(b), addressing the following factors:

> (1) . . . impact of proposed action on the environment;
> (2) . . . [unavoidable] adverse environmental impacts;
> (3) [a]lternatives to the proposed action;
> (4) [t]he relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
> (5) . . . irreversible and irretrievable commitments of resources.

Id. § 51.45(b)(1)-(5). If the proposed siting of a plant slated for an ESP involves unresolved conflicts concerning alternative uses of available resources, then this discussion must be sufficiently complete to allow the Staff to develop and to explore appropriate alternatives to the ESP pursuant to NEPA § 102(2)(E). *See id.* § 51.45(b)(3). The ER must also include "an evaluation of alternative sites to

determine whether there is any obviously superior alternative to the site proposed." *Id.* § 51.50(b)(1).

EARLY SITE PERMIT PROCEEDING(S): ENVIRONMENTAL REVIEW (ALTERNATIVES ANALYSIS)

Additionally, 10 C.F.R. § 51.45(b)(3) and 10 C.F.R. Part 51, App. A, § 1(a)(5), call for a presentation of alternatives in an applicant's ER and in an NRC EIS, respectively, in comparative form. All reasonable alternatives are to be identified. *See Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 71 (1991). The Staff must prepare an EIS during review of an ESP application, *see* 10 C.F.R. § 52.18, and this EIS "must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed." *Id.* § 51.75(b). The EIS must be prepared in accordance with 10 C.F.R. § 51.71, which, inter alia, considers and weighs the environmental impacts of alternatives to the proposed action and alternatives available for reducing or avoiding adverse environmental effects. *See id.* § 51.71(d). In addition, with regard to alternative sites, the Commission has recently emphasized that the Staff must evaluate "'both the process (i.e., methodology) used by the applicant and the reasonableness of the product (e.g., potential sites) identified by that process.'" *North Anna ESP,* CLI-07-27, 66 NRC at 223-24 (quoting ESRP at 9.3-8); *see also id.* at 228-32 (finding FEIS discussion of alternative sites insufficient but independently reviewing record on greenfield, competitors' brownfield, noncompetitors' brownfield, and applicant's other nuclear sites to conclude that the Staff's underlying alternative site review was adequate).

LIMITED WORK AUTHORIZATION (LWA): SCOPE

Section 50.10 of Title 10 of the *Code of Federal Regulations* provides the terms for requesting and issuing an LWA, which authorize an applicant to perform certain site-preparation activities that would otherwise only be permitted following the issuance of a 10 C.F.R. Part 50 construction permit or a 10 C.F.R. Part 52 COL. *See* 10 C.F.R. § 50.10(d)-(g). Section 52.17(c) allows an ESP applicant to request that a section 50.10 LWA be issued in conjunction with an ESP. Section 50.10(a)(1) identifies LWA construction activities, while section 50.10(a)(2) identifies activities that can be performed without an LWA (i.e., as "preconstruction" activities that do not require NRC approval). An LWA allows for the performance of these LWA construction activities prior to issuance of a COL, *see id.* § 50.10(d)(1) (LWA authorizes activities "for which either a construction permit or [COL] is otherwise required"), but the LWA application

must include a plan for site redress that provides for restoration if the project is cancelled, the LWA is revoked, or a construction permit or COL is denied. *See id.* § 50.10(d)(3)(iii). The site redress plan (SReP) also remains in effect for an ESP applicant even if the ESP with which the LWA is issued is not referenced in a construction permit or COL application during the period that the ESP remains valid. *See id.* § 52.25.

LIMITED WORK AUTHORIZATION (LWA): SCOPE

Under section 50.10(a)(1), activities constituting construction, and thus requiring an LWA, are the driving of piles; subsurface preparation; placement of backfill, concrete, or permanent retaining walls within an excavation; installation of foundations; or in-place assembly, erection, fabrication, or testing that are for safety-related structures, systems, or components (SSCs). Also included are construction activities associated with onsite emergency facilities necessary to comply with section 50.47 and 10 C.F.R. Part 50, App. E. *See id.* § 50.10(a)(1).

PRECONSTRUCTION AUTHORITY: STANDARD

Under section 50.10(a)(2), "construction" is defined as not including site exploration; preparation of the site for construction, including site clearing, grading, and installation of environmental mitigation measures; erection of fences and other access control measures; excavation; erection of support buildings for use in connection with construction; building of service facilities, such as paved roads, parking lots, railroad spurs, exterior lighting systems, potable water systems and sewerage treatment facilities, and transmission lines; and procurement or offsite fabrication of facility components. *See id.* § 50.10(a)(2).

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (SITE EMERGENCY PLAN)

The SSAR filed with the ESP application must include information that "identif[ies] physical characteristics of the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans." *Id.* § 52.17(b)(1). If the applicant determines that there are physical characteristics "that could pose a significant impediment to the development of emergency plans, the application must identify measures that would, when implemented, mitigate or eliminate the significant impediment." *Id.*

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (SITE EMERGENCY PLAN)

In addition, an ESP applicant has the option of either proposing a complete and integrated emergency plan or proposing major features of the emergency plan "for review and approval by NRC, in consultation with the Department of Homeland Security (DHS)." *Id.* § 52.17(b)(2)(i), (ii). The regulations provide that either option should be proposed in accordance with the "pertinent" or "applicable" standards in 10 C.F.R. § 50.47 and the requirements of Appendix E to 10 C.F.R. Part 50. *Id.* Section 50.47(b) contains sixteen planning standards related to the emergency preparedness function, and Appendix E to 10 C.F.R. Part 50, establishes minimum requirements for emergency plans. *See id.* § 50.47(b); *id.* Part 50, App. E. Among other requirements in Part 50 Appendix E, section IV outlines the content of emergency plans, while section V specifies provisions for submitting emergency implementing procedures to the NRC for review, and section VI sets forth provisions for the Emergency Response Data System (ERDS). *See id.* Part 50, App. E, §§ IV-VI.

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (SITE EMERGENCY PLAN)

If an applicant chooses to submit a complete and integrated emergency plan with its ESP application, complete and integrated emergency plans "must include the proposed inspections, tests, and analyses that the holder of a combined license referencing the [ESP] shall perform, and the acceptance criteria that are necessary and sufficient" to support a finding of "reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will be operated in conformity with the emergency plans, the provisions of the Act, and the Commission's rules and regulations." *Id.* § 52.17(b)(3). The inspections, tests, analyses, and acceptance criteria (ITAAC) associated with emergency planning reflect those aspects of the emergency plan that cannot be described or completed until the plant is further along in the licensing and construction process. They are essentially placeholders that reflect requirements that could not be addressed under Part 52 prior to physical construction of the plant.

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (SITE EMERGENCY PLAN)

If an applicant submits a complete and integrated emergency plan in conjunction with an ESP application, the Staff must find "that the emergency plans provide reasonable assurance that adequate protective measures can and will be

taken in the event of a radiological emergency." 10 C.F.R. § 50.47(a)(1)(iii). The Staff's review focuses primarily on the applicant-prepared onsite provisions of the plans, which include the evacuation time estimate provided by the applicant, and the ITAAC. *See id.* § 50.47(b), (d). The offsite provisions, which generally are the responsibility of state and local governments, are reviewed by the Federal Emergency Management Agency (FEMA). *See id.* § 50.47(b), (d). FEMA performs its evaluation independently of the NRC, also using NUREG-0654/FEMA-REP-1, and provides its review findings to the NRC. The Staff must take into account FEMA's findings, as section 50.47(a)(2) provides:

> [t]he NRC will base its finding on a review of the [FEMA] findings and determinations as to whether State and local emergency plans are adequate and whether there is reasonable assurance that they can be implemented, and on the NRC assessment as to whether the applicant's onsite emergency plans are adequate and whether there is reasonable assurance that they can be implemented.

Id. § 50.47(a)(2). Moreover, FEMA's finding "constitute[s] a rebuttable presumption on questions of adequacy and implementation capability" in NRC licensing proceedings. *Id.* Ultimately, the reasonable assurance finding for complete and integrated plans includes the successful completion of ITAAC and resolution of any permit conditions.

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (SEISMIC EVALUATION)

Under 10 C.F.R. § 52.17(a)(1)(vi), an applicant's SSAR must include

> [t]he seismic . . . and geologic characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated.

In providing this information, applicants must conform to the requirements of 10 C.F.R. § 100.23, which stipulates that the information provides

> the principal geologic and seismic considerations that guide the Commission in its evaluation of the suitability of a proposed site and adequacy of the design bases established in consideration of the geologic and seismic characteristics of the proposed site, such that, there is a reasonable assurance that a nuclear power plant can be constructed and operated at the proposed site without undue risk to the health and safety of the public.

Among other things, this provision, in conjunction with Appendix A to 10 C.F.R. Part 100, sets forth in detail the geologic, seismic, and engineering characteristics as well as the siting factors and criteria that govern an applicant's seismic suitability showing.

EARLY SITE PERMIT PROCEEDING(S): ENVIRONMENTAL REVIEW (SEVERE ACCIDENT MITIGATION ALTERNATIVES (SAMAS), SEVERE ACCIDENT MITIGATION DESIGN ALTERNATIVES (SAMDAS)); SAFETY REVIEW (SEVERE ACCIDENT MITIGATION ALTERNATIVES (SAMAS), SEVERE ACCIDENT MITIGATION DESIGN ALTERNATIVES (SAMDAS))

Severe accident mitigation alternatives (SAMAs), encompass potential plant modifications, sometimes referred to as severe accident mitigation design alternatives (SAMDAs), as well as plant procedural changes or training program changes that can reduce the risks of severe accidents.

EARLY SITE PERMIT PROCEEDING(S): SAFETY REVIEW (SEVERE ACCIDENT MITIGATION DESIGN ALTERNATIVES (SAMDAS))

Severe accidents are defined as accidents "in which substantial damage is done to the reactor core whether or not there are serious offsite consequences." Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants, 50 Fed. Reg. 32,138, 32,138 (Aug. 8, 1985). NRC safety and environmental regulations require consideration of the consequences of severe accidents. Section 52.17 of Title 10 of the *Code of Federal Regulations* requires an ESP applicant to submit a safety assessment that includes an analysis of a fission product release from an accident, "using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents." 10 C.F.R. § 52.17(a)(1)(ix). The fission product releases in question are associated with accidents that have "generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products." *Id.* § 52.17(a)(1)(ix) n.1. Thus, implicitly, some discussion of SAMAs is required under the safety regulations.

EARLY SITE PERMIT PROCEEDING(S): ENVIRONMENTAL REVIEW (SEVERE ACCIDENT MITIGATION DESIGN ALTERNATIVES (SAMDAS))

On the environmental side, NEPA § 102(2)(C) "implicitly requires agencies to consider measures to mitigate [environmental] impacts." [NEI]; Denial of Petition for Rulemaking, 66 Fed. Reg. 10,834, 10,836 (Feb. 20, 2001); *see also Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 107-08 (2009). NRC regulations also require an applicant's ER to include an analysis of "alternatives available for reducing or avoiding adverse environmental effects." 10 C.F.R. § 51.45(c). NRC's policy statement on Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969, 45 Fed. Reg. 40,101 (Jun. 13, 1980), specifically provides for consideration of measures to prevent or to mitigate the consequences of severe accidents in the ER and EIS of certain categories of nuclear plants. *See id.* at 40,103. The agency's 1985 severe accident policy statement, 50 Fed. Reg. at 32,138, provides for consideration of severe accidents for new plant designs.

EARLY SITE PERMIT PROCEEDING(S): ENVIRONMENTAL REVIEW (SEVERE ACCIDENT MITIGATION ALTERNATIVES (SAMAS)); SAFETY REVIEW (SEVERE ACCIDENT MITIGATION ALTERNATIVES (SAMAS))

In evaluating ESP applications, where detailed design information is not available, the Commission may defer resolution of SAMA issues until the 10 C.F.R. Part 50 construction permit (CP) or 10 C.F.R. Part 52 COL stage. *See North Anna ESP,* CLI-07-27, 66 NRC at 237 & n.126. If an application has selected a certified design for its proposed units, because NRC regulations require design certification applicants to address SAMDAs, *see, e.g.,* 10 C.F.R. §§ 51.30(d), 51.55(a), enough information may be available through the design certification document (DCD), to conduct a limited SAMDA analysis for the application.

EARLY SITE PERMIT PROCEEDING(S): DEFERRAL TO COMBINED LICENSE (COL) STAGE

Although the ESP process is designed, among other things, to permit an applicant to resolve various safety, environmental, and emergency planning issues associated with the particular site at issue prior to the submission of a COL application, items for which sufficient information is lacking at the ESP stage of the licensing process may be subject to deferral for consideration at the COL stage of the process. *See Grand Gulf ESP,* LBP-07-1, 65 NRC at 90.

EARLY SITE PERMIT PROCEEDING(S): PERMIT CONDITIONS

The concept of attaching permit conditions to an ESP arises from 10 C.F.R. § 52.24(b), which states:

> The [ESP] must specify the . . . terms and conditions of the [ESP] the Commission deems appropriate. Before issuance of either a construction permit or combined license referencing an [ESP], the Commission shall find that any relevant terms and conditions of the [ESP] have been met. Any terms or conditions of the [ESP] that could not be met by the time of issuance of the construction permit or combined license, must be set forth as terms or conditions of the construction permit or combined license.

10 C.F.R. § 52.24(b). Thus, any permit conditions imposed that are not met before a COL referencing the ESP is issued will attach to the COL.

EARLY SITE PERMIT PROCEEDING(S): REFERENCED CERTIFIED DESIGN

An ESP is an approval for a nuclear plant site, *see id.* § 52.1, and specifies design parameters for the site, *see id.* § 52.24(b). The ER for an ESP application may evaluate the environmental impacts of a reactor or reactors falling "within the site characteristics and design parameters for the [ESP] application." *Id.* § 51.50(b)(2). At the COL stage, an applicant may reference both an ESP and a standard design certification in its application. *See id.* § 52.73(a). If the application references an ESP, the applicant must demonstrate that the chosen design (e.g., the certified design) falls within the parameters specified in the ESP or, on the safety side, request a variance. *See id.* §§ 51.50(c)(1)(i), 52.79(b)(1)-(2).

LIMITED WORK AUTHORIZATION (LWA): REFERENCED CERTIFIED DESIGN

Additionally, an LWA applicant must submit, as part of the safety analysis report for the LWA, design information related to activities within the scope of the requested LWA. *See id.* § 50.10(d)(3)(i).

EARLY SITE PERMIT PROCEEDING(S): INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC)

To grant an ESP, the Commission must find that "[t]he proposed [ITAAC], including any on emergency planning, are necessary and sufficient, within the scope of the [ESP], to provide reasonable assurance that the facility has been

constructed and will be operated in conformity with the license, the provisions of the Act, and the Commission's regulations." *Id.* § 52.24(a)(5). An applicant has the option of submitting a complete and integrated emergency plan under section 52.17(b)(2)(ii), but if the applicant chooses to do so, it must include in the ESP application the proposed inspections, tests, and analyses that will be performed, and the acceptance criteria that are "necessary and sufficient" for the Commission's required findings for issuance of the ESP. *See id.* § 52.17(b)(3). In addition, the Commission will review any proposed ITAAC relative to a request for an LWA submitted with an ESP application. *See also id.* § 50.10(d)(3).

EARLY SITE PERMIT PROCEEDING(S): INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC)

At the COL stage, a COL application likewise must include, among other things, the "proposed inspections, tests and analyses, including those applicable to emergency planning," to be performed and "the acceptance criteria that are necessary and sufficient" to support the Commission's finding that a COL can be granted. *See id.* § 52.80(a). If a COL application "references an early site permit with ITAAC or a standard design certification or both, the application may include a notification that a required inspection, test, or analysis in the ITAAC has been successfully completed and that the corresponding acceptance criterion has been met." *Id.* § 52.80(a)(3). If the applicant makes this notification, which is essentially a request for a Commission finding on the completion of ITAAC needed for issuance of a COL, the Commission is required to identify these ITAAC in the notice of hearing published in the *Federal Register* for the COL proceeding. *See id.* §§ 52.80(a)(3), 52.85.

EARLY SITE PERMIT PROCEEDING(S): INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA (ITAAC)

If the Commission finds that these ESP or design certification ITAAC have been met, "[t]his finding will finally resolve that those acceptance criteria have been met, those acceptance criteria will be deemed to be excluded from the combined license, and findings under § 52.103(g) [(i.e., findings required before operation of the facility)] with respect to those acceptance criteria are unnecessary." *Id.* § 52.97(a)(2). Upon issuance of a COL, the Commission also must identify any ITAAC that have not yet been met. *See id.* § 52.97(b). Thereafter, but no later than "1 year after issuance of the [COL] or at the start of construction as defined in 10 CFR 50.10(a), whichever is later" the COL licensee must submit "its schedule for completing the inspections, tests, or analyses in the ITAAC." *Id.* § 52.99(a). The licensee must provide schedule updates as outlined in section

52.99(a), with appropriate notifications of completed ITAAC as required by section 52.99(c) and with the NRC reviewing the licensee's ITAAC submissions to "ensure that the prescribed inspections, tests, and analyses in the ITAAC are performed." *Id.* § 52.99(e). Prior to operation under a COL, a notice of intended operation will be published in the *Federal Register* "[n]ot less than 180 days before the date scheduled for initial loading of fuel." *Id.* § 52.103(a). An opportunity for hearing will be provided in this notice regarding certain matters, one of which is ITAAC that have not been found to have been met under section 52.97(a)(2) prior to issuance of the COL. *See id.* § 52.103(a), (b). To this end, "[a]t appropriate intervals" during the time between issuance of a COL and "the last date for submission of requests for hearing under § 52.103(a), the NRC shall publish notices in the *Federal Register* of the NRC staff's determination of the successful completion of inspections, tests, and analyses." *Id.* § 52.99(e)(1). Additionally, the NRC is required to make publicly available any notifications from the COL licensee indicating that the licensee believes certain ITAAC have been met as well as any notifications that any uncompleted ITAAC will be met prior to operation. *See id.* § 52.99(e)(2).

TECHNICAL ISSUE(S) DISCUSSED

The following technical issues are discussed: Accident Dose Estimates; Alternative Site Consideration; Alternative Sources of Energy; Alternatives (and Consideration of); Capability of Fault(s); Cooling Systems; Cooling Water Supply; Earthquake Motions; Emergency Operations Facilities; Emergency Plan(s); Groundwater Diversion (Cumulative Impacts); Groundwater Impacts (Safety-Related Structures, Saltwater Intrusion, Tritium); Inspections, Tests, Analyses, and Acceptance Criteria; Limited Work Authorization Impacts; Peak Ground Acceleration; Preconstruction Impacts; Radiological Consequences of Design Basis Accidents: Radiological Consequences of Severe Accidents; Radiological Impacts; Radiological Releases; Release of Radioactive Materials in Effluents; River Water Diversion (Cumulative Impacts); Safe Shutdown Earthquake (Intensity, Resulting Vibratory Ground Motion); Seismic Design; Seismic Evaluation of Limited Work Authorization Activities; Severe Accident Mitigation Alternatives; Severe Accident Mitigation Design Alternatives; Site Hydrology; Site Redress; Site Subsurface Characteristics; Surface Water Impacts; Technical Support Center.

TABLE OF CONTENTS

I. INTRODUCTION 452

II. PROCEDURAL BACKGROUND 452

III. APPLICABLE LEGAL STANDARDS 456
- A. General Legal Standards 456
- B. Scope of Licensing Board Review 456
- C. Required Board Findings 457
- D. Immediate Effectiveness of Initial Decision 460

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS 460
- A. Hearing Issues 460
  - 1. Cumulative Water Use Impacts 460
  - 2. Radiological Impacts 470
  - 3. Groundwater Impacts on Safety-Related Structures 481
  - 4. Environmental Impacts of Alternatives 485
  - 5. Limited Work Authorization and Site Redress Plan 497
  - 6. Site Emergency Plan 506
  - 7. Seismic Evaluation 520
  - 8. Severe Accident Mitigation Design Alternatives 534
  - 9. Future Regulatory/Licensing Activities Associated with the ESP 540
    - a. Deferrals to Combined License Stage 541
    - b. Permit Conditions 546
    - c. AP1000 Design Certification Revision 549
    - d. Inspections, Tests, Analyses, and Acceptance Criteria 553
- B. Additional Items 558
  - 1. Environmental and Safety Topics Not Addressed at Hearing 558
  - 2. Applicability of the Aircraft Impact Rule 558
  - 3. Additional Information in Satisfaction of 10 C.F.R. § 52.24 559

V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW 560
- A. Safety Findings 560
- B. Environmental Findings 561
- C. Section 50.10(e) and Section 52.24(a) Findings 562

SECOND AND FINAL PARTIAL INITIAL DECISION
(Mandatory/Uncontested Proceeding)

I. INTRODUCTION

1.1 On August 15, 2006, Southern Nuclear Operating Company (SNC) filed an application with the Nuclear Regulatory Commission (NRC) for an early site permit (ESP) under 10 C.F.R. Part 52 for two additional reactors utilizing the Westinghouse Electric Company AP1000 certified design at the existing Vogtle Electric Generating Plant (VEGP) site near Waynesboro, Georgia. Subsequently, on August 16, 2007, SNC submitted a supplement to its ESP application requesting that it be granted a limited work authorization (LWA) pursuant to 10 C.F.R. §§ 50.10, 52.17(c) to permit SNC to perform certain construction-related activities prior to receiving a Part 52 combined license (COL) (for which SNC has also applied[1]). This Second and Final Partial Initial Decision presents the Licensing Board's findings of fact and conclusions of law associated with the mandatory or uncontested aspects of this proceeding, as relevant matters have been identified by the Board based on its review of the pending SNC ESP application, and the associated LWA supplement, and the NRC Staff's final environmental impact statement (FEIS) and final safety evaluation report (FSER) regarding those licensing requests, along with the Board's findings relative to the environmental and safety issues set forth in the notices of hearing for this proceeding, *see* [SNC]; Notice of Hearing and Opportunity to Petition for Leave to Intervene on an [ESP] for the Vogtle ESP Site, 71 Fed. Reg. 60,195, 60,195 (Oct. 12, 2006) [hereinafter ESP Hearing Notice]; [SNC]; Supplementary Notice of Hearing and Opportunity to Petition for Leave to Intervene on an [ESP] for the VOGTLE ESP Site, 72 Fed. Reg. 64,686, 64,686 (Nov. 16, 2007) [hereinafter LWA Hearing Notice], and in 10 C.F.R. §§ 50.10, 52.24.

1.2 For the reasons set forth below, we conclude that Staff issuance of the ESP, and the associated LWA, for the Vogtle ESP site should be authorized, effective immediately.

II. PROCEDURAL BACKGROUND

2.1 In response to the Commission's October 5, 2006 notice of hearing

[1] *See Southern Nuclear Operating Co.* (Vogtle Electric Generating Plant, Units 3 and 4), LBP-09-3, 69 NRC 139 (2009), *appeals denied,* CLI-09-16, 70 NRC 33 (2009)).

and opportunity to petition for leave to intervene, Joint Intervenors[2] (then Joint Petitioners) filed a request for hearing and petition to intervene. On December 15, 2006, this Atomic Safety and Licensing Board was established to adjudicate the Vogtle ESP proceeding. The Board's various rulings on contested matters, including the admission of Joint Intervenors as parties to the proceeding and the disposition of Joint Intervenors three admitted ESP-related environmental contentions, are discussed in detail in its first partial initial decision relative to contested matters.[3] *See* LBP-09-7, 69 NRC 613 (2009), *petition for Commission review pending.*

2.2 The uncontested or mandatory portion of this ESP proceeding, to which only SNC and the Staff were parties, was conducted more or less in tandem with the contested portion. In a series of administrative orders, *see, e.g.,* Licensing Board Memorandum and Order (Prehearing Conference and Initial Scheduling Order) (May 5, 2007); Licensing Board Memorandum and Order (Revised General Schedule) (July 14, 2008); Licensing Board Memorandum and Order (Revised General Schedule) (Nov. 13, 2008) [hereinafter Nov. 13, 2008 Scheduling Order], the Board established a schedule for both the contested and uncontested portions of the proceeding.

2.3 Subsequent to the public release of the Staff's August 14, 2008 FEIS,[4] on October 17, 2008, the Board issued a memorandum and order posing

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[2] Joint Intervenors included the Center for a Sustainable Coast, Savannah Riverkeeper, Southern Alliance for Clean Energy, Atlanta Women's Action for New Directions, and Blue Ridge Environmental Defense League.

[3] Although a hearing opportunity was afforded to interested persons in connection with the LWA supplement to the SNC ESP application, *see* LWA Hearing Notice, 71 Fed. Reg. at 64,686-87, no intervention requests challenging the SNC LWA request were filed.

[4] *See* Exhs. NRC00001A (Office of New Reactors [(NRO), NRC], NUREG-1872, 1 [FEIS] for an [ESP] at the [VEGP] Site (Aug. 2008) (Sections 1.0-4.0)) [hereinafter FEIS 1A]; NRC00001B ([NRO, NRC], NUREG-1872, 1 [FEIS] for an [ESP] at the [VEGP] Site (Aug. 2008) (Sections 5.0-11.0)) [hereinafter FEIS 1B]; NRC00001C ([NRO, NRC], NUREG-1872, 2 [FEIS] for an [ESP] at the [VEGP] Site (Aug. 2008) (Apps. A-J)) [hereinafter FEIS 1C]; NRC00001D ([NRO, NRC], NUREG-1872, 2 [FEIS] for an [ESP] at the [VEGP] Site (Aug. 2008) (App. F)); NRC00001E ([NRO, NRC], NUREG-1872, [FEIS] for an [ESP] at the [VEGP] Site (Sept. 2008 to vols. 1 & 2) (Errata)).

In connection with the exhibit citations above, as entered into the record and reflected in the agency's ADAMS-associated electronic hearing docket, the official exhibit number for each evidentiary item reflects a three-alpha character party identifier (i.e, SNC, NRC); followed by six alpha and/or numeric characters to reflect its number and whether it was revised subsequent to its original submission as a prefiled exhibit (e.g., admitted exhibit SNCR00073 is a revised version of prefiled exhibit SNC000073); followed by a two-character alpha or numeric identifier that will be used in this case to distinguish between an exhibit utilized in the mandatory/uncontested portion of this proceeding (i.e., MA) as opposed to the contested portion of the proceeding (i.e., 00); followed by the designation BD01, which indicates that this Licensing Board (i.e., BD01) was involved in its identification and/or

(Continued)

initial written questions and outlining potential presentation topics relative to the environmental portion of the mandatory hearing. *See* Licensing Board Memorandum and Order (Providing Initial Questions and Potential Presentation Topics Associated with Mandatory Hearing on Environmental Matters) (Oct. 17, 2008) (unpublished) [hereinafter Licensing Board Environmental Questions]. Both SNC and the Staff filed written responses to the Board's questions on November 7, 2008. *See* Exh. SNC000068 ([SNC] Response to the Licensing Board's Order of October 17, 2009 (Nov. 7, 2008)) [hereinafter SNC Response to Environmental Questions]; Exh. NRC000057 (NRC Staff Responses to the Licensing Board's Questions Regarding Environmental Matters) [hereinafter Staff Response to Environmental Questions]. Following the Staff's November 12, 2008 publication of an advanced safety evaluation report (ASER), *see* [NRO, NRC], Safety Evaluation of the [ESP] Application in the Matter of [SNC], for the Vogtle [ESP] Site (Nov. 2008) (ADAMS Accession No. ML080290280) [hereinafter ASER],[5] the Board issued a memorandum and order on December 5, 2008, posing an initial set of written questions and potential presentation topics relative to the safety portion of the mandatory hearing, *see* Licensing Board Memorandum and Order (Providing Initial Questions and Potential Presentation Topics Associated with Mandatory Hearing on Safety Matters) (Dec. 5, 2008) (unpublished) [hereinafter Licensing Board Safety Questions]. SNC and the Staff filed written responses to this set of questions on January 16, 2009. *See* Exh. SNC000069 ([SNC] Response to Licensing Board Order of December 5, 2008 (Jan. 16, 2009)) [hereinafter SNC Response to Safety Questions]; Exh. NRC000058 (NRC Staff Responses to Licensing Board's Questions Regarding Safety Matters) [hereinafter Staff Response to Safety Questions]. On December 31, 2008, the Board issued a memorandum and order setting forth an additional presentation topic for the mandatory hearing. *See* Licensing Board Memorandum and Order (Additional Presentation Topic and Administrative Directives for Mandatory Hearing) (Dec. 31, 2008) (unpublished) [hereinafter Dec. 31, 2008 Order]. Thereafter, on February 5, 2009, the Staff issued its FSER. *See* Exh. NRC000056 (Safety Evaluation of the [ESP] Application in the Matter of [SNC], for the Vogtle [ESP] Site (Feb. 2009)) [hereinafter FSER].

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admission. Accordingly, the official designation for the first exhibit cited above is NRC00001A-MA-BD01. For the sake of simplicity, however, we will refer to all exhibits admitted in the uncontested portion of this proceeding by their initial nine character designation only.

[5] Although this document, as well as a number of other agency review or guidance documents associated with the Staff's safety and environmental reviews of the SNC ESP application for Vogtle Units 3 and 4, were not placed into evidence by either SNC or the Staff, for purposes of the mandatory/uncontested portion of this ESP proceeding, the Board takes official notice of these publicly available documents and their contents. *See* 10 C.F.R. § 2.337(f). Given these documents are not in the evidentiary record, as an aid to locating them, the Board has provided an ADAMS accession number or an NRC website location for each.

2.4 In accordance with the Board's November 13, 2008 scheduling order, the Board held an evidentiary hearing on uncontested environmental and safety topics on March 23-25, 2009, in Waynesboro, Georgia. *See* Tr. at M-1662 to -2410. At the hearing, in accordance with an administrative order issued by the Board on February 23, 2009, *see* Licensing Board Memorandum and Order (Additional Administrative and Scheduling Information) (Feb. 23, 2009) at 3-4 (unpublished), witnesses for SNC and the Staff provided oral presentations on the following topics: Cumulative Water Use Impacts, Radiological Impacts, Groundwater Impacts on Safety-Related Structures, Environmental Impacts of Alternatives, LWA and Site Redress Plan (SReP), Site Emergency Plan, Seismic Evaluation, Severe Accident Mitigation Design Alternatives (SAMDAs), Deferrals to COL, Permit Conditions, and AP1000 Design Certification Revisions. During the hearing, the witnesses for both of the parties were seated and sworn at the same time in a panel format for each presentation topic. Presentation materials, generally in the form of slide presentations and supporting documents, were provided to the Board in advance of the evidentiary hearing and admitted as exhibits in the proceeding. The Board asked questions of these witnesses during the course of these presentations and afforded the witnesses of one party the opportunity to comment upon the responses of the other party's witnesses.

2.5 Following the March 23-25, 2009 evidentiary hearing, in response to the Board's March 30, 2009 post-hearing administrative order, *see* Licensing Board Memorandum and Order (Post-Hearing Administrative Items) (Mar. 30, 2009) at 3 (unpublished), on April 8, 2009, SNC filed a set of joint stipulations agreed to by the Staff as well as an affidavit addressing certain requirements under 10 C.F.R. § 52.24. *See* Exhs. SNC000099 (Affidavit of Charles R. Pierce (Apr. 7, 2009)) [hereinafter Pierce Affidavit]; SNC000100 (SNC Submittal of Affidavit Addressing Requirements Under 10 C.F.R. § 52.24 (Apr. 7, 2009)). Additionally, in an April 17, 2009 memorandum and order adopting certain corrections to the hearing transcripts, the Board marked for identification and admitted into evidence the affidavit submitted by SNC on April 8, 2009, and closed the record of the mandatory portion of this proceeding as of that date. *See* Licensing Board Memorandum and Order (Transcript Corrections; Closing the Record of Mandatory/Uncontested Proceeding) (Apr. 17, 2009) at 1-3 (unpublished) [hereinafter Apr. 17, 2009 Order].

2.6 Pursuant to the Board's November 13, 2008 general schedule, *see* Nov. 13, 2008 Scheduling Order, App. A, at 5, SNC and the Staff filed proposed findings of fact and conclusions of law regarding the mandatory portion of this proceeding on May 22, 2009. *See* [SNC] Proposed Findings of Fact and Conclusions of Law Regarding Uncontested Issues (May 22, 2009); NRC Staff's Proposed Findings of Fact and Conclusions of Law Concerning Uncontested Matters (May 22, 2009).

III. APPLICABLE LEGAL STANDARDS

A. General Legal Standards

3.1 Under the Commission's 10 C.F.R. Part 52 regulations, an applicant who may apply for a construction permit under Part 50, or a combined license under Part 52, may apply for an ESP. *See* 10 C.F.R. § 52.15(a). If granted, an ESP, which is defined as "a partial construction permit," evidences Commission approval of a site for one or more nuclear power facilities. *Id.* § 52.1(a). An ESP applicant may also request that an LWA under 10 C.F.R. § 50.10 be issued in conjunction with the ESP. *See id.* § 52.17(c).

3.2 The Atomic Energy Act (AEA) of 1954, as amended, provides that "[t]he Commission shall hold a hearing . . . on each application under section 2133 or 2134(b) of this title for a construction permit for a facility." 42 U.S.C. § 2239(a)(1)(A).[6] ESP applications, as partial construction permit applications, *see* 10 C.F.R. § 52.1(a), are subject to the AEA hearing requirement, as well as "all procedural requirements in 10 CFR part 2," *id.* § 52.21; *see also System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), LBP-07-1, 65 NRC 27, 35, *permit issuance authorized,* CLI-07-14, 65 NRC 216 (2007).

B. Scope of Licensing Board Review

3.3 When reviewing an ESP application in an uncontested proceeding, licensing boards are instructed to "conduct a simple 'sufficiency' review" rather than a de novo review on both AEA and National Environmental Policy Act (NEPA) of 1969 issues. *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39 (2005). Thus, boards "should decide simply whether the safety and environmental record is 'sufficient' to support license issuance. In other words, the boards should inquire whether the NRC Staff performed an adequate review and made findings with reasonable support in logic and fact." *Id.* With respect to certain NEPA findings, however, boards are instructed to make independent environmental judgments, though they "need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities." *Id.* at 44; *see also Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 559-60, *permit issuance authorized,* CLI-07-27, 66 NRC 215 (2007).

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[6] In the order establishing this Licensing Board, the authority to conduct a mandatory hearing in this proceeding was delegated to the Board. *See* Establishment of Atomic Safety and Licensing Board; ASLBP No. 07-850-01-ESP-BD01, 71 Fed. Reg. 77,071 (Dec. 22, 2006). This delegation was confirmed in an August 30, 2007 Commission memorandum and order. *See* CLI-07-24, 66 NRC 38, 38-39 (2007).

The board's role thus is to "carefully probe [Staff] findings by asking appropriate questions and by requiring supplemental information when necessary," but "the NRC Staff's underlying technical and factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient." *Clinton ESP,* CLI-05-17, 62 NRC at 39-40.

3.4 Additionally, in a mandatory hearing, a licensing board "must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance." *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006).

C. Required Board Findings

1. Required ESP-Related Safety Findings

3.5 Pursuant to the AEA and agency regulations in effect at the time the notice of hearing for this proceeding was published, this Board is required to make two safety findings — answering the first in the negative and the second in the affirmative — before an ESP can be issued for the VEGP site:

> (1) Whether the issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public (Safety Issue 1); and (2) whether, taking into consideration the criteria contained in 10 CFR part 100, a reactor, or reactors, having characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public (Safety Issue 2).

ESP Hearing Notice, 71 Fed. Reg. at 60,195. Subsequent to the publication of the notice of hearing in this proceeding, the 10 C.F.R. Part 52 regulations were revised to, among other things, clarify what is required in the findings associated with the issuance of an ESP. *See* Licenses, Certifications, and Approvals for Nuclear Power Plants, 72 Fed. Reg. 49,352, 49,524 (Aug. 28, 2007). Under a new section 52.24, an ESP may issue if the Commission, or, presumably, the Licensing Board, as the Commission's delegate, *see supra* note 6, finds, among other things, that:

> (1) [The ESP application] meets the applicable standards and requirements of the [AEA] and the Commission's regulations;
>
> (2) Notifications, if any, to other agencies or bodies have been duly made;
>
> (3) There is reasonable assurance that the site is in conformity with the provisions of the Act, and the Commission's regulations;

(4) The applicant is technically qualified to engage in any activities authorized;

(5) The proposed inspections, tests, analyses and acceptance criteria, including any on emergency planning, are necessary and sufficient, within the scope of the early site permit, to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the Act, and the Commission's regulations; [and]

(6) Issuance of the permit will not be inimical to the common defense and security or to the health and safety of the public.

10 C.F.R. § 52.24(a)(1)-(6). In addition, section 52.24 states that if the Commission decides to authorize issuance of the ESP, the issued ESP "must specify the site characteristics, design parameters, and terms and conditions of the [ESP] the Commission deems appropriate." *Id.* § 52.24(b).

3.6 Because the substantive findings that must be made under the pre-2007 regime overlap to a significant degree those required under the current regulations,[7] and SNC has both revised its application to reflect the new rule and provided information in this proceeding to address both sets of provisions, the Board will address the findings outlined in each.

2. Required ESP-Related Environmental Findings

3.7 In authorizing issuance of an ESP, to fulfill its NEPA obligations the Board must:

(1) Determine whether the requirements of Sections 102(2)(A), (C), and (E) of NEPA and the [10 C.F.R. Part 51, Subpart A] regulations have been met;

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken;

(3) Determine, after . . . considering reasonable alternatives, whether the [ESP] should be issued, denied, or appropriately conditioned to protect environmental values; [and]

(4) Determine, in an uncontested proceeding, whether the NEPA review conducted by the NRC Staff has been adequate.

10 C.F.R. § 51.105(a)(1)-(4); *see also* ESP Hearing Notice, 71 Fed. Reg. at 60,195. These findings are consistent with the requirement under 10 C.F.R. § 52.24(a)

[7] In this regard, in issuing the November 2007 supplemental notice relative to the SNC LWA application, the Commission essentially incorporated into this proceeding the findings in paragraphs (1), (4), and (6) of section 52.24(a), denominating them as Safety Issues 3, 4, and 5. *Compare* 10 C.F.R. § 52.24(a)(1), (4), (6), *with* LWA Hearing Notice, 72 Fed. Reg. at 64,686.

that, prior to issuance of an ESP, "[t]he findings required by subpart A of 10 CFR Part 51 have been made." 10 C.F.R. § 52.24(a)(8).

3.8 With regard to the first three of these findings, i.e., the "baseline" NEPA issues, the Board must reach its own independent determination, but should do so without "second-guess[ing] underlying technical or factual findings by the NRC Staff." *Clinton ESP,* CLI-05-17, 62 NRC at 45.

3. Required LWA-Related Findings

3.9 As noted above, *see supra* section III.A, an ESP applicant may request that an LWA be issued in conjunction with the ESP. *See* 10 C.F.R. § 52.17(c). Before the LWA can issue, the Staff must issue an FEIS in connection with the LWA, and the Board must perform essentially the same NEPA analysis described above for the ESP, *see supra* section III.C.2, with respect to the LWA activities, although, instead of making a finding on NEPA Baseline Issue 3, the Board is to "[d]etermine whether the redress plan will adequately redress the activities performed under the [LWA]" should the activities be terminated by either the holder of the LWA or by Commission denial of any corresponding ESP or COL. *See* 10 C.F.R. §§ 50.10(e)(1)(ii), 51.105(c); *see also* LWA Hearing Notice, 72 Fed. Reg. at 64,686. Finally, the Board must find that (1) "the applicable standards and requirements of the Act, and the Commission's regulations applicable to the activities to be conducted under the [LWA] have been met"; (2) "[t]he applicant is technically qualified to engage in the activities authorized"; (3) "[i]ssuance of the [LWA] will provide reasonable assurance of adequate protection to public health and safety and will not be inimical to the common defense and security"; and (4) "there are no unresolved safety issues relating to the activities to be conducted under the [LWA] that would constitute good cause for withholding the authorization."[8] 10 C.F.R. § 50.10(e)(1)(iii)-(iv); *see* LWA Hearing Notice, 72 Fed. Reg. at 64,686.

3.10 In an instance when an ESP is issued with an associated LWA, the Board must find relative to the LWA that "[a]ny significant adverse environmental impact resulting from activities requested under § 52.17(c) can be redressed." 10 C.F.R. § 52.24(a)(7). In addition, if LWA activities are approved by the NRC in

[8] Although section 50.10(e)(1)(iii) and the LWA hearing notice give the responsibility in the first instance for making three of these findings to the Director, NRO, *see* 10 C.F.R. § 50.10(e)(1)(iii); LWA Hearing Notice, 72 Fed. Reg. at 64,686, in light of the fact that the LWA hearing notice attributes to the Board the authority to make the three additional ESP safety findings found in section 52.24(a)(1), (4), (6) in the context of the LWA, *see* LWA Hearing Notice, 72 Fed. Reg. at 64,686, which, in turn, are essentially the same as the three findings in section 50.10(e)(iii), the Board likewise will make these findings in accord with 10 C.F.R. § 50.10(e)(iii) and the LWA hearing notice.

conjunction with an ESP, the ESP as issued "shall specify those 10 CFR 50.10 [authorized] activities." *Id.* § 52.24(c).

D. Immediate Effectiveness of Initial Decision

3.11 Licensing board initial decisions in earlier ESP proceedings have not been effective until they were reviewed by the Commission. *See, e.g., North Anna ESP,* LBP-07-9, 65 NRC at 629. Subsequently, however, the 10 C.F.R. Part 2 regulations were revised to provide for immediate effectiveness of initial decisions in certain proceedings. *See* 72 Fed. Reg. at 49,416, 49,475-76. Accordingly, under the current rules,

> [a]n initial decision directing the issuance or amendment of a limited work authorization under 10 CFR 50.10 [or] an early site permit under subpart A of part 52 of this chapter . . . is immediately effective upon issuance unless the presiding officer finds that good cause has been shown by a party why the initial decision should not become immediately effective.

10 C.F.R. § 2.340(f).

IV. FACTUAL FINDINGS AND LEGAL CONCLUSIONS

A. Hearing Issues

4.1 In setting forth the Board's determinations relative to the uncontested portion of this ESP proceeding, we begin with the subject matter of the various presentations that were made by SNC and the Staff in response to the Board's requests for additional information on these particular items.

1. Cumulative Water Use Impacts

a. Introduction

4.2 Water use impacts resulting from the operation of the proposed units were evaluated in section 5.3.2 of the FEIS, with cumulative impacts discussed in section 7.3.1. The Staff concluded in the FEIS that water use impacts would be SMALL. *See* FEIS 1B, at 5-10 (surface water), 5-17 (groundwater). For surface water, this conclusion was based on the Staff's analysis that the maximum consumptive use of Savannah River water for proposed Vogtle Units 3 and 4 would be 0.7% at the normal flow rate of 8830 cubic feet per second (cfs), and 1.7% at the low flow rate of 3800 cfs. *See id.* at 5-8 to -9. The Staff argued that withdrawal rates this small would not destabilize the river resource, and would

even be difficult to detect, since the uncertainty in flow gauge measurements is in the 5 to 10% range. *See id.* at 5-9 to -10. In the cumulative impacts analysis, the Staff concluded that although the impacts might be detectable, they nonetheless would not destabilize the river resource, and so would continue to be SMALL. *See id.* at 7-5.

4.3 At the limited appearance sessions held by the Board as part of this ESP proceeding, members of the public expressed concerns over potential water use impacts of the new facilities, particularly in light of the recent severe drought conditions in the Savannah River basin. *See, e.g.,* Limited Appearance Session Tr. at 27-29, 50-51 (Apr. 27, 2008); Limited Appearance Session Tr. at 34 (Apr. 28, 2008). The Board was also concerned about whether the Staff had considered an adequate range of river flows in preparing the draft environmental impact statement (DEIS). This led the Board to pose several questions to the Staff (and SNC if it wished to respond) regarding the impacts of river flow rates lower than the 3800 cfs considered in the DEIS. *See* Licensing Board Environmental Questions, App. A, at 3-5. Given these concerns and the importance of water use impacts, the Board requested that the Staff provide a summary presentation on this topic at the mandatory hearing, so the Board could further evaluate the adequacy and conservatism of the Staff's analysis and conclusions in the FEIS. Specifically, the Board requested that the Staff provide:

> a presentation reviewing the cumulative surface and groundwater impacts associated with the operation of Vogtle Electric Generating Plant (VEGP) Units 1-4. In this review, include the potential impact of other relevant facilities in the area, such as the D-Area Powerhouse and the Urquhart Station. In particular, address these impacts under a range of drought conditions, including the possibility of conditions more severe than Drought Level 3. Address why the limiting conditions used in the evaluation of cumulative impacts, where the evaluations were often limited to Drought Level 3, are conservative in light of recent drought conditions in the VEGP area.

Id. at 2.

b. Witnesses and Evidence Presented

4.4 The Staff, which was the lead and sole presenter for this topic, provided four witnesses to discuss the Staff review of water use impacts. These witnesses provided oral testimony, in conjunction with their prefiled slide presentation that was admitted as an exhibit, at the evidentiary hearing.[9] *See* Tr. at M-1692 to

[9] Although the Staff seated four witnesses in connection with this topic, only Dr. Christopher B. Cook, Dr. Charles T. Kincaid, and Lance W. Vail spoke at the hearing on this topic.

-1736; Exh. NRC000059 (NRC Staff Presentation Topic #1, Water Use Impacts) [hereinafter Staff Water Use Impacts Presentation].

4.5 Dr. Christopher B. Cook earned a Bachelor of Science degree (B.S.) in Civil Engineering from Colorado State University and a Master of Science degree (M.S.) and a Ph.D. in Civil and Environmental Engineering from the University of California at Davis. He is currently a Senior Hydrologist in the NRC/NRO Division of Site and Environmental Reviews (NRC/NRO/SERD). *See* Exh. NRC000070, at 1 (Christopher Bruce Cook, Statement of Professional Qualifications (SPQ)). Prior to joining the NRC, Dr. Cook was employed as a Senior Research Engineer at Pacific Northwest National Laboratory (PNNL) for over 7 years. *See id.* While employed at PNNL, Dr. Cook provided assessments for the hydrology-related sections in the Vogtle DEIS. *See id.* at 2.

4.6 Dr. Charles T. Kincaid earned a B.S. in Civil Engineering from Humboldt State College and a Ph.D. in Engineering (Hydraulics) from Utah State University. He is currently a Staff Scientist with the Energy and Environment Directorate at PNNL. *See* Exh. NRC000071, at 1 (Curriculum Vitae (CV) for Charles T. Kincaid). Over the course of his approximately 30-year employment at PNNL, Dr. Kincaid has focused on soil physics and groundwater studies, and has specialized in the area of computational fluid mechanics of environmental systems. *See id.*; Tr. at M-1727.

4.7 Mark D. Notich earned a B.S. in Agricultural Chemistry from the University of Maryland. He is currently an NRC/NRO Senior Project Manager. *See* Exh. NRC000072, at 1 (Mark D. Notich, SPQ). As the Environmental Project Manager for the Vogtle ESP, Mr. Notich has been involved in all activities relating to the Staff's issuance of the DEIS and FEIS for the VEGP site and oversees the team of specialists from PNNL that aids the Staff with its environmental review for the Vogtle ESP application. *See id.*

4.8 Lance W. Vail earned a B.S. in Environmental Resources Engineering from Humboldt State University and an M.S. in Civil Engineering from Montana State University. He is currently a Senior Research Engineer in the Environmental Technology Division at PNNL. *See* Exh. NRC000073, at 1 ([SPQ] of Lance W. Vail). Over the course of his approximately 28-year employment at PNNL, Mr. Vail has developed expertise in a broad spectrum of areas related to water resources. His more recent projects have included participation as Task Manager of PNNL's assessments of three of the ESP applications that have been submitted to the NRC. *See id.*

4.9 Based on the respective qualifications and experience of the proffered witnesses, the Board finds each of these witnesses qualified to testify as an expert regarding the cumulative water use impacts associated with Vogtle Units 1 through 4.

c. Regulations and Guidance Relating to Water Use

4.10 The agency's NEPA regulations require that the Staff prepare an environmental impact statement (EIS) in connection with the issuance of an ESP. *See* 10 C.F.R. § 51.20(b)(1). The Staff must first prepare a DEIS, *see id.* §§ 51.70, 51.75(b), that includes, among other things,

> an evaluation of the environmental effects of construction and operation of a reactor, or reactors, which have design characteristics that fall within the site characteristics and design parameters for the [ESP] application, but only to the extent addressed in the [ESP] environmental report [(ER)] or otherwise necessary to determine whether there is any obviously superior alternative to the site proposed.

Id. § 51.75(b). Though the DEIS may rely in part on the applicant's ER, the regulations require the Staff to "independently evaluate and be responsible for the reliability of all information used in the [DEIS]." *Id.* § 51.70(b). The DEIS is then distributed for public comment and, based on the comments received, a review of information provided by the applicant, and supplemental independent information and analysis, the Staff prepares and issues an FEIS. *See id.* §§ 51.73, 51.91.

4.11 Additionally, in implementing NEPA, the NRC uses certain of the definitions provided in Council on Environmental Quality regulations. *See id.* § 51.14(b). Among those is section 1508.25, which states that an agency EIS must consider direct, indirect, and cumulative impacts of an action. *See* 40 C.F.R. § 1508.25. Direct impacts are those caused by the federal action, and occurring at the same time and place as that action, while indirect impacts are caused by the action at a later time or more distant place, yet are still reasonably foreseeable. *See id.* § 1508.8. In addition, cumulative impacts are defined as

> the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

Id. § 1508.7.

4.12 Section 5.2.2 of the Staff's environmental standard review plan (ESRP), which is a Staff guidance document, outlines the Staff's review responsibilities with respect to the discussion in the EIS of water use impacts from plant operation. The ESRP states that the Staff's review "should be in sufficient detail to predict and assess potential impacts and to recommend how these impacts should be treated in the licensing process," including recommendations for mitigating measures, as necessary. Office of Nuclear Reactor Regulation (NRR), [NRC], NUREG-1555,

Environmental Standard Review Plan at 5.2.2-1 (1999 & 2007), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/Staff/sr1555/ [hereinafter ESRP]. This Staff review should include an evaluation of "the impacts of water use on water availability, hydrologic alterations, and water quality." *Id.* at 5.2.2-7. With respect to cumulative impacts from operation of the plant, the ESRP states that the Staff should identify, evaluate, and summarize the "potential cumulative impacts associated with plant operation," and provide a "characterization of the impacts using the NRC's SMALL, MODERATE, LARGE terminology." *Id.* at 5.11-3. These three characterizing terms, which we likewise utilize in this decision as appropriate, are defined as follows:

> SMALL — Environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource.
>
> MODERATE — Environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.
>
> LARGE — Environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

See FEIS 1A, at 1-4.

4.13 In conducting the cumulative impacts analysis, the reviewer should obtain information from the Staff reviewers conducting the assessment of the direct impacts from operation, including water use impacts under ESRP 5.2.2. *See* ESRP at 5.11-2.

d. Evidentiary Presentation

4.14 At the hearing on uncontested issues, as requested the Staff made a presentation to the Board regarding the Staff's assessment of the cumulative water use impacts associated with operation of the existing and proposed Vogtle units. This included a discussion of both the cumulative surface water impacts and the cumulative groundwater impacts. *See* Staff Water Use Impacts Presentation at 3, 17.

4.15 As it is advised to do in the ESRP, *see* section IV.A.1.c, *supra,* in its cumulative impacts analysis of the water use impacts in FEIS § 7.3, the Staff referenced the potential water use impacts discussed in FEIS § 5.3. *See* FEIS 1B, at 7-3. To the extent applicable to the Staff's discussion of its cumulative impacts assessment, the Board also references portions of the Staff's assessment of potential water use impacts in FEIS § 5.3.

(i) CUMULATIVE SURFACE WATER IMPACTS

4.16 The evidence presented relative to cumulative surface water impacts

focused on the impact of withdrawing water from the Savannah River to supply the existing and proposed closed-cycle cooling systems for the VEGP units. *See id.* at 7-4. For existing Units 1 and 2, the cooling water requirements are outlined in the FEIS. *See id.* For proposed Units 3 and 4, the cooling water requirements are defined in the AP1000 design certification document (DCD) and outlined in the FEIS. *See* FEIS 1A, at 3-5 to -7 (discussing the cooling water requirements for the VEGP Units 3 and 4).[10] To calculate the impacts from use of surface water, the Staff compared the water withdrawal values and the consumptive use values for all four units to various Savannah River flow conditions to determine the percentage of flow used. *See* FEIS 1B, at 7-4 to -5.

4.17 The FEIS reports that the average annual flow of the Savannah River is 8830 cfs, *see id.* at 7-4, but when the water level in the upstream Thurmond Dam drops below a prescribed value, the United States Army Corps of Engineers implements a Drought Level Contingency Plan under which the release rate from the dam is restricted. *See id.* at 5-7. The lowest release rate explicitly specified in the plan is 3800 cfs. This is associated with what is termed Drought Level 3. *See id.* at 5-7, 7-4. There is also a Drought Level 4, but the release rate is not explicitly specified. At Drought Level 4, the release rate is set equal to the inflow to the dam, in order to maintain a fixed water level. *See id.* at 5-7. Conditions have never reached Drought Level 4, however. *See* Staff Water Use Impacts Presentation at 12-13 (showing no Drought Level 4 conditions between February 1980 and February 2009); *see also* FEIS 1B, at 5-7 (as of date FEIS written, Drought Levels 3 and 4 had never been reached). Evidence presented at the hearing showed that the Thurmond Dam had been operating at Drought Level 3 during the later part of 2008 and, in fact, recently the release rate was temporarily reduced to 3100 cfs for several months. *See* Tr. at M-1711; Staff Water Use Impacts Presentation at 13.

4.18 As discussed above, the Board was concerned with whether the Staff used an appropriately conservative Savannah River flow rate in its environmental analysis of the Vogtle ESP application. The Staff chose 3800 cfs as the basis for its NEPA evaluation. Mr. Vail presented data at the hearing that showed that the river flow at the site is generally higher than the release rates at the Thurmond Dam. *See* Staff Water Use Impacts Presentation at 7. This is mainly due to drainage inflow into the river between the dam and the Vogtle site. *See* Tr. at M-1702 to -1703. Data from the Waynesboro flow gauge located near the site shows that even with the historically low release rate of 3100 cfs from Thurmond Dam, the flow at the VEGP site rarely fell below 3800 cfs. *See* Staff Water Use

[10] The FEIS was prepared using the information from revision 15 of the AP1000 DCD. After the Staff published the FEIS, however, SNC advised the Staff that some of the values for the cooling water requirements would change based on the subsequently proffered AP1000 DCD revision 16. *See* FEIS 1A, at 3-7; *see also* section IV.A.1.e, *infra.*

Impacts Presentation at 7; *see also* Exh. SNC000016 (United States Geological Survey (USGS) Charts Depicting Recent Flows of Savannah River).[11]

4.19 The Staff also presented a chart providing data representing weekly average flows recorded by the flow gauge near Augusta, Georgia, upstream of the VEGP site, from 1925 to the present, which showed the effects of the upstream reservoirs on river flow. *See* Tr. at M-1703 to -1704; Staff Water Use Impacts Presentation at 6. The Staff explained that the flood control function of the reservoirs will "clip off some of the higher flows" and the drought management function "pulls up some of the lower flows." Tr. at M-1703. Noticing that there appeared to be a downward trend in the flows starting in about the 1980s, the Board asked Mr. Vail if the Staff had analyzed recent drought data to see if there was a trend that might lead it to project even more severe drought conditions in the future. *See* Tr. at M-1704 to -1705, M-1709 to -1710. In addressing this question, Mr. Vail showed a chart overlaying precipitation and river flow measured at the Augusta gauge that provided a history back to 1944. *See* Tr. at M-1723; Staff Water Use Impacts Presentation at 15. While acknowledging that there had been two recent periods of significant drought, Mr. Vail stated that the Staff did not necessarily see these as indicative of a long-term trend. *See* Tr. at M-1725.

4.20 The Staff then identified other major users of Savannah River water in the area, including, as the Board had requested, the D-Area Powerhouse and Urquhart Station, and conservatively estimated their total consumptive use at 78.7 cfs. *See* Tr. at M-1712 to -1714; Water Use Impacts Presentation at 8. The Staff estimated the total consumptive use for Vogtle Units 1 through 4 at 129 cfs. Although this number exceeds the consumptive use of other users, Mr. Vail testified that drainage into the river between Thurmond Dam and the Vogtle site more than offsets the withdrawals by other users. *See* Tr. at M-1715; *see also* Staff Water Use Impacts Presentation at 9. He stated that this supported the Staff's use of the average Savannah River flow of 3800 cfs in its cumulative impact analysis. *See* Tr. at M-1715, M-1726.

4.21 The results of the Staff's analysis showed that the operation of Units 1 through 4 would consume 1.5% of the normal average river flow of 8830 cfs, and 3.4% at the conservative flow rate of 3800 cfs. The corresponding consumption percentages when other major users are included were 2.4% and 5.5%. *See* Staff Water Use Impacts Presentation at 9. While the Staff emphasized the appropriateness of using 3800 cfs, Mr. Vail explained that the Staff did consider flow rates of 3000 cfs and 2000 cfs to provide additional context for its analysis. *See* Tr. at M-1715. For example, at an assumed Savannah River flow rate of 3000 cfs, all four units would consume 4.3% of the flow. *See* Staff Water Use

[11] Exhibit SNC000016 is a contested hearing exhibit. Nonetheless, because it generally contains the same data as the Staff's mandatory hearing presentation, albeit in a more easily readable format, for clarity we reference both documents.

Impacts Presentation at 9. But data presented showed that 3000 cfs is considerably lower than any flow measured at the Augusta gauge since the Thurmond Dam was put into operation in the 1950s. *See id.* at 6. Based on the above, the Staff concluded that there was sufficient support for the conclusions in the FEIS that the cumulative surface water use impacts of the VEGP ESP would be SMALL. *See* Tr. at M-1726 to -1727; Staff Water Use Impacts Presentation at 16.

(ii) CUMULATIVE GROUNDWATER IMPACTS

4.22 With respect to cumulative impacts, the proposed Vogtle Units 3 and 4 would use groundwater to supply makeup water for the service water system, the fire protection system, the plant demineralized water system, the potable water supply, and other miscellaneous uses. *See* FEIS 1B, at 5-10. This water would be pumped from wells in the deep Cretaceous aquifer that underlies the site. *See id.* at 7-12.

4.23 The Staff's groundwater impacts review focused on four topics. One concerned groundwater resource use generally, while the other three concerned groundwater quality as impacted by (1) tritium in the unconfined aquifer; (2) groundwater contamination associated with the Department of Energy's (DOE) Savannah River Site (SRS); and (3) saltwater intrusion. *See* Tr. at M-1727; FEIS 1B, at 7-12 to -15.

4.24 Staff witness Dr. Kincaid summarized the Staff's review of groundwater usage projections. He stated that, during normal operation, the four units would require 2.13 million gallons per day (gpd) (3.30 cfs) from the deep aquifer. He also testified that a low estimate of the base flow of the deep Cretaceous aquifer, which is the groundwater resource that VEGP draws upon, *see* Tr. at M-1729, was 119 million gpd (184 cfs). Thus, all four units are projected to use about 2% of the groundwater resource, with the two new units accounting for half of this usage. *See* Tr. at M-1728; Staff Water Use Impacts Presentation at 18. These estimates were based on data from a severe drought period in 1968 that was published in a 1987 USGS report. *See* Tr. at M-1728. In response to Board questions regarding whether the Staff was concerned about the current validity of a report that was published over 20 years ago, Dr. Kincaid stated that the water in the deep aquifer was on the order of thousands of years old and, therefore, the base flow is relatively unaffected by droughts, such as the current drought. He thus indicated he was not concerned with the age of the data because the quantity of the deep base flow was long-term. *See* Tr. at M-1728 to -1730.

4.25 The Staff also reviewed the projected aquifer drawdown that would result from the groundwater removal outlined in FEIS § 5.3.2.2. Dr. Kincaid testified that the Cretaceous aquifer had 120 meters of confining head, while the projected drawdown at the site boundary would be 4 meters, and the drawdown at the nearest neighboring well would be 3 meters. *See* Tr. at M-1730.

4.26 The FEIS stated there was an upward gradient from the Cretaceous to the Tertiary aquifer, but that pumping could reduce this upward gradient. *See* FEIS 1B, at 5-15. The Board inquired whether pumping in the Cretaceous aquifer at the projected rates could reverse this gradient, and thereby lead to potentially contaminating flow from the Tertiary to the Cretaceous aquifer. *See* Licensing Board Environmental Questions, App. A, at 2. Dr. Kincaid testified that gradient reversal was possible, but that it would be localized to the vicinity of the production wells. *See* Tr. at M-1730. The Staff therefore concluded that the impact from use of the groundwater resource is SMALL. *See* Tr. at M-1730 to -1731.

4.27 Dr. Kincaid then summarized the Staff's review of the three specific items relating to impacts to groundwater quality. Relative to tritium in the Water Table aquifer, Dr. Kincaid explained that, although tritium was first discovered in the Water Table aquifer in 1988, subsequent studies by the Georgia Geological Survey and USGS indicated that the source of tritium was atmospheric release from SRS. *See* Tr. at M-1731 to -1734; Staff Water Use Impacts Presentation at 19. Because the two current and two proposed units do not and will not withdraw water from the Water Table aquifer or make releases to it, the Staff concluded that "there is no reason to believe that the proposed project will contribute to the issue of tritium in the [W]ater [T]able aquifer." Tr. at M-1731; Staff Water Impacts Presentation at 19.

4.28 Regarding SRS groundwater plumes, the Staff determined from groundwater modeling conducted by USGS that contamination in the aquifers underlying SRS is intercepted by the Savannah River. *See* Tr. at M-1734 to -1735; FEIS 1B, at 7-14; Staff Water Use Impacts Presentation at 20. According to the Staff, the production of groundwater at the VEGP site "does not appear to contribute to the broader migration of SRS contamination." Staff Water Use Impacts Presentation at 20; *see also* Tr. at M-1735.

4.29 In connection with saltwater intrusion, the Staff obtained a permitting plan report issued by the State of Georgia that identified Burke County, where the VEGP site is located, as one of nineteen counties that do not contribute substantially to the development or extent of saltwater intrusion in coastal areas. *See* FEIS 1B, at 7-12. The Staff also determined that the quality of water withdrawn from Burke County wells indicated that it is not impacted by saltwater intrusion. *See* Tr. at M-1735; Staff Water Use Impacts Presentation at 21. In addition, the Staff noted in the FEIS that an SNC request for a modification of its current groundwater use permit for utilizing groundwater relative to proposed Units 3 and 4 would be subject to State review to ensure "aggressive and practical conservation and reuse principles." FEIS 1B, at 7-12.

4.30 Regarding these three groundwater quality issues, the Staff concluded that any impacts from groundwater production would be SMALL. *See* Tr. at M-1731, M-1735 to -1736. Further, Dr. Kincaid concluded his testimony by

repeating the Staff's conclusion in the FEIS that groundwater impacts would be SMALL based on the Staff's evaluations of all these four topic areas. *See* Tr. at M-1736.

e. Board Findings Related to Cumulative Water Use Impacts

4.31 After reviewing the Staff's evaluation of the cumulative water use impacts, the Board finds it to be adequate to support the Staff's conclusion that the cumulative impacts would be SMALL.

4.32 Based on the DEIS, the Board had been concerned about whether the Staff had included adequate conservatism in choosing 3800 cfs as the river flow on which the NEPA evaluation would be based. This concern was motivated by the recent severe drought conditions, and the resulting restrictions in the amount of water being released from the Thurmond Dam. The FEIS, however, expanded the analysis in this area, and additional data and testimony were provided at the mandatory hearing, as well as at the contested hearing where the flow rate was also an issue, albeit in a different context. *See* LBP-09-7, 69 NRC at 652-56. The Staff provided data that showed that the river flow rate has rarely dropped below 3800 cfs since the Thurmond Dam came into operation in the early 1950s. This has been true even during periods of severe drought. The Board finds that the use of 3800 cfs is well supported as a conservative, yet reasonable, flow rate for the Staff's evaluation. The Board also finds that the Staff's consideration of flow rates as low as 3000 cfs and 2000 cfs provided valuable context when considering severe drought conditions, but agrees with the Staff that flow rates that low would be extremely unlikely, and that using them as the ultimate basis for their NEPA evaluation would not be appropriate.

4.33 With respect to groundwater impacts, the Board finds that the impacts to groundwater have been well characterized in FEIS §§ 5.3.2.2 and 7.3.2.2. The parameters used to characterize the impacts are well calibrated against extensive onsite measurements. The withdrawal rates are defined in the AP1000 DCD and, while the latest revision of the DCD is not yet finalized, the Board finds that the projected deep aquifer withdrawal rate of 1% for the operation of the new Units 3 and 4 is well founded. In this regard, the FEIS states that the maximum groundwater demand from DCD revision 16 is about 11% lower than from revision 15, which was the basis for the current analysis. *See* FEIS 1B, at 5-17.

4.34 Overall, the Board concludes that the Staff has adequately considered and analyzed the cumulative water use impacts, and that the Staff's evaluation that the cumulative impacts would be SMALL for both surface water and groundwater is well supported by the data and analyses in the record.

2. Radiological Impacts

a. Introduction

4.35 The potential release of radioactive materials is a key consideration in evaluating both the safety and environmental impacts of nuclear power plant operation. As one of the Staff witnesses observed, the NEPA-driven environmental review is more outward looking and involves a one-time impacts evaluation emphasizing a "reasonableness" approach. *See* Tr. at M-1860. The environmental impacts of radiological releases for proposed Vogtle Units 3 and 4 were discussed in various portions of the FEIS. FEIS chapter 2 includes a discussion of the groundwater hydrology of the site as well as interactions between the site surface and groundwater and between aquifers. *See* FEIS 1A, at 2-21 to -31. Section 5.9 describes the radiological impacts of normal operations, reviewing liquid pathways, gaseous pathways, and direct exposure pathways through which members of the public might be exposed to radiation. *See* FEIS 1B, at 5-63 to -75. Section 5.9 also describes impacts to biota other than humans. *See id.* at 5-74 to -75. Radiation doses from accidents are discussed in section 5.10. *See id.* at 5-75 to -91. Design basis accident (DBA) impacts are discussed in section 5.10.1, while severe accidents are discussed in section 5.10.2. *See id.* at 5-77 to -91. The Staff also evaluated cumulative radiological impacts of both normal operations and accidents in section 7.8 of the FEIS. *See id.* at 7-27 to -29.

4.36 In contrast, according to one of the Staff witnesses, the AEA-driven safety review, which is both more inward looking and ongoing, takes a "conservative" approach. *See* Tr. at M-1859 to -1860. Radiological impacts likewise are discussed in various sections of the FSER. Section 2.4.13 analyzes accidental releases of radioactive liquid effluents into ground and surface water. *See* FSER at 2-158 to -174. Chapter 11 discusses radiological consequences of normal operations, through gaseous and liquid effluents. *See id.* at 11-1 to -7. Chapter 15 outlines the radiological impacts of DBAs. *See id.* at 15-1 to -6.

4.37 The Board asked the Applicant and the Staff to review at the mandatory hearing their environmental and safety evaluations of radiological impacts, with an emphasis on how the parameters used in the analyses were related to onsite measurements, and how the Staff assured itself that the results were adequately conservative. *See* Licensing Board Safety Questions at 3; Licensing Board Environmental Questions at 2-3.

b. Witnesses and Evidence Presented

4.38 Relative to the issue of radiological impacts, during the March 2009 mandatory/uncontested evidentiary hearing regarding proposed Vogtle Units 3 and 4, lead party SNC presented two witnesses, while four individuals appeared on behalf of the Staff. At the evidentiary hearing, these witnesses provided oral

testimony, in conjunction with their prefiled slide presentations that were admitted as exhibits. *See* Tr. at M-1737 to -1885; Exhs. SNC000070 ([SNC] Vogtle ESP Mandatory Hearing Presentation #2, Environmental Topic #2: Radiological Impacts) [hereinafter SNC Radiological Impacts (Environmental) Presentation]; SNCR00073 ([SNC] Vogtle ESP Mandatory Hearing Presentation #2 and #3, Safety Topic #2 and #3: Accidental Release & Transport of Radioactive Liquid Effluents & Potential Groundwater Impacts) [hereinafter SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation]; NRC000060 (NRC Staff Presentation Topic #2, Radiological Impacts) [hereinafter Staff Radiological Impacts Presentation).

(i) SNC WITNESSES

4.39 Philip L. Young, a certified health physicist with Tetra Tech, Inc., was involved in the preparation of the ER for the Vogtle ESP application. He has a B.S. in Radiation Health (Health Physics) from Oregon State University, an M.S. in Health Physics from Georgia Tech, and over 17 years of experience in assessing environmental impacts of nuclear facilities, managing the preparation of NEPA documents, and performing radiological health and ecological risk assessments, including involvement in the preparation of ERs for license renewals of eighteen nuclear power plants. *See* Tr. at M-1751; Exh. SNC000071 (Philip L. Young CV).

4.40 Dr. Angelos N. Findikakis is a registered professional engineer and a Bechtel fellow with the Bechtel Corporation. He has a Ph.D. in civil engineering from Stanford University and over 35 years' experience working in the areas of groundwater flow and transport, modeling, environmental hydraulics and hydrology, and water resources. *See* Tr. at M-1777; Exh. SNC000074, at 1-2 (Angelos N. Findikakis CV).

4.41 At the hearing, Mr. Young presented testimony on the environmental aspects of radiological impacts, while Dr. Findikakis focused on the safety-related aspects of such impacts.

(ii) STAFF WITNESSES

4.42 The Staff presented testimony from Dr. Charles Kincaid and Dr. Hosung Ahn on the safety-related aspects of radiological impacts, and from Michael Smith and James Van Ramsdell, Jr., on the environmental aspects of such impacts. Additionally, the Staff panel on radiological impacts included Mark Notich (environmental) and Christian Araguas (safety).

4.43 Dr. Kincaid's background and expert qualifications are discussed in section IV.A.1.b, *supra*.

4.44 Dr. Ahn is a Hydrologist in the Hydrologic Engineering Branch, NRC/NRO/SERD. *See* Exh. NRC000077, at 1 ([CV] for Hosung Ahn) [hereinafter

Ahn CV]; Tr. at M-1821. He has an M.S. and a Ph.D. in Hydrology from Colorado State University and over 24 years of experience in the areas of water resources management, ecosystem restorations, power plant siting, and reactor licensing. *See* Ahn CV at 1. He has also reviewed the site safety analysis report (SSAR) portions of new reactor license applications, focusing on potential extreme hydrologic hazards, such as flood, drought, dam breaks, tsunamis, and subsurface radionuclide contamination, and has worked on three ESP applications. *See id.*

4.45 Mr. Smith, a scientist and certified health physicist with the PNNL Radiological Science and Engineering Group, received a B.S. in Nuclear Engineering from Kansas State University and M.S. degrees in Nuclear Engineering and Environmental Science from Ohio State University. Before joining PNNL, Mr. Smith worked for 5 years at the Southwest Research Institute (SRI), on projects involving the proposed Yucca Mountain high-level waste (HLW) repository facility. While with PNNL, he has been involved in environmental reviews for a number of NRC COL and ESP proceedings. *See* Exh. NRC000076, at 1 (CV for Michael A. Smith).

4.46 Mr. Ramsdell is a Senior Technical Researcher with the Radiological Sciences and Engineering Group at PNNL. *See* Exh. NRC000075, at 1 ([CV] for James V. Ramsdell, Jr.) [hereinafter Ramsdell CV]. He has a B.S. in General Sciences and an M.S. in Meteorology from Oregon State University, graduate experience in Atmospheric Studies at the University of Washington and the Joint Center for Graduate Study, Richland, Washington, and has been with PNNL since 1967, with 39 years of experience conducting environmental reviews. *See id.*; Staff Radiological Impacts Presentation at 27. He was the program manager for updating the ESRPs, and he conducted EIS accident analyses for several ESP environmental reviews. *See* Ramsdell CV at 2-3; Staff Radiological Impacts Presentation at 27.

4.47 Mr. Notich's background and expert qualifications are discussed in section IV.A.1.b, *supra*.

4.48 Mr. Araguas earned a B.S. in Electrical Engineering from the Pennsylvania State University. *See* Exh. NRC000074, at 1 ([CV] for Christian J. Araguas) [hereinafter Araguas CV]. He is currently employed in the Division of New Reactor Licensing, NRC/NRO, as a Lead Project Manager for the Vogtle ESP application. *See id.* Specifically, he was the Safety Project Manager for the review of the Vogtle ESP application and LWA request. *See* Tr. at M-2120. He has worked at the NRC for approximately 6 years. *See* Araguas CV at 1.

4.49 Based on the foregoing, the Board finds each of these SNC and Staff witnesses qualified to testify as an expert in their respective areas regarding the radiological impacts associated with the proposed Vogtle Units 3 and 4.

c. Regulations and Guidance Relating to Radiological Impacts

4.50 Potential radiological impacts of the proposed units have both environmental and safety aspects. On the safety side, 10 C.F.R. § 52.17 specifies that an ESP application must contain "[a] description and safety assessment of the site" that includes "an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequence evaluation factors identified in paragraphs (a)(1)(ix)(A) and (a)(1)(ix)(B) of this section." 10 C.F.R. § 52.17(a)(1)(ix). That section requires that "[t]he applicant . . . perform an evaluation and analysis of the postulated fission product release . . . to evaluate the offsite radiological consequences." *Id.* Under 10 C.F.R. § 52.17, individuals located at the boundary of the exclusion area cannot be exposed to more than 25 rem total effective dose equivalent (TEDE) in any 2-hour period, and any individual located at the outer boundary of the low population zone cannot be exposed to more than 25 rem TEDE during the entire period of any radioactive release. *See id.* § 52.17(a)(1)(ix)(A)-(B).

4.51 Additionally, 10 C.F.R. § 52.18 directs the Staff to review ESP applications "according to the applicable standards set out in 10 CFR part 50 and its appendices and 10 CFR part 100." *Id.* § 52.18. Section 50.34a, in turn, directs an applicant to describe "equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences," and, for applications filed after January 2, 1971, directs the applicant to identify design objectives and means to maintain levels of radioactive effluents "as low as is reasonably achievable [(ALARA)]." *Id.* § 50.34a(a). Part 50, Appendix I, sets forth numerical guidelines for meeting the ALARA standard. *See id.* Part 50, App. I. Further, Part 100 instructs the Staff to consider physical characteristics of the site, specifically noting that "[f]actors important to hydrological radionuclide transport . . . must be obtained from on-site measurements." *Id.* § 100.20(c)(3). Finally, Part 20 sets out numerical limits for radiation exposure, including occupational dose limits and radiation dose limits for members of the public. *See id.* §§ 20.1201 to .1302. The Staff also follows guidance in RS-002 and Regulatory Guide 1.113.[12]

4.52 On the environmental side, the EPA has established radiation exposure standards under 40 C.F.R. Part 190, the applicability of which the Commission has acknowledged in Part 20 of the agency's regulations. *See* 10 C.F.R. § 20.1003 (defining "generally applicable environmental radiation standards" as the "stan-

[12] *See* [NRR, NRC], Processing Applications for [ESPs], RS-002 (May 3, 2004), *available at* http://www.nrc.gov/reactors/new-licensing/esp/esp-public-comments-rs-002.html [hereinafter RS-002]; Office of Standards Development (OSD), [NRC], Regulatory Guide 1.113, Estimating Aquatic Dispersion of Effluents from Accidental and Routine Reactor Releases for the Purpose of Implementing Appendix I (rev. 1 Apr. 1977) (ADAMS Accession No. ML003740390).

dards issued by the [EPA]"); *id.* § 20.1301(e) (providing that "licensee[s] subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR part 190 shall comply with those standards"). Additionally, the Staff evaluates individual and population exposure under the 10 C.F.R. Part 20 and the ALARA standards discussed above in connection with safety. In analyzing the environmental aspect of radiation impacts, the Staff follows Regulatory Guides 1.109, 1.111, 1.112, 1.113, as well as ESRP §§ 4.5 (Radiation Exposure to Construction Workers) and 5.4 (Radiological Impacts of Normal Operation).[13]

4.53 For radiological impacts of accidents, the Staff follows Regulatory Guides 1.145 and 1.183,[14] as well as ESRP §§ 7.1 (Design Basis Accidents) and 7.2 (Severe Accidents), *see* ESRP at 7.1-1 to 7.2-7, Standard Review Plan (SRP), chapter 15,[15] and the NRC Safety Goal Policy set forth in 51 Fed. Reg. 30,028 (Aug. 21, 1986).

d. Evidentiary Presentations

4.54 The environmental impacts of potential radiological releases were evaluated for both normal operations and postulated accident conditions. The Applicant's witnesses reviewed the radiological impacts analysis in the ER, while the Staff witnesses presented the Staff's review and independent verification of the radiological impacts as documented in the FEIS.

(i) RADIOLOGICAL IMPACTS FROM NORMAL OPERATIONS

4.55 SNC witness Mr. Young described the Applicant's analysis of radiological impacts from normal operations. Pursuant to the regulations and regulatory

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[13] *See* [OSD, NRC], Regulatory Guide 1.109, Calculation of Annual Doses to Man from Routine Releases of Reactor Effluents for the Purpose of Evaluating Compliance with 10 CFR Part 50, Appendix I (rev. 1 Oct. 1977) (ADAMS Accession No. ML003740384); [OSD, NRC], Regulatory Guide 1.111, Methods for Estimating Atmospheric Transport and Dispersion of Gaseous Effluents in Routine Releases from Light-Water-Cooled Reactors (rev. 1 July 1977) (ADAMS Accession No. ML003740354); Office of Nuclear Regulatory Research (RES), [NRC], Regulatory Guide 1.112, Calculation of Releases of Radioactive Materials in Gaseous and Liquid Effluents from Light-Water-Cooled Power Reactors (rev. 1 Mar. 2007) (ADAMS Accession No. ML070320241); ESRP at 4.5-1 to 4.5-8, 5.4-1 to 5.4.4-5, 5.7-1 to 5.7-14.

[14] *See* [RES, NRC], Regulatory Guide 1.145, Atmospheric Dispersion Models for Potential Accident Consequence Assessments at Nuclear Power Plants (rev. 1 Nov. 1982) (ADAMS Accession No. ML003740205); [RES, NRC], Regulatory Guide 1.183, Alternative Radiological Source Terms for Evaluating [DBAs] at Nuclear Power Reactors (July 2000) (ADAMS Accession No. ML003716792).

[15] *See* [NRR, NRC], Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants, [Light Water Reactor (LWR)] ed., NUREG-0800, ch. 15 (revs. 0-3 July 2000-Mar. 2007), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/Staff/sr0800/ [hereinafter NUREG-0800 or SRP].

guides, the Applicant analyzed two types of exposure scenarios. The first is the maximum dose that could be received by an individual residing at the site boundary, the so-called maximally exposed individual (MEI) (i.e., the hypothetical individual who, due to proximity, activities, or living habits, could receive the maximum possible dose of radiation). *See* Tr. at M-1751; SNC Radiological Impacts (Environmental) Presentation at 4. The second is the dose to the population living within a 50-mile radius of the facility. *See* Tr. at M-1752; SNC Radiological Impacts (Environmental) Presentation at 5. The Applicant used effluent release source terms specified in the AP1000 DCD revision 15 and considered the radiation exposure pathways specified in NRC guidance. *See* Tr. at M-1754; SNC Radiological Impact (Environmental) Presentation at 6-13. Mr. Young also stated at the hearing that he believed that pending DCD revisions 16 and 17 did not have changes that would produce dose calculations different from those based on DCD revision 15. *See* Tr. at M-1755, M-1760.

4.56 As outlined by Mr. Young, the sources of potential exposure are liquid effluent releases, gaseous effluent releases, and direct radiation from the facility. *See* Tr. at M-1752. For liquid effluents, the exposure pathways for the MEI include ingestion of aquatic food, ingestion of drinking water, and direct radiation exposure from shoreline activities. *See* Tr. at M-1752 to -1753; SNC Radiological Impacts (Environmental) Presentation at 7. For the population dose calculations, the exposure pathways are the same, except ingestion of drinking water was not included because the most recent land-use census showed no use of the Savannah River for drinking water within 100 miles downstream of the site. *See* Tr. at M-1753 to -1754; SNC Radiological Impacts (Environmental) Presentation at 8. For gaseous effluents, the exposure pathways include immersion in the radioactive plume, direct exposure from deposited radioactivity, inhalation, ingestion of garden fruit and vegetables, and ingestion of beef. The dose from milk ingestion was not evaluated because the most recent land-use census indicated that no milk cows existed within 5 miles of the VEGP site. If, however, milk cows are moved within the vicinity of the site at some future date, Mr. Young indicated the annual land-use census would identify it and any necessary changes would be made to the offsite dose calculation manual. *See* Tr. at M-1757 to -1758; SNC Radiological Impacts (Environmental) Presentation at 11.

4.57 Relative to these pathways, dose calculations were performed using NRC-sanctioned computer codes and methodologies. Liquid pathway doses were calculated using the LADTAP-II computer program, while gaseous pathway releases were calculated with the GASPAR-II program. *See* Tr. at M-1754, M-1759; SNC Radiological Impacts (Environmental) Presentation at 9, 13. Mr. Young presented the MEI dose results from liquid and gaseous effluents, and showed that they were all well below the 10 C.F.R. Part 50, App. I, design objectives. *See* SNC Radiological Impacts (Environmental) Presentation at 15; *see also* FEIS 1B, at 5-69 (tbl. 5-9). He also presented the direct radiation dose

calculated for the population within 50 miles, and showed that it was about one thousandth of the natural background dose, i.e., the population dose was calculated to be 1.837 person-rem/year, while the same population would receive 2430 person-rem/year from natural background. *See* Tr. at M-1761 to -1762; SNC Radiological Impacts (Environmental) Presentation at 16.

4.58 According to Mr. Young, to evaluate the potential direct radiation exposure from the normal operation of Units 3 and 4, SNC reviewed the radiation doses measured during the operation of Units 1 and 2. To estimate the 50-mile radius population dose, thermal luminescent dosimeter (TLD) measurements were used. *See* Tr. at M-1762. Because the measurements would not have any contribution from direct radiation emanating from the site, SNC collected control data reflecting the background radiation at stations more than 10 miles from the site boundary. *See id.*; FEIS 1B, at 5-75. SNC also collected data from indicator stations located at the site perimeter given these measurements would include background plus any radiation contribution from the site. *See* Tr. at M-1762 to -1763. Based on data taken from 1992-2001, the range of average annual doses from the control stations was 48.4 to 54.4 millirem. The corresponding range of doses from the indicator stations was 48.0 to 54.4 millirem. These data, according to Mr. Young, indicate there is no dose contribution at the site boundary due to direct radiation from the Unit 1 and 2 operations. *See* Tr. at M-1763; SNC Radiological Impacts (Environmental) Presentation at 18.

4.59 Finally, Mr. Young presented cumulative dose results that included the combined releases from VEGP Units 1 through 4, the DOE SRS, and the planned mixed oxide (MOX) facility at SRS. The cumulative MEI dose was calculated to be 2.9 millirem per year, while the population dose was calculated to be 30 person-rem/year, which represents an average exposure to each person of only a small fraction of 1 millirem per year. *See* Tr. at M-1766 to -1767; SNC Radiological Impacts (Environmental) Presentation at 19.

4.60 Staff witness Mr. Smith presented evidence he asserted showed that the Staff carefully reviewed the Applicant's dose calculations and performed independent calculations to verify the accuracy of the Applicant's results, which included reviewing all of the input parameters to ensure they were reasonable. *See* Tr. at M-1865. Mr. Smith stated that, although the release source terms were based on the AP1000 DCD revision 15, he had examined the DCD revision 17 source terms and found that they did not differ significantly from the revision 15 source terms used in the analysis. *See* Tr. at M-1865, -1867. According to Mr. Smith, these independent Staff calculations produced results that were virtually identical to those presented by the Applicant, with the exception of the population doses. The Staff's calculated population doses were about 20% higher than the Applicant's because the Staff used a population projection for the year 2013, while the Applicant used the year 2000 population. *See* Tr. at M-1866. There were also slight differences between some of the Applicant's and Staff's

calculations for a few categories of gaseous effluents, but according to Mr. Smith those differences were due to the Staff's use of a different source term and not rounding off values from the AP1000 DCD. *See* Tr. at M-1868 to -1869.

4.61 Staff witness Mr. Smith also testified that the LADTAP-II and GASPAR-II computer programs used to perform the dose calculations had been extensively benchmarked and used accepted methodologies referred to in NRC Regulatory Guides. *See* Tr. at M-1867 to -1870. Mr. Smith concluded that, based on the Staff's review, the radiological impacts during the construction and operation of the new units, as well as the cumulative radiological impacts and the radiological impacts from the associated uranium fuel cycle activities, would be SMALL. *See* Staff Radiological Impacts Presentation at 25.

(ii) RADIOLOGICAL IMPACTS FROM POSTULATED ACCIDENTS

4.62 SNC witness Mr. Young also testified regarding the Applicant's analysis of radiological impacts from both DBAs and postulated severe accidents. He stated that the DBA analysis was based on the AP1000 DCD revision 15, while the source term methodology was from Regulatory Guide 1.183. *See* Tr. at M-1768. The DCD doses are applied to the Vogtle site by scaling the atmospheric dispersion factors (i.e., Chi over Q or Chi/Q factors) used in the DCD analysis to the Chi/Qs determined from Vogtle site data. Mr. Young testified that the Chi/Q methodology employed was from Regulatory Guide 1.145. *See* Tr. at M-1760, M-1768 to -1769. The DBA dose at the exclusion area boundary (EAB) was calculated as a 2-hour dose, while the DBA dose for the low population zone (LPZ) was calculated for the entire term of the accident, or approximately 30 days. *See* Tr. at M-1769. By referring to FEIS Table 5-14, Mr. Young concluded that the doses at the EAB and within the LPZ would all be considerably smaller than NRC review criteria, and that the environmental impact from such doses would be SMALL. *See* SNC Radiological Impacts (Environmental) Presentation at 21.

4.63 Mr. Ramsdell provided evidence that the Staff again performed extensive consistency checks and confirmatory calculations on the Applicant's DBA radiological impacts analysis. He stated that the Staff followed ESRP § 7.1 and SRP chapter 15 in conducting the review. This included reviewing the Applicant's atmospheric dispersion factors, accident selection, and dose calculations. *See* Tr. at M-1876. According to Mr. Ramsdell, the Staff verified that the DBA doses were less than 10 to 15% of the safety criteria set forth in SRP § 15.0.3. *See* Tr. at M-1877. He further testified that the Staff concluded that the Vogtle site is suitable for the operation of two new reactors falling within the parameters of the AP1000 DCD revision 15 design. *See* Tr. at M-1878.

4.64 SNC witness Mr. Young testified that the evaluation of doses from severe accidents (those beyond DBAs that could result in substantial reactor

core damage or containment degradation) is based on a generic probabilistic risk assessment model in the AP1000 DCD. To apply this model to the VEGP site, site-specific parameters, such as meteorology and population distributions, were used. Mr. Young testified that the Applicant's site-specific analysis presented in ER § 7.2 was bounded by the DCD results. *See* Tr. at M-1770 to -1771. He further stated that these calculations were carried out using the MACCS2 computer program, which is a standard analytical tool for calculating the doses from atmospheric releases, including through direct exposure to the plume, exposure to material deposited on ground surfaces and the skin, inhalation of material in the plume, and ingestion of contaminated food and water. The MACCS2 code was used to analyze three areas of consequences: human health, economic costs, and land affected by contamination. Mr. Young also testified that the results presented in FEIS Table 5-16 confirmed that the VEGP severe accident risks are well below the safety goal policy values. *See* SNC Radiological Impacts (Environmental) Presentation at 23-24; Tr. at M-1771 to -1773; *see also* FEIS 1B, at 5-84 (tbl. 5-16). Finally, he stated that the human health risks for all risk categories from severe accidents were determined to be SMALL. *See* Tr. at M-1772 to -1773.

4.65 Mr. Ramsdell stated that the Staff again performed an independent check on the parameters used in the Applicant's severe accident analysis calculations, as well as conducted confirmatory independent calculations. *See* Tr. at M-1881 to -1882. According to Mr. Ramsdell, accepting the MACCS2 computer code as an appropriate tool for performing severe accident dose calculations was appropriate because the code was specifically developed for this purpose, and was endorsed in the SRP. *See* Tr. at M-1879. Mr. Ramsdell also presented the severe accident risk estimates, which were 2.8×10^{-4} person-sieverts per reactor year, with fatality estimates of 1.9×10^{-10} person-sieverts per reactor year, economic costs of $48.00 per reactor year, and 3.6×10^{-4} hectares of farmland requiring decontamination per reactor year. He concluded that the risk (including the cumulative risk) was well below the Commission's Safety Goal Policy Statement, *see* 51 Fed. Reg. at 30,028, and less than 10% of the severe accident risk associated with an existing unit. *See* Staff Radiological Impacts Presentation at 36-37. Overall, the Staff concluded that the environmental impact of probability-weighted consequences of a severe accident for an AP1000 unit at the VEGP site would be SMALL. *See id.* at 39.

e. Presentations on Safety Impacts

4.66 On the safety side, SNC witness Dr. Findikakis provided extensive information regarding the relevant site hydrology, including a characterization of the three aquifers that underlie the site, the location of liquid effluent release points, the transport pathways, and the characteristics that affect radionuclide

transport, including how these characteristics were based on site-specific data. *See* Tr. at M-1777.

4.67 According to Dr. Findikakis, the Savannah River lies north and east of the VEGP site, with local streams flowing into the river. To the north of the site sits Mallard Pond, which flows into an unnamed creek that flows into the Savannah River. Three aquifers — the Water Table aquifer, Tertiary aquifer, and Cretaceous aquifer — underlie the site, with the Tertiary and Cretaceous aquifers hydraulically isolated from the Water Table aquifer by the Blue Bluff marl, which separates the Water Table and Tertiary aquifers. *See* Tr. at M-1778; SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation at 6-7.

4.68 Dr. Findikakis provided evidence that the aquifers had been characterized through onsite measurements. *See* Tr. at M-1778 to -1780. He presented a site hydrology model developed by the Applicant and calibrated against site-specific groundwater levels measured in monitoring wells. *See* Tr. at M-1780 to -1786. The hydraulic parameters used in the model, such as the hydraulic conductivity, were also based on extensive site-specific measurements. *See* Tr. at M-1784 to -1785. The model was developed using MODFLOW, which Dr. Findikakis declared is the standard model in the industry. *See* Tr. at M-1787 to -1788. According to Dr. Findikakis, the groundwater model included modifications to account for the relevant changes that would be introduced by the construction of the new units, particularly changes to the recharge distribution due to changes in grading and surface cover. *See* Tr. at M-1799; SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation at 18-20.

4.69 Dr. Findikakis testified that the hydrology model predicted that liquid effluent releases from proposed Units 3 and 4 would move to the north, where they would enter the surface water system at Mallard Pond, which is within the site boundary. They would be diluted during transport to the pond, while in the pond, and while in a stream that runs from the pond to the Savannah River. *See* Tr. at M-1801 to -1802; SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation at 21. He also presented results for a postulated accident chosen to release the highest concentrations of radionuclides. This accident scenario involved the instantaneous release of 80% of the liquid effluent from a 22,400-gallon holdup tank in the basement of the auxiliary building. *See* Tr. at M-1801, M-1804; SNC Radiological Impacts (Safety) Presentation at 21. Dr. Findikakis likewise presented evidence that a number of very conservative assumptions had been used in the analysis. For example, SNC assumed that the released effluents were instantaneously transported into the water table, taking no credit for the building's drain system, the 6-foot concrete base-mat and membrane under the floor, or the passage through the approximately 25 feet of unsaturated zone from the bottom of the building to the groundwater. *See* Tr. at M-1802. Dr. Findikakis testified that, using the compliance point for the analysis as the location in the stream where it passes outside the site boundary, despite the conservatism

in the analysis all of the radionuclide concentrations at the compliance point were calculated to be much smaller than the effluent concentration limits (ECLs) prescribed in 10 C.F.R. Part 20. *See* Tr. at M-1804 to -1805.

4.70 Dr. Findikakis described an additional transport path where the same effluent release was assumed instantaneously to pass into the Tertiary aquifer. *See* Tr. at M-1813. This analysis took no credit for the 60 feet of practically impermeable Blue Bluff marl over the Tertiary aquifer. With the compliance point for this analysis being the nearest discharge point from the aquifer into the Savannah River, he testified that this very conservative analysis again predicted that the radionuclide concentrations would be much smaller than the ECLs. *See* Tr. at M-1814.

4.71 Relative to the Staff's review efforts, Dr. Kincaid provided evidence that the Staff performed an extensive evaluation of the Applicant's radiological impacts analyses. This included site audits, issuing a number of requests for additional information (RAIs), reviewing the site-specific model parameters, proposing alternative conceptual groundwater models, and performing several independent calculations and sensitivity analyses based on postconstruction groundwater recharge distributions. *See* Staff Radiological Impacts Presentation at 4; Tr. at M-1821 to -1858. The Staff evaluation also included checking that the most current light detection and ranging (LiDAR) and digital elevation model (DEM) data were used, as well as checking the hydraulic conductivities and recharge rates used in SNC's models. *See* Tr. at M-1824 to -1828; Staff Radiological Impacts Presentation at 5-6. Dr. Kincaid also provided evidence that the Staff's evaluation incorporated adequate conservatism, including examining multiple pathways, neglecting dispersion in the groundwater, applying the lowest measured distribution coefficients, and using low-discharge-year catchment flows. *See* Tr. at M-1851. Specifically, he noted that the Staff identified a second drainage pathway toward Daniels Branch, rather than Mallard Pond, that it determined would be plausible but unlikely. *See* Tr. at M-1842 to -1843. The Staff confirmed the Applicant's conclusion that the standard of 10 C.F.R. Part 20, App. B, tbl. 2, can be met for both the Mallard Pond catchment and the Daniels Branch catchment. *See* Tr. at M-1851; Staff Radiological Impacts Presentation at 20-21.

f. Board Findings Related to Radiological Impacts

4.72 The Board finds that the site hydrology has been well characterized, and that the parameters used to evaluate the transport of liquid effluents were based on an extensive set of onsite measurements. We also find that the analytical methodologies and computer programs used in the radiological evaluation are those specified and/or endorsed in NRC regulations and associated guidance (e.g., the LADTAP-II, GASPAR-II, and MACCS2 computer programs). The Board also finds that the Staff was thorough in its review and evaluation of the

Applicant's analyses in this area. The Staff not only reviewed the analytical tools and input parameters, but performed many independent calculations to verify the Applicant's results. The Staff ensured that key hydrological parameters were based on adequate site-specific measurements, and that the models and parameters incorporated an adequate level of conservatism. The Board finds that the Applicant's analyses showing that the doses from radiological releases (both for routine operations and postulated accidents) are well below regulatory standards, and have been adequately reviewed and confirmed by the Staff. The Board thus finds that the Applicant's and the Staff's conclusions that the radiological impacts will be SMALL and will not pose an undue risk to public health and safety are well supported by the record of this proceeding.

3. Groundwater Impacts on Safety-Related Structures

a. Introduction

4.73 Another safety issue related to site hydrology is the impact that groundwater could have on subsurface portions of safety-related structures, systems, and components (SSCs). The main issue is whether or not the groundwater could reach the foundation level of safety-related SSCs and so negatively impact them.

4.74 SNC addressed the relationship of groundwater to the design basis for the AP1000 design in SSAR § 2.4.12. *See* Exh. SNC000075, at 2.4.12-1 to -98 ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] (rev. 5 Dec. 2008)). In reviewing SNC's SSAR, the Staff had questions regarding the Applicant's original hydrological model, leading to open item 2.4-2 in the draft safety evaluation report (DSER). *See* Tr. at M-1893. Open item 2.4-2 requested that SNC provide "an improved and complete description of the current and future local hydrological conditions, including alternate site models, [and a demonstration that] the design basis related to groundwater induced loadings on sub-surface portions of the safety related SSCs would not be exceeded." Tr. at M-1893. In response to this open item, SNC provided a groundwater model of the Water Table aquifer (discussed above in the Radiological Impacts section, *see supra* section IV.A.2), which was independently evaluated by the Staff. Tr. at M-1893; FSER at 2-157. After an exchange of RAIs between SNC and the Staff and the amendment of the application, the Staff determined that SNC's "site characteristic value for the maximum ground-water elevation at the VEGP site [is] acceptable. This elevation will be far enough below the site grade so as to not represent a safety concern for the plant fitting within the bounding parameters proposed in the application." FSER at 2-157. Thus, the Staff closed open item 2.4-2. *See id.*

4.75 After the Staff issued the ASER for review by the Advisory Committee on Reactor Safeguards (ACRS), the Board asked SNC and the Staff to address this topic area at the mandatory hearing, including postconstruction site hydrology,

the relationship between evaluation parameters and onsite measurements, and how the Staff assured itself that the analysis in the SER was conservative. *See* Licensing Board Safety Questions at 3.

b. Witnesses and Evidence Presented

4.76 To address the issue of groundwater impacts on safety-related structures, lead party SNC presented one witness while the Staff put forth three witnesses. At the evidentiary hearing, these witnesses provided oral testimony in conjunction with prefiled slide presentations that were admitted as exhibits. *See* Tr. at M-1886 to -1906; SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation; NRC000061 (NRC Staff Presentation Topic #3, Groundwater Impacts on Safety-Related Structures) [hereinafter Staff Groundwater Impacts Presentation].

(i) SNC WITNESS

4.77 Dr. Angelos Findikakis, whose background and expert qualifications are discussed in section IV.A.2.b(i), *supra,* appeared on behalf of SNC. *See* Tr. at M-1886, M-1888 to -1891, M-1905 to -1906.

(ii) STAFF WITNESSES

4.78 Dr. Hosung Ahn, Mr. Christian Araguas, and Dr. Charles Kincaid appeared on behalf of the Staff. *See* Tr. at M-1892 to -1906. Dr. Ahn's and Mr. Araguas' backgrounds and expert qualifications are discussed in section IV.A.2.b(ii), *supra.* Dr. Kincaid's background and expert qualifications are discussed in section IV.A.1.b, *supra.*

4.79 Based on the foregoing, the Board finds each of these witnesses qualified to testify as an expert regarding the groundwater impacts on safety-related structures associated with proposed Vogtle Units 3 and 4.

c. Regulations and Guidance Related to Groundwater Impacts on Safety-Related Structures

4.80 Among other things, pursuant to section 52.17(a)(1) the SSAR submitted with an ESP application must contain "[t]he seismic, meteorological, hydrologic, and geologic characteristics of the proposed site" and "[a] description and safety assessment of the site on which a facility is to be located." 10 C.F.R. § 52.17(a)(1)(vi), (ix). In addition, section 100.20 states that the Commission, "in determining the acceptability of a site for a stationary power reactor," will consider the "[p]hysical characteristics of the site, including seismology, meteorology, geology, and hydrology." *Id.* § 100.20(c).

4.81 Section 2.4.1 of RS-002 guides the Staff's review of an ESP Applicant's hydrologic description of a proposed site. *See* RS-002, at 2.4.1-1. RS-002 states that the application should provide sufficient detail of the surface and subsurface characteristics of the site and region "to assess acceptability of the site and the potential for those characteristics to influence the design of structures, systems, or components of a nuclear power plant or plants . . . that might be constructed on the proposed site." *Id.* at 2.4.1-2. This information, if provided in sufficient detail, will be used to support a finding regarding whether the requirements in Parts 52 and 100 have been met, and whether there is "reasonable assurance that the hydrologic characteristics of the site and potential hydrologic phenomena would pose no undue risk to the type of facility . . . proposed for the site." *Id.* Regulatory guidance is also provided in SRP § 2.4.1, *see* SRP at 2.4.1-1 to -15, and section 2.4.13 of Regulatory Guide 1.70, *see, e.g.,* [OSD, NRC], Regulatory Guide 1.70, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, LWR ed., at 2-24 (rev. 3 Nov. 1978) (pt. I, ADAMS Accession No. ML011340072).

d. Evidentiary Presentation

4.82 In his testimony on behalf of SNC, Dr. Findikakis stated that the preconstruction groundwater model used in this evaluation was the same model discussed in the topic area of Radiological Impacts. *See supra* section IV.A.2. He reiterated that the model was based on, and calibrated against, site-specific parameters and measurements. *See* Tr. at 1889. The model was then modified to account for postconstruction changes. The key changes in this regard were in the area of groundwater recharge, and accounted for such impacts as site grading, building placement, and the placement of paved or graveled areas. The model also took into account the extensive placement of backfill material under the power block area. *See* SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation at 33; *cf. also* Tr. at M-1888 to -1889. This model was then used to predict groundwater conditions following the construction of Units 3 and 4. *See* SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation at 33. Dr. Findikakis testified that the parameters used in the postconstruction model were conservative, and were based on onsite measurements. *See* Tr. at M-1889. According to Dr. Findikakis, the model was also evaluated using a sensitivity analysis, which determined that the level of groundwater was not very sensitive to changes in the combinations of parameters used, exhibiting differences "well within the order of about two to five feet at most." Tr. at M-1890.

4.83 Dr. Findikakis testified that the model was used to predict the surface elevation contours of the water table as well. The model predicted groundwater levels between 150 and 160 feet above mean sea level (MSL) in the area of Units 3 and 4. *See* Tr. at M-1890. According to Dr. Findikakis, the grade level is about

220 feet MSL in this area, and the base of the lowest safety-related structure is at 180.5 feet MSL. *See* Tr. at M-1890; SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation at 39; FSER at 2-156. Although the AP1000 DCD requires that the maximum groundwater level be at least 2 feet below the final site grade, *see* SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation at 38; FSER at 2-156, the groundwater in this instance is about 60 feet below the surface, about 58 feet below the DCD requirement, and about 20 feet below the base of any of the structures. Based on these circumstances, Dr. Findikakis concluded there would be no issue of hydrostatic loading on safety-related structures. *See* Tr. at M-1891; SNC Radiological Impacts (Safety) and Groundwater Impacts Presentation at 38-39. Dr. Findikakis also pointed out that the future groundwater level predictions were similar to current groundwater levels, which indicated that groundwater levels would not be significantly altered by site construction. *See* Tr. at M-1891.

4.84 Dr. Kincaid discussed the Staff's review of this topic area, with a focus on how the Staff assured that the groundwater evaluations in the SER were conservative. *See* Tr. at M-1892. He presented the Staff's extensive review of the site hydrology model, including the Staff's development of alternate conceptual models of the site, calibration of the model against hydraulic heads measured in observation wells at the site, and comparison with USGS data. He concluded that the preconstruction and postconstruction results independently calculated by the Staff were "very comparable" to those calculated by the applicant. Tr. at M-1900; *see* Tr. at M-1893, M-1898; FSER at 2-154; Staff Groundwater Impacts Presentation at 11. He thus agreed with SNC that the proposed model is the best model. *See* Tr. at M-1897.

4.85 Dr. Kincaid also presented evidence that the Staff's and the Applicant's results were conservative. *See* Staff Groundwater Impacts Presentation at 16. He testified that the preconstruction model yielded conservative, or high, estimates of the water table as compared to measurements from observation wells, and that the postconstruction model was likely to do the same. *See* Tr. at M-1901; *see also* Tr. at M-1897 to -1898; Staff Groundwater Impacts Presentation at 12. The high estimates were likely due to the hydraulic conductivity value used, or the higher rates of recharge to groundwater from precipitation applied. *See* Tr. at M-1897. Dr. Kincaid identified as a conservatism in the postconstruction model the fact that it incorporates no regions of zero recharge to groundwater from precipitation (i.e., all areas were assumed to have recharge from precipitation), which ignores the presence of structures, parking lots, and other paved areas for which there typically would be no recharge. *See* Tr. at M-1900, M-1902; Staff Groundwater Impacts Presentation at 11. As another example of conservatism, Dr. Kincaid indicated that, based on the literature reviewed, the Staff determined that the "plausible cases" for recharge rates in the cooling tower and power block areas were one-quarter of average annual precipitation and one-eighth of average annual

precipitation, respectively. Using these values, the Staff calculated groundwater elevations of 166.5 feet MSL in the cooling tower area and 162.4 feet MSL in the power block area, which were comparable to the Applicant's respective calculated values of 166.1 feet MSL and 162.6 feet MSL. The Staff therefore determined that the postconstruction water table would be predicted to be below 165 feet MSL. *See* Tr. at M-1898 to -1902; Staff Groundwater Impacts Presentation at 13, 15-16.

4.86 Dr. Kincaid concluded that the Applicant's site characterization value of the highest groundwater level, 165 feet MSL, is supported by current observations and postconstruction simulations. *See* Tr. at M-1903 to -1905. Given that the lowest elevation for a safety-related structure is 180.5 feet MSL, Dr. Kincaid concluded that the maximum groundwater level would present no undue threat to safety-related structures. *See* Tr. at M-1903. Further, in response to a question from the Board regarding the Staff's level of confidence in its analysis, Dr. Kincaid declared that even when adding the range of observed fluctuation in the Water Table aquifer (4 feet MSL) to either the highest preconstruction water table elevation measured in the proposed power block (157.24 feet MSL) or the preconstruction elevations predicted by the Applicant or the Staff (approximately 161 feet MSL, after accounting for 1 to 1.5 feet of conservatism), the resulting groundwater level would still not exceed 165 feet MSL. *See* Tr. at M-1903 to -1905; *see also* Staff Groundwater Impacts Presentation at 17.

e. Board Findings Related to Groundwater Impacts on Safety-Related Structures

4.87 The Board finds that the site groundwater model developed for this evaluation was adequately detailed, and well calibrated against site-specific data. We also find that the Staff was thorough in its independent evaluation of the model and its application in predicting postconstruction groundwater levels. This included the Staff's examination of alternative models, the exploration of a range of hydraulic conductivities and recharge rates, and the independent review comparisons to onsite data. The Board finds that the prediction of a maximum groundwater level of 165 feet MSL is well supported by measurements and calculations and concurs with SNC's and the Staff's conclusion that groundwater at the site presents no undue threat to the safety-related structures.

4. Environmental Impacts of Alternatives

a. Introduction

4.88 The FEIS discussion of alternatives is found in chapter 9, Environmental Impacts of Alternatives, and chapter 10, Comparison of the Impacts of the

Proposed Action and the Alternative Sites. *See* FEIS 1B, at 9-1 to -103, 10-1 to -9. Chapter 9 discusses the no-action alternative (section 9.1), energy alternatives (section 9.2), system design alternatives (section 9.3), and alternative sites (sections 9.4 to .7). *See id.* at 9-1. Chapter 10 compares the proposed and alternative sites and concludes that, although there would be some differences in environmental impacts at the different sites, none of the alternative sites is environmentally preferable and therefore none is obviously superior to the VEGP site. *See id.* at 10-7. Chapter 10 also discusses the no-action alternative. *See id.* at 10-7 to -8.

4.89 After reviewing the FEIS, the Board sought further information regarding the Staff's review of the key environmental impacts of alternatives to the proposed nuclear power units. The information was to focus on alternative energy sources and sites and was not to include discussion of the dry cooling alternative, which was a subject of the contested hearing. *See* Licensing Board Environmental Questions at 3; *see also* LBP-09-7, 69 NRC at 686-702. The Board sought to verify that the alternatives analysis included in the FEIS adequately evaluated potential environmental impacts from the construction and operation of the proposed plants as compared with the environmental impacts of alternatives.

b. Witnesses and Evidence Presented

4.90 To address the Board's review of the alternatives assessment, SNC, which was the lead party relative to this issue, put forth one witness and the Staff proffered four witnesses to make oral presentations at the hearing, in conjunction with their prefiled slide presentations that were admitted as exhibits, and/or to provide responses to Board questions. *See* Tr. at M-1927 to -2020; Exh. SNC000076 ([SNC] Vogtle ESP Mandatory Hearing Presentation #4, Environmental Topic #3: Alternative Site Selection Process) [hereinafter SNC Alternatives Presentation]; Exh. NRC000062 (NRC Staff Presentation Topic #4: Environmental Impact of Alternatives) [hereinafter Staff Alternatives Presentation].

(i) SNC WITNESS

4.91 SNC presented one witness, Thomas C. Moorer, on the topic of alternatives analyses. Mr. Moorer is the Project Manager–Environmental for SNC. *See* Exh. SNC000014, at unnumbered p. 2 (Thomas C. Moorer [CV]).[16] He has a B.S. in Environmental Science from Auburn University and a B.S. in Civil/Environmental Engineering from the University of Alabama and over 30

[16] Mr. Moorer was also a witness for the contested portion of this proceeding. *See, e.g.,* Tr. at 610, 612, 966, 1291. As a result, his CV also was filed as a contested hearing exhibit.

years of experience in electric utility environmental management, including over 18 years in the nuclear area and 15 years in NEPA matters. *See id.*

(ii) STAFF WITNESSES

4.92 For the Staff, Paul L. Hendrickson and Lance W. Vail gave oral presentations at the evidentiary hearing. The Staff's panel on alternatives analyses also included Dr. Christopher B. Cook and Mark D. Notich. Mr. Hendrickson is a staff scientist in the Radiological Science and Engineering Group, Energy and Environment Directorate, at PNNL. *See* Exh. NRC000078, at 1 (CV for Paul L. Hendrickson). He has a B.S. in Chemical Engineering from the University of Washington, a Juris Doctor degree (J.D.) from the University of Washington Law School, and an M.S. in Industrial Management from Purdue University. *Id.* He has been with PNNL for 36 years and has done EIS support work for NRC for the last 11 years. *See* Tr. at M-1972. The qualifications of Dr. Cook, Mr. Notich, and Mr. Vail were previously discussed in connection with the Staff's water impacts presentation. *See supra* section IV.A.1.b.

4.93 Based on the respective qualifications and experience of the proffered witnesses, the Board finds that each of these individuals is qualified to testify as an expert regarding the alternatives analyses relative to the Vogtle ESP application.

c. Regulations and Guidance Relating to Alternatives Analysis

4.94 NEPA § 102(2)(C)(iii) requires that an EIS address alternatives to the proposed action. *See* 42 U.S.C. § 4332(2)(C)(iii). NRC's regulations implementing this NEPA provision require an applicant for an ESP to file an ER, *see* 10 C.F.R. § 51.50(b), addressing the following factors:

> (1) impact of proposed action on the environment;
> (2) [unavoidable] adverse environmental impacts;
> (3) [a]lternatives to the proposed action;
> (4) [t]he relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and
> (5) irreversible and irretrievable commitments of resources.

Id. § 51.45(b)(1)-(5). If the proposed siting of a plant slated for an ESP involves unresolved conflicts concerning alternative uses of available resources, then this discussion must be sufficiently complete to allow the Staff to develop and to explore appropriate alternatives to the ESP pursuant to NEPA § 102(2)(E). *See id.* § 51.45(b)(3). The ER must also include "an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed." *Id.* § 51.50(b)(1).

4.95 Additionally, 10 C.F.R. § 51.45(b)(3) and 10 C.F.R. Part 51, App. A,

§ 1(a)(5), call for a presentation of alternatives in an applicant's ER and in an NRC EIS, respectively, in comparative form. All reasonable alternatives are to be identified. *See Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 71 (1991). The Staff must prepare an EIS during review of an ESP application, *see* 10 C.F.R. § 52.18, and this EIS "must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed." *Id.* § 51.75(b). The EIS must be prepared in accordance with 10 C.F.R. § 51.71, which, *inter alia,* considers and weighs the environmental impacts of alternatives to the proposed action and alternatives available for reducing or avoiding adverse environmental effects. *See id.* § 51.71(d). In addition, with regard to alternative sites, the Commission has recently emphasized that the Staff must evaluate "'both the process (i.e., methodology) used by the applicant and the reasonableness of the product (e.g., potential sites) identified by that process.'" *North Anna ESP,* CLI-07-27, 66 NRC at 223-24 (quoting ESRP at 9.3-8); *see also id.* at 228-32 (finding FEIS discussion of alternative sites insufficient but independently reviewing record on greenfield, competitors' brownfield, noncompetitors' brownfield, and applicant's other nuclear sites to conclude that the Staff's underlying alternative site review was adequate).

4.96 ESRP chapter 9 provides guidance to the Staff in its alternatives analysis. *See* Staff Alternatives Presentation at 3; *see also* ESRP at 9.1-1 to 9.4.3-14. Pursuant to ESRP § 9.3, the Staff's evaluation of alternative sites proceeds in two steps. First, the Staff, using "reconnaissance-level information" on a "full suite of environmental issues," determines whether any alternative sites identified by the applicant are environmentally preferable to the proposed site. Thereafter, if the Staff identifies environmentally preferable sites, the Staff examines economic, technological, and institutional factors to determine whether any of those sites are obviously superior to the proposed site. *See* FEIS 1B, at 9-1; ESRP at 9.3-5. Additional guidance is provided in chapters 9 and 10 of Regulatory Guide 4.2, *see* Exh. NRC000007, at 9-1 to 10-4 ([OSD, NRC], Regulatory Guide 4.2, Preparation of Environmental Reports for Nuclear Power Stations, NUREG-0099 (rev. 2 July 1976)), and in Regulatory Guide 4.7, *see* Exh. NRC000008 (Office of Nuclear Regulatory Research (RES), [NRC], Regulatory Guide 4.7, General Site Suitability Criteria for Nuclear Power Stations (rev. 2 Apr. 1998)); *see also* FEIS 1B, at 9-1.

d. Evidentiary Presentation

(i) NO-ACTION ALTERNATIVE

4.97 With respect to the analysis of the no-action alternative, which assumes that the ESP is denied, resulting in a COL not being issued, SNC witness Mr.

Moorer indicated that the initial impact would be a loss of generation margin. Given the need for baseload generation in the near future, however, environmental impacts would not be avoided entirely in that they would occur for an alternate generation source, possibly at an alternate site. *See* Tr. at M-1935 to -1936; SNC Alternatives Presentation at 5. In response to a Board inquiry about the impact of electricity consumption-moderating demand side management (DSM) on the shifted environmental impact for the no-action alternative, Mr. Moorer indicated that "there's just not enough demand side possibility to fill the need for 2400 megawatts of baseload." Tr. at M-1936.

4.98 The Staff presentation regarding the no-action alternative basically mirrored the Applicant's discussion indicating that a failure to obtain an ESP and LWA for the Vogtle site would eliminate impacts at that site, but might result in impacts occurring at an alternate site. *See* Tr. at M-1974. Staff witness Mr. Hendrickson also pointed out that site-related non-LWA construction work would be an avoided impact, but such work could proceed without NRC approval in any event. *See* Tr. at M-1974.

(ii) ENERGY ALTERNATIVES ANALYSIS

4.99 Staff witness Mr. Hendrickson stated that ESP applicants are not required to include an analysis of energy alternatives in their ER, having been notified of this in a June 2003 letter. Nonetheless, since SNC chose to include an energy alternatives discussion in its ER, the Staff's EIS also considered energy alternatives. *See* Tr. at M-1974 to -1975; Staff Alternatives Presentation at 5.

4.100 SNC witness Mr. Moorer indicated "that this alternative[]s analysis is predicated on an understanding that we're comparing alternatives to 2234 megawatts of baseload generation." Tr. at M-1936; *see also* Exh. SNC00001P, at 9.2-5 ([SNC], [ER] for [SNC]'s Vogtle [ESP] Application, ch. 9 (rev. 2 Apr. 2007)) [hereinafter ER 1P]. He also indicated there are two types of energy alternatives: those requiring new generating capacity and those that do not. *See* Tr. at M-1936; SNC Alternatives Presentation at 6.

(1) Energy Alternatives Not Requiring New Generation

4.101 Relative to the category of energy alternatives that do not require new generation, the options that SNC included were DSM, purchased power agreements, license renewal and power uprates of existing nuclear units, and a combination of these options. *See* Tr. at M-1937; SNC Alternatives Presentation at 7. SNC witness Mr. Moorer indicated that "these alternatives, while they're important, they do not rise to the level of replacing the baseload." Tr. at M-1937 to -1938. He testified that all three SNC nuclear plants have already been uprated and two out of three have had their licenses renewed, with the existing units at the Vogtle plant currently in the license renewal process. *See* Tr. at M-1937 to -1938.

Mr. Moorer concluded that the nongeneration options, both individually and in combination, are insufficient to meet forecast baseload demand growth. *See* Tr. at M-1939.

4.102 Similarly, Staff witness Mr. Hendrickson stated that "[i]n the EIS, the Staff considered energy alternatives that would require new generation, and alternatives that would not require new generation. And the EIS also uses the same target value of 2234 megawatt electric baseload power that Southern used in their ER." Tr. at M-1975. The Staff independently examined essentially the same options as the Applicant, as well as reactivation of retired power plants. *See* Tr. at M-1975 to -1977. Mr. Hendrickson indicated that "the Staff's general conclusion in this area of alternatives not requiring new generation was that the options not requiring new generation are not reasonable alternatives to a new baseload nuclear power plant." Tr. at M-1977. In response to Board questions about the basis for the megawatt target value, Mr. Hendrickson and Mr. Moorer indicated that the Georgia Public Service Commission (PSC), after reviewing the Georgia Power Company Integrated Resource Plan, approved 2234 megawatts electric (MWe) of nuclear-powered baseload generation. *See* Tr. at M-1977 to -1978.

(2) Energy Alternatives Requiring New Generation

4.103 With respect to energy alternatives involving increased generating capacity, Mr. Moorer identified a list of ten alternative energy sources and an option associated with combining energy generation alternatives to achieve the MWe target. *See* Tr. at M-1938; SNC Alternatives Presentation at 8. The combined option selected was four 530-MWe combined cycle gas plants and 120 MWe of wind power. Mr. Moorer explained that the combined cycle plants could load-follow to accommodate the intermittent nature of the wind power. He then stated that the environmental impacts of a combination of gas-fired combined cycle generation and wind-powered generation did not compare favorably to two nuclear units, nor did a coal/gas alternative. *See* Tr. at M-1939 to -1941, M-1945; SNC Alternatives Presentation at 10. Mr. Moorer indicated that "when you look at the air impacts, and land use impacts, and the combination of all the impacts compared to nuclear, nuclear, very clearly, is a better choice from an environmental impact standpoint." Tr. at M-1940 to -1941. Replying to a Board question, Mr. Moorer indicated that building one nuclear plant in combination with combined cycle and wind would not alter this conclusion. *See* Tr. at M-1941 to -1942.

4.104 The Board also asked about the need to perform a new alternatives analysis if only one of the two proposed nuclear units were built, i.e., for 1117 MWe instead of 2234 MWe of new generating capacity. *See* Tr. at M-1942 to -1943. Mr. Moorer responded that the outcome would probably be the same, "[b]ut I will say that if we were to downsize from two units to one unit, we

would certainly treat that as new information, and would go through the process of vetting that in the COL." Tr. at M-1943. In response to another Board question regarding the effects of the current economic recession on the need for power in the future and the impact on this project, Mr. Moorer indicated that the likely effect would be to push out the schedule for construction, not eliminate the need altogether. *See* Tr. at M-1943 to -1944. Further, in answering a Board question regarding whether consideration was given to carbon dioxide-associated impacts in performing any of these alternatives comparisons, Mr. Moorer indicated that this was not analyzed because, as an unknown that was hard to quantify, it was not considered to be appropriate at this time and, in any event, would clearly favor the nuclear option if it were considered. *See* Tr. at M-1945 to -1946.

4.105 Mr. Hendrickson presented the Staff's analysis of alternative generation sources. According to Mr. Hendrickson, the Staff independently examined the same alternatives as SNC, as well as wood and biomass. *See* Tr. at M-1980; Staff Alternatives Presentation at 8. The Staff considered coal generation and natural gas combined cycle generation as the principal alternatives, the impacts of which they found to be greater than the nuclear plant impacts. The other alternatives of oil, wind, solar, geothermal, and fuel cells were also evaluated and were found not to be reasonable alternatives for a variety of reasons such as capacity, resource limitations, and excessive cost. *See* Tr. at M-1980 to -1985; Staff Alternatives Presentation at 10-13. Mr. Hendrickson indicated that the Staff also looked at what it determined to be a representative combination of alternative energy sources for the southeastern United States, which "would be a combination of natural gas combined cycle, wind energy, biomass, and municipal solid waste, hydro power, and conservation." Tr. at M-1986; *see also* Staff Alternatives Presentation at 14. The Staff evaluated the environmental impacts of the combination option against the nuclear, coal, and natural gas options and found the nuclear option to have a smaller environmental impact. *See* Tr. at M-1989 to -1990; Staff Alternatives Presentation at 16-17. Finally, in response to Board questions, Mr. Hendrickson indicated that the environmental impact comparisons would likely have to be redone if the baseload plant size were associated with construction of one nuclear plant instead of two. *See* Tr. at M-1994.

(iii) ANALYSIS OF ALTERNATIVE SITES

4.106 With respect to the analysis of alternative sites, SNC witness Mr. Moorer indicated that the process followed by SNC was driven by guidance in section 9.2 of Regulatory Guide 4.2 and ESRP § 9.3, as well as Regulatory Guide 4.7, which is a siting guide. *See* Tr. at M-1948; SNC Alternatives Presentation at 11. The purpose of the process that SNC used to identify and analyze alternative sites is to demonstrate that there is no obviously superior alternative site to the proposed site. *See* Tr. at M-1932 to -1933; ER 1P, at 9.3-1.

4.107 Mr. Moorer indicated that a key element of SNC's alternative site analysis was defining its "relevant service area" and "region of interest." Tr. at M-1934; SNC Alternatives Presentation at 4. For current alternatives analyses, both must be considered. Mr. Moorer defined the relevant service area (RSA) as the area in which electricity from the new Vogtle units would be sold. *See* Tr. at M-1934. Although Mr. Moorer indicated that previously the RSA might have been the focus of the VEGP alternative sites analysis, under current practice that focus has been expanded to include the SNC region of interest (ROI), which is a four-state area that comprises SNC's power generating territory, i.e., Georgia, Alabama, Mississippi, and part of the Florida panhandle. *See* Tr. at M-1934 to -1935.

4.108 Mr. Moorer then described at length the site selection process used by SNC. SNC first identified all potential sites within its ROI that had existing SNC electrical generation units of 1000 megawatts or greater with adequate land and cooling water availability, as well as large greenfield sites currently owned by SNC. This led to the identification of twelve generating plants and two greenfield sites. These fourteen potential alternative sites eventually were narrowed down to three candidate sites (in addition to the VEGP site), with the greatest potential — two existing nuclear sites and one greenfield site. Those three candidate sites and the VEGP site were then evaluated for environmental impacts, consistent with Regulatory Guide 4.2, through "reconnaissance-type investigations." The result of the selection process was that none of these alternative sites was found to be obviously superior to the VEGP site. *See* Tr. at M-1947 to -1959; SNC Alternatives Presentation at 11-23.

4.109 Mr. Hendrickson indicated that the definition of the ROI used by the Staff, which is found on page 9-1 of Regulatory Guide 4.2, is a broad definition, and that the ROI chosen by SNC is consistent with the Staff's definition. *See* Tr. at M-1994 to -1995, M-2004. When asked by the Board to elaborate on the extent of the Staff review of the alternative site selection process, Mr. Hendrickson responded that, based on the guidance in ESRP § 9.3, the Staff looks "to see that the applicant has a reasonable process to go from region of interest, to candidate area, to potential sites, to candidate sites, to the proposed site. We want to see that that process is a reasonable one that can be justified and backed up." Tr. at M-2000. When questioned further about the extent of the Staff's review, Mr. Hendrickson explained that "[i]f the Staff is satisfied that the process appears to be okay, then the Staff's focus of providing examination of the sites is limited to the four candidate sites." Tr. at M-2002. He further indicated that "[t]he Staff did their own review of the four candidate sites, and the Staff's review was an independent review." Tr. at M-2003. The Staff concluded that "Southern's site selection process was reasonable, and resulted in candidate sites that are among the best that could be reasonably found in the region of interest." Tr. at M-2004.

4.110 Mr. Hendrickson then provided the Board with details of the Staff's

comparative review of the four candidate sites with respect to construction and operational impacts. *See* Tr. at M-2004 to -2006; Staff Alternatives Presentation at 22-27. As a result of the review,

> the Staff's conclusion regarding site selection[ ] is that while there are some differences between the Staff's characterization of environmental impacts at the proposed site, and at the alternative ESP sites, none of the differences is sufficient for the Staff to conclude that any of the alternative sites would be environmentally preferable to the proposed Vogtle ESP site. And given that none would be environmentally preferable, it would follow that none would be obviously superior to the proposed Vogtle ESP site.

Tr. at M-2006; *see also* Staff Alternatives Presentation at 28.

(iv) ALTERNATIVE COOLING SYSTEMS ANALYSIS

4.111 With respect to alternative cooling systems, Mr. Moorer indicated that SNC "looked at all of the available cooling technologies that we were aware of, and that included once-through cooling, mechanical draft wet towers, natural draft wet towers, dry towers, wet/dry hybrid towers, cooling ponds, and spray canals." Tr. at M-1962; *see also* SNC Alternatives Presentation at 24. With the exception of the dry cooling system that was the subject of the contested hearing in this proceeding, *see* LBP-09-7, 69 NRC at 686-702, Mr. Moorer provided a brief overview of the evaluation that was done for each of the alternative cooling systems, that resulted in the decision to utilize a natural draft wet cooling system. He indicated that the decision to use natural draft towers was driven by SNC's prior experience with, and its operators' preference for, natural draft towers, as well as a judgment that the natural draft towers would have a smaller aesthetic impact given the presence of the two existing natural draft towers at the VEGP site. With regard to wet versus wet/dry hybrid towers, Mr. Moorer indicated that the greater land requirements and efficiency loss from hybrid towers led SNC to conclude that they were not preferable to wet towers despite the reduction in water use and associated impacts for hybrid towers. Once-through cooling was not an option due to the amount of water required, and other technologies, such as cooling ponds, require large amounts of land and are not as efficient. Thus, SNC concluded that none of the alternative cooling systems would be preferable to the proposed closed-cycle wet cooling system with natural draft cooling towers. *See* Tr. at M-1962 to -1966.

4.112 Mr. Vail discussed the Staff's evaluation of cooling system alternatives. He indicated that the primary impact areas evaluated by the Staff were associated with water quality, water use, and aquatic ecosystems. *See* Tr. at M-2010. In addition to the proposed natural draft wet cooling system, the Staff evaluated once-through cooling, hybrid wet/dry cooling and cooling ponds.

Once-through cooling was immediately ruled out because of water availability, and cooling ponds were ruled out because the site relief made them impractical. The hybrid wet/dry cooling system had some advantages and disadvantages with respect to the proposed wet cooling system. *See* Tr. at M-2010 to -2012; Staff Alternatives Presentation at 29. Overall, however, "the Staff concluded that given the environmental disadvantages of the alternative cooling systems considered, that there would be no environmentally preferable alternative to the proposed wet cooling system." Tr. at M-2012.

e. Board Findings Related to Environmental Impact of Alternatives

(i) NO-ACTION ALTERNATIVE

4.113 The Board finds that a denial of the ESP request, and by extension any future COL, while having the short-term effect of eliminating the environmental impacts discussed in the FEIS, would result in an undesirable loss of generation margin and, given the State-determined need for near-term baseload generation, would still require additional generation. Consequently, the environmental impacts would still occur via an alternative generation source, perhaps at an alternative site. For these reasons, the Board finds that the Staff had a reasonable basis for reaching this same conclusion in its analysis of the no-action alternative.

(ii) ENERGY ALTERNATIVES

4.114 The Board concludes that it is appropriate for the energy alternatives analysis to compare the alternatives to 2234 megawatts of baseload generation and that both generation and nongeneration alternatives should be considered.

(1) Energy Alternatives Not Requiring New Generation

4.115 The Board finds that the nongeneration energy options evaluated by SNC, and independently evaluated by the Staff, were appropriate and support the conclusion that the nongeneration options, both individually and in combination, are insufficient to meet forecast baseload demand growth. Based on its independent review of energy alternatives not requiring new generation, including the reactivation of retired power plants, the Staff reasonably concluded that nongeneration options are not reasonable alternatives to the proposed baseload nuclear power units.

(2) Energy Alternatives Requiring New Generation

4.116 The Board finds that the individual alternative generation sources and the combination of sources considered by SNC and, independently, by the Staff were appropriate. The Staff review included the same individual energy sources

as SNC's analysis, with the addition of wood and biomass. The combined sources evaluated by SNC included natural gas combined cycle and wind energy, and the independent review by the Staff added biomass, municipal solid waste, hydropower, and conservation to these sources. The Staff determined that, from an environmental perspective, none of the viable energy alternatives is clearly preferable to construction of a new baseload nuclear power plant.[17] We find that the Staff had a reasonable basis for its conclusions, and that the record is sufficient with respect to the analysis of energy generation alternatives.

4.117 The Board also finds that, in the event SNC chooses to build only one of the two proposed nuclear units, this potentially would be considered new and significant information requiring a reevaluation of the analysis of energy alternatives, both generation and nongeneration, as well as the combination of these alternatives.

(iii) REGION OF INTEREST AND ALTERNATIVE SITE-SELECTION/EVALUATION

4.118 The Board finds that the ROI chosen by SNC is consistent with the Staff's definition and that SNC had a reasonable process to go from ROI, to candidate area, to potential sites, to candidate sites, to the proposed site. The Board also finds that the Staff, based on its independent review, had a reasonable basis for concluding that the Applicant's ROI was appropriate for consideration and analysis of potential ESP sites, and that SNC did not arbitrarily exclude desirable candidate ESP locations. In addition, it is clear that once the Staff was satisfied that the ROI and the selection process were acceptable, the Staff then did its own independent review of the four candidate sites. In that regard, the Board finds that the Staff had a reasonable basis for concluding that the SNC site selection process resulted in candidate sites that are among the best that could be reasonably found in the ROI, and that, since none of the alternative sites would be environmentally preferable to the proposed Vogtle ESP site, none would be obviously superior.[18] We thus find that the Staff's conclusions in this regard were

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[17] Although not extensively relied upon by Applicant SNC as an alternatives analysis justification for its proposed facilities, *see* Tr. at M-1945 to -1946, the Staff did make mention in its FEIS cost/benefit analysis summary that, as compared to coal and natural gas, "operation of a nuclear power plant does not result in any emissions of air pollutants associated with global warming and climate change (e.g., nitrogen oxides, sulfur dioxide, carbon dioxide) or methyl mercury," FEIS 1B, at 11-18, *see id.* at 11-20 (tbl. 11-3), a matter about which the Commission has indicated it may have more to offer regarding the need for a NEPA "carbon footprint" analysis in new reactor licensing proceedings, *see Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 70 n.2 (2009).

[18] Although the Staff's ESRP indicates that "all nuclear power plant sites within the identified region of interest having an operating nuclear power plant or a construction permit issued by the NRC should

(Continued)

reasonable and that the record is sufficient with respect to the SNC site selection and evaluation process and results.

(iv) SYSTEM DESIGN ALTERNATIVES

4.119 The Board finds that SNC considered all of the available cooling technologies including once-through cooling, mechanical draft wet towers, natural draft wet towers, dry towers, wet/dry hybrid towers, cooling ponds, and spray canals. In addition to the proposed natural draft wet cooling system, the Staff independently evaluated once-through cooling, hybrid wet/dry cooling, and cooling ponds. In evaluating each of these alternative cooling systems with respect to its environmental impacts, the Staff conducted an independent analysis of each of the alternative heat dissipation systems and concluded there was no environmentally preferable alternative to the proposed closed-cycle wet cooling system. Based on the above, and in light of our finding in the contested portion of this proceeding relative to the dry cooling alternative that was also evaluated by the Staff, *see* LBP-09-7, 69 NRC at 686-702, we find that the Staff's conclusions regarding system alternatives were reasonable, that the record is sufficient to support that determination, and that the Staff satisfied its responsibility under NEPA § 102(2)(E) with respect to the analysis of alternative cooling systems.

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be compared with the Applicant's proposed site," ESRP at 9.3-7, in light of the Commission's holding in the *North Anna ESP* proceeding that brownfield sites (i.e., a site on which an existing facility is located) owned by companies other than the Applicant may reasonably be excluded as alternative sites, *see North Anna ESP,* CLI-07-27, 66 NRC at 231-32, and the relatively confined ROI in this instance (at least as compared to the ROI in the *North Anna* proceeding, *see North Anna ESP,* LBP-07-9, 65 NRC at 642 (App. B, showing ROIs of applicant Dominion Nuclear North Anna, LLC (Dominion) and SNC)), it does not appear, as a practical matter, that the alternative site analysis relative to the Vogtle ESP application was inadequate because SNC did not list in its initial selection of candidate sites any non-SNC-owned brownfield sites.

The Board also is aware that the Commission in the *North Anna ESP* proceeding indicated that Dominion's initial consideration of DOE's Portsmouth, Ohio, and SRS sites as alternative sites was reasonable as part of its alternative site analysis. *See North Anna ESP,* CLI-07-27, 66 NRC at 232. Nonetheless, we find both SNC's alternative site analysis and the Staff's review of that analysis to be reasonable despite their noninclusion of the DOE Portsmouth and SRS facilities. Two factors support our conclusion in this regard. First, SNC's ROI, which is significantly smaller than Dominion's, does not include either DOE site, with Portsmouth being located many miles to the northwest of the VEGP. *See id.* at 232 n.94 (noting noninclusion of DOE's Idaho Falls, Idaho site in alternative sites analysis, which was "far outside Dominion's region of interest"); *see also North Anna ESP,* LBP-07-9, 65 NRC at 588, 642 (App. B, showing Dominion's ROI, which appears to include both SRS and Portsmouth). Second, although the Commission found Dominion's inclusion of the DOE sites to be reasonable in the context of the *North Anna ESP* proceeding, it does not seem to follow from the Commission's decision that noninclusion of those sites would necessarily be unreasonable, particularly in light of potential considerations such as existing ownership/land acquisition issues, site environmental conditions (e.g., contamination), or transmission line siting issues. *See* FEIS 1B, at 9-28.

5. Limited Work Authorization and Site Redress Plan

a. Introduction

4.120 In conjunction with its ESP application, SNC has requested that it be allowed to conduct certain site-preparation activities at the VEGP site as authorized by the LWA provisions of 10 C.F.R. §§ 50.10, 52.17(c). Section 3.8 of the SSAR for the ESP application discusses the scope of the LWA foundation work and provides a description of the various items needed to prepare the nuclear island base slab, *see* Exh. SNC000081, at 3.8-1 to 3.8-4 ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] (rev. 5 Dec. 2008)), while Part 4 of the ESP application describes (1) the safety-related activities that may occur after the NRC issues an ESP with the LWA authorization sought by SNC for the VEGP site, but before NRC issues a COL; and (2) the site redress activities in the event SNC terminates construction. *See* Exh. SNC000082 ([SNC], Vogtle [ESP] Application, pt. 4, [SReP] (rev. 4 Mar. 2008)) [hereinafter SReP]. The extent and impacts of the requested LWA activities, as well as SNC's SReP, are addressed in section 4.11 of the FEIS. *See* FEIS 1A, at 4-72 to -74. In addition, the Board sought further information regarding the activities that would be undertaken either as prerequisites to, or as activities under, the requested LWA; the anticipated impacts of those activities on the VEGP site; and the specific activities that would be implemented under the SReP to mitigate those impacts in the event the SReP were required to be implemented. *See* Licensing Board Environmental Questions at 3.

b. Witnesses and Evidence Presented

4.121 To address the Board's request for further information on the LWA and SReP processes associated with the Vogtle ESP, in conjunction with their prefiled slide presentations that were admitted as exhibits, lead party SNC presented one witness, while the Staff presented three witnesses. *See* Tr. at M-2020 to -2070; Exh. SNC000077 ([SNC] Vogtle ESP Mandatory Hearing Presentation #5, Environmental Topic #5: LWA and Site Redress Plan) [hereinafter SNC LWA Presentation]; Exh. NRC000063 (NRC Staff Presentation Topic #5: LWA and Site Redress Plan) [hereinafter Staff LWA Presentation].

(i) SNC WITNESSES

4.122 On behalf of SNC, Dale L. Fulton provided an oral presentation and answered questions from the Board regarding the SNC LWA and SReP submissions. Mr. Fulton, who has a B.S. in Geology from Auburn University, currently serves as an SNC Environmental Specialist. He has over 10 years' experience in environmental consulting, including NEPA assessments and the

preparation of NEPA documents associated with the license renewal for Vogtle Units 1 and 2. *See* SNC LWA Presentation at 2; Exh. SNC000078 (Dale L. Fulton [CV]).

(ii) NRC WITNESSES

4.123 Dr. Michael R. Sackschewsky made the Staff's presentation on the LWA request. Also, as part of the Staff panel on this subject matter, Christian J. Araguas answered questions from the Board, and Mark D. Notich also was available to answer questions. Dr. Sackschewsky, a Senior Research Scientist in the Ecology Group at PNNL and the team leader for the Vogtle ESP EIS, has a B.A. in Biology from the University of Colorado and a Ph.D. in Botany from Washington State University. He has nearly 20 years of professional experience in performing environmental and ecological assessments, including 15 years' experience with NRC environmental reviews. *See* Staff LWA Presentation at 2; Exh. NRC000079, at 1-2 (Michael R. Sackschewsky Resume). The qualifications of Mr. Araguas and Mr. Notich previously were discussed in connection with, respectively, the topics of radiological impacts and water use impacts. *See supra* sections IV.A.2.b(ii), IV.A.1.b.

4.124 Based on the respective qualifications and experience of the proffered witnesses, the Board finds each of these individuals qualified to testify as an expert witness regarding the LWA and SReP associated with the Vogtle ESP application.

c. Regulations and Guidelines Relating to LWAs

4.125 Section 50.10 of Title 10 of the *Code of Federal Regulations* provides the terms for requesting and issuing an LWA, which authorize an applicant to perform certain site-preparation activities that would otherwise only be permitted following the issuance of a 10 C.F.R. Part 50 construction permit or a 10 C.F.R. Part 52 COL. *See* 10 C.F.R. § 50.10(d)-(g). As discussed above, *see supra* sections III.A, III.C.3, section 52.17(c) allows an ESP applicant to request that a section 50.10 LWA be issued in conjunction with an ESP. Section 50.10(a)(1) identifies LWA construction activities,[19] while section 50.10(a)(2) identifies activities that can be performed without an LWA (i.e., as "preconstruction" activities that do

[19] Under section 50.10(a)(1), activities constituting construction, and thus requiring an LWA, are the driving of piles; subsurface preparation; placement of backfill, concrete, or permanent retaining walls within an excavation; installation of foundations; or in-place assembly, erection, fabrication, or testing that are for safety-related structures, systems, or components (SSCs). Also included are construction activities associated with onsite emergency facilities necessary to comply with section 50.47 and 10 C.F.R. Part 50, App. E. *See* 10 C.F.R. § 50.10(a)(1).

not require NRC approval).[20] An LWA allows for the performance of these LWA construction activities prior to issuance of a COL, *see* 10 C.F.R. § 50.10(d)(1) (LWA authorizes activities "for which either a construction permit or [COL] is otherwise required"), but the LWA application must include a plan for site redress that provides for restoration if the project is cancelled, the LWA is revoked, or a construction permit or COL is denied. *See id.* § 50.10(d)(3)(iii). The SReP also remains in effect for an ESP applicant even if the ESP with which the LWA is issued is not referenced in a construction permit or COL application during the period that the ESP remains valid. *See id.* § 52.25.

4.126 The current provisions of section 50.10(d) are the product of an agency rulemaking process that concluded in an October 2007 final rule. *See* Limited Work Authorizations for Nuclear Power Plants, 72 Fed. Reg. 57,416, 57,432-33 (Oct. 9, 2007). Among other things, the new rule modified the scope of activities that are considered construction for which an LWA is required. *See id.* As is discussed above, *see supra* section IV.A.5.a, in response to the October 2007 rule, Southern submitted a revised SReP that is part of its current ESP application. Additionally, because the rule revision occurred between the Staff's issuance of the DEIS and the FEIS for Vogtle Units 3 and 4, only the FEIS reflects the October 2007 LWA rule and Southern's revised SReP.

d. Evidentiary Presentation

(i) LWA AND NON-LWA ACTIVITIES

4.127 Mr. Fulton testified that, subsequent to the agency's adoption of the new LWA rule that allows non-safety-related activities to be conducted without NRC authorization, SNC updated its LWA request in November 2007 to address the safety-related activities that would be covered under an LWA. *See* Tr. at M-2028. The updated request includes the engineered backfill, mud mats, mechanically stabilized earth wall, waterproof membrane, and lean concrete fill. *See* Tr. at M-2028. Mr. Fulton declared that the LWA work for Unit 3 is expected to be completed by February 2011, with Unit 4 starting concurrently with Unit 3 and lagging by 6 to 12 months. *See* Tr. at M-2029; SNC LWA Presentation at 4.

4.128 Mr. Fulton also indicated that preconstruction activities have already begun at the site and will continue through 2009 for Unit 3 and 2010 for Unit 4.

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[20] Under section 50.10(a)(2), "construction" is defined as not including site exploration; preparation of the site for construction, including site clearing, grading, and installation of environmental mitigation measures; erection of fences and other access control measures; excavation; erection of support buildings for use in connection with construction; building of service facilities, such as paved roads, parking lots, railroad spurs, exterior lighting systems, potable water systems and sewerage treatment facilities, and transmission lines; and procurement or offsite fabrication of facility components. *See id.* § 50.10(a)(2).

See Tr. at M-2028 to -2029. He explained that the major preconstruction (non-LWA) activity is the excavation of the power block for each of the units. *See* Tr. at M-2030. Other non-LWA activities, according to Mr. Fulton, include road and rail construction, utility installation, temporary construction facilities, clearing, grading and grubbing activities, installing environmental controls, and underground pipe installation. *See* Tr. at M-2029 to -2030; SNC LWA Presentation at 5.

4.129 Mr. Fulton provided details regarding the proposed LWA activities, showing slides illustrating the proposed excavation and stabilization associated with preparing for post-COL facility containment construction, including placement of the engineered backfill, mud-mats, and retaining walls. The backfill extends to the Blue Bluff marl layer, which is the load bearing layer for Vogtle Units 3 and 4. *See* Tr. at M-2031 to -2032; SNC LWA Presentation at 7-10. Mr. Fulton provided excavation illustrations showing that the nuclear island foundation will be approximately 40 feet below grade, with the grade elevation at approximately 220 feet MSL, meaning the bottom of the nuclear island will be at approximately 180 feet MSL, and the bottom of the excavation at 130 feet MSL. *See* Tr. at M-2033; SNC LWA Presentation at 9. He explained that, because the groundwater in the Water Table aquifer is at approximately 160 feet MSL, *see* Tr. at M-2033, the depth of the excavation relative to the groundwater elevation will require dewatering and groundwater monitoring during construction, *see* Tr. at M-2038 to -2039.

4.130 On behalf of the Staff, Dr. Sackschewsky noted that, in response to the changes in the LWA rules, SNC revised its LWA request between the issuance of the DEIS and the FEIS so that the Staff's FEIS analysis covered a different set of activities. *See* Tr. at M-2044. Following issuance of the FEIS, SNC asked to withdraw the rebar installation from its list of LWA activities. *See* Tr. at M-2045; Staff LWA Presentation at 5. Dr. Sackschewsky confirmed that this did not impact the environmental review conclusions. *See* Tr. at M-2045. In response to a Board question regarding whether the removal of the rebar from the LWA activity scope was related to site redress concerns, Mr. Araguas indicated that guidance from the Staff was the reason behind the removal of rebar from the LWA request, in that the rebar requirements depend on the reactor base-mat design, and the Staff was not able to approve the base-mat design per the LWA issuance schedule because of the differences in design between revisions 15 and 16 of the AP1000 certified design. *See* Tr. at M-2058.

4.131 Further, in response to Board questions regarding the inspection of site LWA activities, Mr. Araguas indicated that the construction inspection program would include the LWA work and would be implemented on a regional level from the NRC Region II office in Atlanta, Georgia. *See* Tr. at M-2068. The Board also inquired regarding the verification of discharge pipe conformance to thermal plume analysis design assumptions, in response to which Dr. Sackschewsky

indicated that, although the NRC would not be involved in that review because it is a preconstruction activity, a local and/or state permitting agency would likely be performing an inspection of the approved design documented in the agency's permit. *See* Tr. at M-2069. Additionally, in response to a Board question regarding whether cooling tower construction is considered a preconstruction activity, Dr. Sackschewsky clarified that the term preconstruction "doesn't mean that that activity is done before construction," but rather is better defined as "non-safety-related construction," which would permit cooling tower construction prior to LWA issuance. *See* Tr. at M-2051 to -2052.

(ii) CONSTRUCTION AND PRECONSTRUCTION IMPACTS

4.132 Mr. Fulton testified that the environmental impacts associated with preconstruction and LWA construction activities were included in the ESP ER impact evaluation for construction. *See* Tr. at M-2034. In this regard, Mr. Fulton indicated that "[t]he impacts evaluated for the construction activities incorporated the impacts associated with pre-construction and activities covered under the LWA." SNC LWA Presentation at 11. Mr. Fulton explained that SNC used "the cumulative approach for the environmental analysis, where the impacts associated with the LWA and construction are analyzed as a whole." Tr. at M-2034. He also indicated that this is a bounding analysis, because the impacts associated with combining LWA and construction activities would be greater than those associated with the LWA activities alone. *See* Tr. at M-2034. Mr. Fulton noted that "[i]n evaluating the environmental impacts, SNC also identified necessary environmental controls that need to be in place to minimize and mitigate the identified impacts." Tr. at M-2035. These controls included obtaining regulatory permits, groundwater monitoring, installing settling basins, dams, site drainage, and other storm water controls, and providing for dust suppression and for the containment of spills. *See* Tr. at M-2035; SNC LWA Presentation at 11.

4.133 Dr. Sackschewsky confirmed that the Staff also evaluated the impacts of preconstruction, LWA, and construction activities in a cumulative manner because "[w]e found that the LWA activities were hard to separate in terms of defining the actual impacts. In many resource areas, the environmental impact of the actual construction, compared to the preconstruction, is pretty minimal, especially in areas such as land use, and ecology, historic and culture resources . . . ." Tr. at M-2056; *see also* Staff LWA Presentation at 13. In contrast, Dr. Sackschewsky indicated that impacts on socioeconomics, transportation, and nonradiological health can be somewhat different for preconstruction and construction when construction includes LWA activities. *See* Tr. at M-2056. Nonetheless, he testified that the "impacts of the LWA activities would be bounded by the overall cumulative construction impacts," most of which were found to be SMALL, except in the area of cultural resources, where they were

found to be MODERATE. *See* Tr. at M-2057; Staff LWA Presentation at 14. He also indicated that the MODERATE cultural resource impacts were entirely due to preconstruction-related activities. *See* Tr. at M-2057. Several socioeconomic subareas, such as demography, taxes, and transportation, would also be moderately impacted, but "the LWA portion of those moderate impacts would be relatively small compared to the rest of the construction activities." Tr. at M-2057; *see also* Staff LWA Presentation at 14.

(iii) LWA PREREQUISITES

4.134 Mr. Fulton indicated that the quality assurance (QA) program, the fitness-for-duty (FFD) program, and the problem identification & resolution (PI&R) program (which is actually part of the QA Program) would all be in place prior to the start of the LWA activities. *See* Tr. at M-2032; SNC LWA Presentation at 7.[21] The FEIS also provides a list of "prerequisites to LWA activities that must be fulfilled before performing such activities." FEIS 1A, at 4-72 to -73; *see also* Tr. at M-2035. Mr. Fulton indicated that "[t]hese prerequisites are practical matters to be performed prior to initiating the LWA activities." Tr. at M-2035. Included in the prerequisite list are such items as the documentation of existing site conditions through an ongoing process of environmental impact evaluations; coordination of agreements between the site's co-owners and SNC to perform licensing and construction activities; coordination of the movement of the existing VEGP site protected area (PA) boundary, although there is no need to adjust the PA boundary to support LWA activities; movement, demolition, or ownership transfer of existing VEGP site buildings and structures within the Units 3 and 4 site; and obtaining the necessary permits to perform preconstruction and LWA activities. *See* Tr. at M-2035 to -2036; SNC LWA Presentation at 12.

4.135 Dr. Sackschewsky testified that these prerequisites "are not items that are NRC required items. They're not something that Southern would have to prove

[21] In the context of its LWA review, the Staff reviewed SNC's description of its QA program and found that it adequately describes the authority and responsibility of the appropriate personnel and provides adequate guidance to perform verification and self-assessment functions without undue influence from those directly responsible for costs and schedule as well as adequate guidance to apply the program to activities that are important to safety and to establish controls. *See* FSER at 1-1, 1-5, 17-1 to -13. Also relative to its LWA review, the Staff performed an evaluation of the SNC FFD program, which included review of the persons to whom the program applied, written policy and procedures, drug and alcohol testing, fitness monitoring, behavioral observation, sanctions, review process, audits, recordkeeping and reporting, and suitability and fitness evaluations. *See id.* at 1-1, 1-5, 13-152 to -159. The Board did not inquire further into the QA and FFD programs during the evidentiary hearing portion of this proceeding, having found from its consideration of the relevant FSER sections that the Staff's review formed a reasonable basis for its conclusions that these programs, as currently constituted, meet the requirements of the AEA and the agency's regulations. *See infra* section IV.B.

before they got their ESP, or their LWA. But they're items that would be expected to be done before they could do that." Tr. at M-2045. This statement prompted a number of Board questions in response to which Dr. Sackschewsky explained that there are no actual safety implications associated with these items and that, while there may be legal implications for the Applicant associated with them, they are not something for which the Staff requires documentation. *See* Tr. M-2045 to -2046. He further emphasized that any licenses or permits associated with these prerequisite items are issued by state or local entities other than the NRC; that "compliance would be monitored by the other agencies"; and that "if there are any conditions on those permits, it would be placed and enforced by the other agencies, and not by the Staff." Tr. at M-2046 to -2047. In response to a Board question concerning the precedental basis for his statements, Mr. Sackchewsky indicated that "[t]here is an . . . almost identical list in the Clinton ESP FEIS, and a very similar type list in the North Anna ESP FEIS," Tr. at M-2047, both of which he indicated also had been the subject of LWA applications, *see* Tr. at M-2048.

(iv) SITE REDRESS PLAN

4.136 Relative to the SReP associated with the LWA, Mr. Fulton described the redress plan and indicated that it will ensure that the site will be returned to an "unattended environmentally stable, and aesthetically acceptable condition in the event Vogtle 3 and 4 [are] not completed" in accordance with applicable land use requirements and zoning. Tr. at M-2041; *see also* SNC LWA Presentation at 13. For LWA excavation area activities at approximately 90 feet below grade, "SNC's preferred method of redress would be burial in place." Tr. at M-2041. The burial in place plan would assure that no significant amount of degradable material would remain below grade, but would be removed and properly disposed of. *See* Tr. at M-2041. The plan would be discussed with the Georgia Environmental Protection Division (GEPD) and, if the GEPD did not approve the burial in place, "SNC would demolish and remove the LWA structures in accordance with Georgia requirements." Tr. at M-2041. The final site redress would also include regrading to mitigate storm erosion. *See* Tr. at M-2041 to -2042; SNC LWA Presentation at 13. In addition, SNC would evaluate possible future alternative uses for the land area before implementing redress work. If improvements would allow for an alternative industrial use, the site redress efforts would be commensurate with that use. *See* Tr. at M-2042. Similar environmental controls to those used during preconstruction and LWA construction would be implemented as part of the site redress activities. *See* Tr. at M-2042.

4.137 Dr. Sackschewsky confirmed that the main objective of the SReP is as defined by SNC. *See* Tr. at M-2057; Staff LWA Presentation at 15. He clarified that the SReP is applicable only to LWA activities, and so does not cover preconstruction activities, and reiterated that the redress work would have to be in

accordance with applicable land-use and zoning requirements. *See* Tr. at M-2057. He also confirmed the SNC testimony regarding the use of burial in place with surface regrading and revegetation as the preferred redress approach, with inert material removal, transportation, and disposal elsewhere if burial in place is not permitted. *See* Tr. at M-2058 to -2059; Staff LWA Presentation at 16.

4.138 Dr. Sackschewsky also discussed the possibility that there might be the identification of an alternative acceptable use for any part of the site that had been the subject of LWA activities, thereby making that portion of the site not subject to redress except to the extent needed to conform to the alternative use. *See* Tr. at M-2059; Staff LWA Presentation at 16. In response to a Board question regarding who would determine if an alternative use is acceptable, Dr. Sackschewsky indicated, and Mr. Fulton agreed, that SNC would make that determination. *See* Tr. at M-2059 to -2060. Mr. Fulton added, however, that the alternative use would need to follow any applicable federal, state, and local requirements governing that use. *See* Tr. at M-2060.

4.139 Dr. Sackschewsky also testifed that the redress activities would have environmental impacts similar to those that would result from the preconstruction or LWA activities. *See* Tr. at M-2060 to -2061; Staff LWA Presentation at 17. In that regard, under the SReP, SNC would have to implement a set of measures and controls that would mitigate impacts from noise, traffic, erosion and sedimentation, air quality, and potential releases of pollutants. *See* Staff LWA Presentation at 17. In response to a Board inquiry about whether the NRC monitors site redress, Dr. Sackschewsky indicated that he believed the NRC would have a role in conjunction with any other permitting agencies. *See* Tr. at M-2061.

4.140 Finally, in summary, Dr. Sackschewsky declared that the Staff found that the LWA activities requested by SNC are all allowed under 10 C.F.R. § 50.10(d); that the SReP activities would adequately redress the LWA impacts: and that implementation of the SReP would not have adverse environmental impacts. *See* Tr. at M-2064; Staff LWA Presentation at 18.

e. Board Findings Relating to LWA and SReP[22]

4.141 The LWA would allow Applicant SNC to undertake limited construction activities, including the placement of engineered backfill, a concrete mud

[22] Notwithstanding the provisions of section 51.105(c)(3) indicating that a presiding officer should issue a separate partial initial decision regarding an LWA request, *see* 10 C.F.R. § 51.105(c)(3), just as the Staff reviewed the SNC LWA request in the context of its ESP review, *see* FSER at 1-1, we find no practical or logical basis in this instance for separating our consideration of the adequacy *(Continued)*

mat, a waterproofing membrane, an MSE retaining wall, and temporary drains. The Board concurs with the Applicant and the Staff that the Staff's LWA review needs only to address those aspects of the AP1000 design that are within the scope of the LWA request.

4.142 SNC's evaluation of construction impacts, and the Staff's independent review of these impacts, included both the impacts associated with preconstruction (non-LWA) activities and activities covered under the LWA. The Board finds that this cumulative approach to the environmental analysis was appropriate because we concur that the impacts associated with combining LWA and non-LWA preconstruction activities would be greater than those associated with the LWA activities alone, and that it would be difficult to separate the impacts from these activities.

4.143 SNC and the Staff also provided information on the seismic analysis of LWA activities and ITAAC related to the LWA in the context of their seismic presentations. *See infra* section IV.A.7. Based on the information provided in those presentations, the Board finds that the Staff's review was sufficient to conclude that SNC met the LWA requirements related to stability of subsurface materials and foundations at the VEGP site and that SNC's proposed ITAAC related to LWA activities are adequate to ensure that the installation of the foundation for the nuclear island will be in accordance with NRC regulations and guidance and will provide adequate margins of safety.

4.144 The Board notes that any incompatibilities between the design information approved in an LWA and the design information submitted in a COL application would need to be reviewed by the Staff at the COL stage.

4.145 The Staff included a permit condition in the FSER requiring "that the Applicant shall either remove and replace, or shall improve, the soil directly above the Blue Bluff Marl for soil under or adjacent to Seismic Category 1 structures, to eliminate any liquefaction potential." FSER at 2-438, A-2. The Board finds that SNC's LWA request encompasses activities that, when completed, will satisfy this permit condition.

4.146 In sum, the Board finds the record before it is sufficient to conclude that the Staff made a reasonable determination, based upon its review of the SNC LWA and SReP submissions, that the requested LWA activities should be authorized and that the SReP would adequately redress any LWA impacts.

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of the SNC LWA request from our determination regarding the ESP with which it is associated. Nonetheless, to the extent such separate consideration is warranted, we note it would consist of no more than an amalgamated restatement of the LWA-related findings we have made in sections III.C.3, IV.A.5, IV.A.7, and V of this Decision.

6. Site Emergency Plan

a. Introduction

4.147 SNC provided a complete and integrated emergency plan in part 5 of the ESP application. *See* Exh. SNC000085 ([SNC], Vogtle [ESP] Application, pt. 5, Emergency Plan (rev. 4 Mar. 2008)). Information related to emergency planning is also provided in section 13.3 of the ESP application SSAR. *See* Exh. SNC000088, at 13.3-1 to 13.3A-59 ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR], ch. 13, Conduct of Operations (rev. 5 Dec. 2008)). The Staff evaluation of this information is in section 13.3 of the FSER. *See* FSER at 13-1. While the emergency plan includes the two existing and two proposed units, the Staff limited its review to proposed Units 3 and 4 and to the common features of the plan. *See* Tr. at M-2152 to -2153. During the review of the SNC emergency plan, the Staff identified seven emergency planning permit conditions that needed to be imposed, six of which address the emergency action level (EAL) scheme, and one that addresses the Technical Support Center (TSC) location. *See* Tr. at M-2139; FSER at 13-120 to -121; Exh. NRC000064, at 3 (NRC Staff Presentation Topic #6, Site Emergency Plan) [hereinafter Staff Site Emergency Plan Presentation]. The Staff also outlined a chart of inspections, tests, analyses, and acceptance criteria, i.e., ITAAC, to be completed in connection with emergency planning. *See* FSER at 13-122 to -147. The Staff ultimately concluded that the SNC emergency plan met the applicable regulations and was consistent with regulatory guidance. *See id.* at 13-120. Pursuant to 10 C.F.R. § 50.47(a), the Staff found that "subject to the required conditions and limitations of the full-power license and satisfactory completion of the ITAAC, there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the VEGP site, and that emergency preparedness at Vogtle Units 3 and 4 is adequate to support full-power operations." *Id.*

4.148 In addition to asking various questions regarding aspects of SNC's site emergency plan prior to the evidentiary hearing, the Board requested that the Staff and SNC provide a presentation on the topic at the hearing. The Board was interested in a discussion by the parties regarding the key elements of the site emergency plan, with an emphasis on how the control rooms of each of the four reactor units will interact with the proposed common TSC and with each other under emergency conditions. *See* Licensing Board Safety Questions at 3, App. A at 3-5.

b. Witnesses and Evidence Presented

4.149 To address the Board's review of the site emergency plan, as the lead party addressing this topic, SNC presented one witness, and the Staff presented two witnesses. At the evidentiary hearing, these witnesses provided

oral testimony, in conjunction with the parties' prefiled slide presentations that were admitted as exhibits. *See* Tr. at M-2070 to -2119, M-2128 to -2187; Exh. SNCR00083 (Vogtle ESP Mandatory Hearing Presentation #6, Safety Topic #4, Site Emergency Plan) [hereinafter SNC Site Emergency Plan Presentation]; Staff Site Emergency Plan Presentation.

(i) SNC WITNESS

4.150 Mr. Theodore Amundson, a consultant for EP Consulting, testified on behalf of SNC. *See* Tr. at M-2077 to -2119. Mr. Amundson earned a B.S. in Mechanical Engineering with an Aeronautical Option and an M.S. in Mechanical Engineering from North Dakota State University. *See* Exh. SNC000084, at 2 (Theodore E. Amundson [CV]) [hereinafter Amundson CV]. He has over 32 years of experience in the commercial nuclear industry. *See* Tr. at M-2077. Over the course of his career he has worked in the area of emergency preparedness, serving as an exercise controller and evaluator and scenario developer. He was also qualified as an emergency director and emergency manager. *See id.* at M-2078. Mr. Amundson assisted in the preparation of the site emergency plan for the SNC ESP application, developing the ITAAC for emergency planning. *See* Amundson CV at 1.

(ii) STAFF WITNESSES

4.151 Christian Araguas and Bruce J. Musico provided testimony on behalf of the Staff. *See* Tr. at M-2128 to -2186.

4.152 Mr. Araguas' background and expert qualifications are discussed in section IV.A.2.b, *supra.*

4.153 Mr. Musico earned a B.S. in Nuclear Engineering from University of Michigan, and a J.D. from Franklin Pierce Law Center. *See* Exh. NRC000080, at 1 ([SPQ] for Bruce J. Musico) [hereinafter Musico SPQ]. Mr. Musico has over 20 years of experience working on emergency planning issues. *See id.*; Tr. at M-2128. He is currently employed as a Senior Emergency Preparedness Specialist, Division of Preparedness and Response, Office of Nuclear Security and Incident Response (DPR/NSIR), NRC. *See* Musico SPQ at 1. He has been the principal Staff reviewer for the emergency planning information submitted in the Vogtle ESP application. *See id.*

4.154 Based on the foregoing, the Board finds each of these witnesses qualified to testify as an expert regarding the site emergency plan relative to the Vogtle ESP application.

c. Regulations and Guidance Relating to the Site Emergency Plan

4.155 The SSAR filed with the ESP application must include information

that "identif[ies] physical characteristics of the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans." 10 C.F.R. § 52.17(b)(1). If the applicant determines that there are physical characteristics "that could pose a significant impediment to the development of emergency plans, the application must identify measures that would, when implemented, mitigate or eliminate the significant impediment." *Id.*

4.156 In addition, an ESP applicant has the option of either proposing a complete and integrated emergency plan or proposing major features of the emergency plan "for review and approval by NRC, in consultation with the Department of Homeland Security (DHS)." *Id.* § 52.17(b)(2)(i), (ii). The regulations provide that either option should be proposed in accordance with the "pertinent" or "applicable" standards in 10 C.F.R. § 50.47 and the requirements of Appendix E to 10 C.F.R. Part 50. *Id.* Section 50.47(b) contains sixteen planning standards related to the emergency preparedness function, and Appendix E to 10 C.F.R. Part 50, establishes minimum requirements for emergency plans. *See id.* § 50.47(b); *id.* Part 50, App. E. Among other requirements in Part 50 Appendix E, section IV outlines the content of emergency plans, while section V specifies provisions for submitting emergency implementing procedures to the NRC for review, and section VI sets forth provisions for the Emergency Response Data System (ERDS). *See id.* Part 50, App. E, §§ IV-VI.

4.157 SNC chose to submit a complete and integrated emergency plan with its ESP application. *See* Tr. at M-2081. Complete and integrated emergency plans "must include the proposed inspections, tests, and analyses that the holder of a combined license referencing the [ESP] shall perform, and the acceptance criteria that are necessary and sufficient" to support a finding of "reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will be operated in conformity with the emergency plans, the provisions of the Act, and the Commission's rules and regulations." 10 C.F.R. § 52.17(b)(3). The ITAAC associated with emergency planning reflect those aspects of the emergency plan that cannot be described or completed until the plant is further along in the licensing and construction process. *See* Tr. at M-2132. They are essentially placeholders that reflect requirements that could not be addressed under Part 52 prior to physical construction of the plant.[23] *See* Tr. at M-2133.

[23] During the Staff's discussion of the components of its review, which, as discussed above, includes the review of the emergency plan ITAAC, the Board requested that the Staff provide an example of an ITAAC that would be part of the Staff's review. *See* Tr. at M-2133. The Staff provided an example that concerned the size of the TSC. The Staff explained that there is a requirement that the TSC size be consistent with NUREG-0696 or, specifically, 2175 square feet (Vogtle ITAAC 5.1.1), which cannot be determined until the TSC is constructed. *See* Tr. at M-2135 to -2137; *see also* FSER at 13-123.

4.158 NRC's general intent was to make the Part 52 licensing process compatible with the Part 50 licensing process. *See* 72 Fed. Reg. at 49,353-54; *see also* Tr. at M-2141. Moreover, in the context of emergency planning, Staff witness Mr. Musico explained that under Part 50, if the NRC determines that the onsite emergency plan is adequate, the then-licensee is permitted to operate up to 5% of rated power until FEMA determines that the offsite exercise objectives are met. *See* Tr. at M-2139 to -2142. In this Part 52 proceeding, if the onsite plan is determined to be adequate, then the Staff would allow operation at up to 5% of rated power through the use of a license condition that references the 5% of rated power threshold until FEMA determines that the offsite objectives are met. *See* Tr. at M-2142. If an applicant chooses to submit a complete and integrated emergency plan, that applicant also is required to make a good faith effort to obtain a certification from federal, state, and local governmental agencies with emergency planning responsibilities that "(i) [t]he proposed emergency plans are practicable; (ii) [t]hese agencies are committed to participating in any further development of the plans, including any required field demonstrations; and (iii) [t]hat these agencies are committed to executing their responsibilities under the plans in the event of an emergency." 10 C.F.R. § 52.17(b)(4).

4.159 Regulatory guidance utilized by the applicant in preparing the application, and by the Staff in reviewing the application, is provided in a number of documents. Regulatory Guide 1.101, Emergency Response Planning and Preparedness for Nuclear Power Reactors, outlines the methods that the "staff considers acceptable" for complying with Part 50 Appendix E and the standards in section 50.47(b). It also endorses the use of other guidance documents. *See, e.g.,* Office of Nuclear Reactor Research, Regulatory Guide 1.101, Emergency Response Planning and Preparedness for Nuclear Power Reactors, at 3-5 (rev. 5 June 2005) (ADAMS Accession No. ML050730286) [hereinafter Reg. Guide 1.101].

4.160 One such document endorsed by Regulatory Guide 1.101 is NUREG-0654/FEMA-REP-1, which is a document that was jointly prepared by NRC and FEMA as guidance for state and local government agencies and applicants and licensees in the development and assessment of emergency plans. *See* [NRC], [FEMA], Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, NUREG-0654/FEMA-REP-1, at 1-2 (rev. 1 Nov. 1980; addenda Mar. 2002), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/Staff/sr0654/. Supplement 2 to NUREG-0654 provides guidance specifically for emergency plans associated with ESP applications. For complete, integrated emergency plans that are submitted with an ESP application, Supplement 2 refers to the original document, NUREG-0654/FEMA-REP-1. *See* [NRC], [FEMA], Criteria for Emergency Planning in an Early Site Permit Application, NUREG-0654/FEMA-REP-1, at 1, 6 (rev. 1, supp. 2, Apr. 1996) (ADAMS Accession No. ML050130188); *see also*

Tr. at M-2129. Regulatory guidance is also provided in NUREG-0696, Functional Criteria for Emergency Response Facilities, and NUREG-0737, Supplement 1, Clarification of TMI Action Plan Requirements: Requirements for Emergency Response Capability, both of which are related to the function, capabilities, and design of emergency response facilities such as the TSC and the Operational Support Center (OSC); NUREG/CR-6863, Development of Evacuation Time Estimate Studies for Nuclear Power Plants; and NUREG/CR-6864, Identification and Analysis of Factors Affecting Emergency Evacuations.[24]

4.161 Other documents endorsed by Regulatory Guide 1.101 are those produced through work sponsored by the Nuclear Energy Institute (NEI), NUMARC/NESP-007 and NEI-99-01,[25] which the Staff has found acceptable as alternatives to NUREG-0654/FEMA-REP-1 for the development of EALs. *See* Reg. Guide 1.101, at 4. EALs are the criteria used to determine the notifications that need to be made to federal, state, and local authorities and to determine the appropriate protective responses to a particular set of emergency conditions. *See* 10 C.F.R. Part 50, App. E, § IV.B. NEI has proposed NEI-07-01 for endorsement by the Staff. Like NEI-99-01, NEI-07-01 involves the methodology for developing EALs, but unlike NEI-99-01, it incorporates consideration of advanced passive reactor design features (like those in the AP1000). NEI-07-01 is currently under review by the NRC. *See* Tr. at M-2080.

4.162 If an applicant submits a complete and integrated emergency plan in conjunction with an ESP application, the Staff must find "that the emergency plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency." 10 C.F.R. § 50.47(a)(1)(iii). The Staff's review focuses primarily on the Applicant-prepared onsite provisions of the plans, which include the evacuation time estimate provided by the Applicant, and the ITAAC. *See id.* § 50.47(b), (d); Tr. at M-2132, M-2151. The offsite

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[24] *See* Office of Inspection and Enforcement, NRC, Functional Criteria for Emergency Response Facilities, NUREG-0696 (Feb. 1981), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/Staff/sr0696/sr0696.pdf; [NRR, NRC], Clarification of TMI Action Plan Requirements: Requirements for Emergency Response Capability, NUREG-0737 (supp. 1 Jan. 1983), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/Staff/sr0737/sup1/sr0737sup1.pdf; Sandia National Laboratories [(Sandia)], Development of Evacuation Time Estimate Studies for Nuclear Power Plants, NUREG/CR-6863 (Jan. 2005) (ADAMS Accession No. ML050250240); 1 & 2 [Sandia], Identification and Analysis of Factors Affecting Emergency Evacuations, NUREG/CR-6864 (Jan. 2005), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/contract/cr6864/.

[25] *See* [NEI], Methodology for Development of Emergency Action Levels, NEI-99-01 (rev. 4 Jan. 2003) (ADAMS Accession No. ML041470143) [hereinafter NEI-99-01]; Nuclear Management and Resources Council, Inc., Methodology for Development of Emergency Action Levels, NUMARC/NESP-007 (rev. 2 Jan. 1992) (ADAMS Accession No. ML041120174). NEI-99-01 states that it is the successor to NEI-97-03, which was the successor to NUMARC/NESP-007. *See* NEI-99-01, at iv-v.

provisions, which generally are the responsibility of state and local governments, are reviewed by FEMA.[26] *See* 10 C.F.R. § 50.47(b), (d). For the Vogtle ESP, the offsite emergency plan consists of the Georgia and South Carolina state plans, and county plans for Aiken, Allendale, and Barnwell counties in South Carolina, and Burke County in Georgia. FEMA performs its evaluation independently of the NRC, also using NUREG-0654/FEMA-REP-1, and provides its review findings to the NRC. *See* Tr. at M-2138 to -2139; Staff Site Emergency Plan Presentation at 3-5. The Staff must take into account FEMA's findings, as section 50.47(a)(2) provides:

> [t]he NRC will base its finding on a review of the [FEMA] findings and determinations as to whether State and local emergency plans are adequate and whether there is reasonable assurance that they can be implemented, and on the NRC assessment as to whether the applicant's onsite emergency plans are adequate and whether there is reasonable assurance that they can be implemented.

10 C.F.R. § 50.47(a)(2); *see also* Tr. at M-2150 to -2151. Moreover, FEMA's finding "constitute[s] a rebuttable presumption on questions of adequacy and implementation capability" in NRC licensing proceedings. 10 C.F.R. § 50.47(a)(2). Ultimately, the reasonable assurance finding for complete and integrated plans includes the successful completion of ITAAC and resolution of any permit conditions. *See* Tr. at M-2151.

d. Evidentiary Presentation

4.163 By way of background, SNC witness Mr. Amundson explained that the site emergency plan was developed from the plan for the currently operating units and revised to accommodate the new AP1000 units. *See* Tr. at M-2081 to -2082. The base plan and its appendices reflect the common elements among all four units. *See* Tr. at M-2082. Separate annexes were developed to account for unique design differences between the units. A new evacuation time estimate study was performed and new certifications by twenty-one state and local agencies were obtained in support of the site emergency plan. *See* Tr. at M-2085; SNC Site Emergency Plan Presentation at 7-8; Exh. SNC000087 (Evacuation Time Estimates for the Vogtle Electric Generating Plant (Apr. 2006)) [hereinafter Evacuation Time Estimate Study]. According to Mr. Amundson, offsite emergency

[26] As Staff witness Mr. Musico explained at the hearing, the Staff uses the sixteen planning standards in section 50.47(b) to evaluate the adequacy of the SNC emergency plans. FEMA utilizes fifteen of the sixteen planning standards, but does not use the second standard referring to the onsite organization. He also explained that the sixteen standards in section 50.47(b) are also the sixteen planning standards in NUREG 0654/FEMA-REP-1. *See* Tr. at M-2149; Staff Site Emergency Plan Presentation at 6-7.

planning is for the most part unchanged with the addition of the two additional units at the Vogtle site. *See* Tr. at M-2153 to -2154. Mr. Amundson also stated that because a separate proceeding will be required to gain approval for the emergency plan for existing Vogtle Units 1 and 2, SNC intends to submit the plan for approval approximately 1 year prior to the scheduled full participation exercise for Unit 3. *See* Tr. at M-2082. Staff witness Mr. Musico pointed out that the Vogtle ESP application is the first of a kind. "It's the first application that has been submitted under the new Part 52 licensing process with a complete and integrated emergency plan. That's very unique." Tr. at M-2130. Applicants for previous ESPs submitted only major features emergency plans. *See* Tr. at M-2130.

4.164 Mr. Amundson asserted that the emergency plan "complies with all 16 planning standards of 10 CFR 50.47(b) and the associated requirements found in 10 CFR 50, Appendix E." Tr. at M-2086. His presentation only focused on "a few selected key elements" of the planning standards considered to be risk significant insofar as they are of key importance to the regulator and the public, which he delineated as emergency classifications; notifications; accident assessment and protective response; emergency communications; and emergency facilities and equipment. *See* Tr. at M-2086; SNC Site Emergency Plan Presentation at 9. He then proceeded to describe the SNC approach to each of these elements in more detail in his testimony. *See* Tr. at M-2086 to -2119.

4.165 With regard to the TSC location, a matter of particular interest to the Board, Mr. Amundson indicated that "[b]ased on an analysis of methods to effectively implement the emergency plan at multiple unit sites, it was decided to build a new [TSC] within the protected area boundary." Tr. at M-2082 to -2083. The new TSC, which will be common to all four units with the equipment and facilities to accommodate all four, will be activated approximately 1 year prior to fuel load on Unit 3. *See* SNC Site Emergency Plan Presentation at 5-6; Tr. at M-2096. The TSC will be located in the Communication Support Center, about 1700 feet from the Unit 4 control room (Unit 4 being the farthest distance from the new TSC), within what will become the common protected area for all four units. *See* Tr. at M-2083; Exh. SNC000089 (Vogtle Electric Generating Plant Permanent Buildings and Facilities Site Plan). According to Mr. Amundson, "it would take approximately ten minutes to walk between the TSC and the Unit 4 control room, however, as a compensatory measure, we are planning to have motorized vehicles to be available for personnel to use for transit between the TSC and the site control rooms." Tr. at M-2084. He also noted that SNC currently plans to convert the existing TSC into the OSC for Units 1 and 2. *See* Tr. at M-2104.

4.166 With respect to the TSC location, Staff witness Mr. Musico pointed out that part of the pending Westinghouse rulemaking proposal to amend the AP1000 certified design involves a change in the characteristics of the TSC

location. He explained that "[i]n the current certified design, the TSC location is identified as a Tier 1 ITAAC," which means that if any application deviates from the TSC location, it would need to be accompanied by an exemption request. Tr. at M-2167. On the other hand, if the TSC location is characterized as a Tier 2-Star, which is the intent of the Westinghouse proposed revision, then an exemption request would not be necessary. Instead, the COL or ESP applicant for a complete integrated emergency plan would merely have to ask for prior NRC approval to change the TSC location. *See* Tr. at M-2166 to -2167. Mr. Musico further testified that "[the NRC Staff is] utilizing the tool of a permit condition here to facilitate a review at the COL stage to address the on-going review that the NRC is in with respect to its endorsement review of [NEI 07-01] as well as the on-going rulemaking associated with AP 1000." Tr. at M-2171. Accordng to Mr. Musico, if the rulemaking results in a change of the TSC location to a Tier 2-Star designation, then the proposed ESP permit condition (PC) that applies to TSC location, PC-8, is satisfied because NRC approval has been given. If not, then an exemption request and approval would be required to satisfy the permit condition. *See* Tr. at M-2173.

4.167 Mr. Amundson testified that the OSC for Units 3 and 4 will be located in the Control Support Area, which is adjacent to the respective control rooms. *See* Tr. at M-2096. This area, he noted, is actually the location of the TSC in the currently approved AP1000 DCD revision 15. *See* Tr. at M-2104. According to Mr. Amundson, the OSC "is where [the] reserve operators, . . . craft people, craft leaders, health physics technicians, and so on congregate and meet." Tr. at M-2104. He gave the example of establishing a repair team, which would be assembled in the OSC and provided with the appropriate equipment before beginning repair activities. *See* Tr. at M-2104 to -2105.

4.168 Also impacted by the potential addition of two more units to the VEGP site is the existing Emergency Operations Facility (EOF), which is located in the SNC corporate headquarters in Birmingham, Alabama. According to Mr. Amundson, it will be modified to accommodate the additional two units at Vogtle. Mr. Amundson explained that "the primary function of the EOF is to provide technical assistance to the TSC, coordinate off-site assistance and response to state and local agencies and to provide direction and control and assessment of off-site radiological monitoring." Tr. at M-2097. He also indicated that the Birmingham, Alabama EOF will continue to accommodate emergencies on all three Southern Nuclear sites, including the two new units at Vogtle. The consolidated EOF for the existing SNC sites was approved by the NRC in February 2005. *See id.; see also* Exh. SNC000090, at 1-2 (SECY-04-0236, Policy Issue, Notation Vote, [SNC's] Proposal to Establish a Common Emergency Operating Facility at Its Corporate Headquarters (Dec. 23, 2004)). In response to a Board question regarding the length of time necessary for having the TSC and EOF functioning during an emergency, Mr. Amundson stated that the TSC and EOF have an

activation time requirement of 60 minutes following "activation of the emergency response organization." Tr. at M-2098.

4.169 In terms of communication capability, Mr. Amundson indicated that each control room is able to communicate directly with the TSC, EOF, and OSC via dedicated circuits. In addition, each control room contains circuits from the Emergency Notification Network, which is part of the state and local system, and Emergency Notification System, which is part of the Federal Telecommunications System. Although the control rooms are not expected to communicate directly with each other during an event, they can do so with existing telephones and radios if there is a particular reason. *See* Tr. at M-2094 to -2095; SNC Site Emergency Plan Presentation at 14.

4.170 The Board questioned whether there would be any problems with a single TSC for all four units, and raised a concern about the absence of face-to-face communication when the TSC is farther from the control room. Earlier in his testimony, Mr. Amundson had explained that

> [i]ndustry experience over the past 25 years indicates that close proximity of the TSC and the control room is not important. Following TMI, it was anticipated that the decision makers would need frequent, face-to-face communication with the control room for technical and data exchanges. But with the advent of advanced communication systems that provide detailed voice and data information, these anticipated face-to-face communication sessions seldom, if ever, occur during drills and exercises.

Tr. at M-2096. In responding to the Board's TSC-related concerns, Mr. Amundson indicated that, given the current high level of communications and data processing capabilities that exist, this configuration is actually superior for the multiunit site at Vogtle. It provides consistent planning and execution as well as a single point of contact across all units onsite and so is less confusing to implement. *See* Tr. at M-2099 to -2101. Mr. Amundson pointed out that the command center area is 3700 square feet and has conference rooms to accommodate face-to-face meetings of a large number of people within a very short distance from the control rooms and adjacent to the command center. *See* Tr. at M-2102 to -2103. Mr. Amundson asserted that the new TSC "meets or exceeds the guidance of NUREG 0696 and NUREG 0737, Supplement 1, with the exception of the guidance to locate the TSC within two minutes of the control room." Tr. at M-2095.

4.171 The question of the importance of face-to-face communication was also addressed by Mr. Musico in his testimony for the Staff. He noted that while NUREG-0696 specifies a 2-minute walking time requirement from the control room to the TSC, as was discussed above, the walking time from the Unit 4 control room to the TSC is estimated at about 10 minutes. Mr. Musico acknowledged that, as a consequence of this discrepancy, in reviewing SNC's

emergency plan the Staff reexamined the NUREG-0696 guidance and identified two key reasons for having the location of the TSC near the control room: (1) to facilitate management interaction and technical information exchange, i.e., communications; and (2) to provide TSC access to control room data. *See* Tr. at M-2175 to -2176. According to Mr. Musico, in then reviewing the communication strategy that has been proposed in support of Vogtle Units 3 and 4, the Staff found the SNC communication capabilities are redundant, dedicated, and diversified and reflected an upgrade to the communication capabilities generally available in 1979 that led to the generic 2-minute walking time standard. *See* Tr. at M-2181; Staff Site Emergency Plan Presentation at 15. Mr. Musico noted that, with respect to data capabilities, there is the Protection and Monitoring System (PMS) and the Qualified Data Processing System (QDPS), which is a subset of the PMS system, as well as the Safety Parameter Display System (SPDS) and the Emergency Response Data System (ERDS) that links to the PMS system as well as to the NRC. According to Mr. Musico, these multiple data capabilities are improvements to what existed at the time of the Three Mile Island accident. *See* Tr. at M-2182; Staff Site Emergency Plan Presentation at 19. The Staff evaluation thus found that "advanced communication capability would be acceptable to relax the two-minute walking distance," Tr. at M-2176, and that these communication capabilities could be used "to satisfy the two-minute travel time." Tr. at M-2177.

4.172 Mr. Musico noted, however, that in addition to the improvements in communications and data availability, the Staff identified a number of other factors that supported approval of the common TSC, which were listed in the slides provided in support of his testimony and included the increased efficiency of a common facility; elimination of duplication of systems/equipment; fulfills TSC habitability requirements; moderate distance from all control rooms; eliminates staffing confusion and need to Staff multiple TSCs for multi-unit events; permits coordinated response among all site units; provides centralized site support point and single offsite support point of contact; increased separation from control rooms addresses post-9/11 security concerns; allows former Units 1 and 2 TSC to be backup TSC; and is consistent with March 2007 approval of an alternate TSC location for the Clinton plant that has a walking time of approximately 15 minutes. See Tr. at M-2183 to -2184; Staff Site Emergency Plan Presentation at 22-23. The Staff thus "approved the common TSC that is located further away, subject to final resolution of the rulemaking associated with the AP1000 to ensure that the final outcome of that does not result in any inconsistencies with respect to the Staff's approval in the context of the ESP application." Tr. at M-2183.

4.173 In terms of EALs, which inform the responses that are made to an emergency situation, Mr. Amundson stated that the EALs for the Vogtle emergency plan will be developed in the future to conform to proposed guidance document NEI-07-01, the guidance for development of EALs associated with passive reactors. *See* Tr. at M-2087. "It is anticipated that detailed EALs will be

submitted to the NRC for final confirmation, approximately 18 months prior to fuel load. In addition, EALs will be required to be in place to complete ITAAC 1.1.2." Tr. at M-2088. Regarding the EALs, Staff witness Mr. Musico testified, and illustrated with the slides accompanying his testimony, how six of the permit conditions (PCs) imposed in the ESP are EAL-related permit conditions (PCs) and reflect a concern over details associated with EAL development that are not known at the ESP stage. Thus, in the case of PC-4 and PC-5, they reflect the fact that the EALs are potentially affected by the pending DCD revision amendments, while PC-6 and PC-7 are based on as-built plant conditions and instrumentation and PC-2 and PC-3 address the EALs associated with NEI-07-01. *See* Tr. at M-2165; Staff Site Emergency Plan Presentation at 12. Further, in response to a Board question regarding differences in the EALs resulting from the pending AP1000 design amendment and NEI-07-01, Mr. Amundson indicated that "[t]he difference lies primarily in the area of instrument and controls, digital [control] rooms versus analog [control] rooms, particularly in relationship to annunciator systems." Tr. at M-2118. "In addition, there are certain aspects of the electrical design that are different in the sense that they're not all required. AC power isn't required for safety parameters in the passive designs. So we made some modifications to the EALs in regards to AC power, particularly off-site power." Tr. at M-2118 to -2119.

4.174 Staff witness Mr. Musico also discussed the subject of the emergency planning zones (EPZ) for the VEGP site, including the 10-mile plume exposure pathway EPZ and the 50-mile ingestion control pathway EPZ that are the basic constructs used in emergency planning. *See* Tr. M-2145 to -2146; Staff Site Emergency Plan Presentation at 4. Mr. Musico indicated that the 10-mile EPZ on the South Carolina side of the Savannah River is almost entirely encompassed by the SRS, a facility under the purview of DOE, which makes the situation unique relative to that at other plants. He indicated that there is a memorandum of agreement (MOA) between DOE and SNC regarding emergency response in the event of an accident at either the VEGP site or the SRS. Under the MOA, DOE would take full responsibility for emergency response and protection of its people at the SRS. *See* Tr. at M-2146 to -2147; Staff Site Emergency Plan Presentation at 5. According to Mr. Musico, "[t]he Staff did not review the emergency plans that DOE has for that site" because it is not within the scope of the Staff's review. Tr. at M-2147. The Staff did, however, review the MOA and was "satisfied that it adequately represented the existing agreement between . . . DOE and the [SRS] and Southern." Tr. at M-2147. He stated that consistent with the Staff's guidance in the SRP, "where an applicant at an existing site incorporates by reference and utilizes the existing features associated with an emergency plan into the application, there is a presumption of adequacy of those aspects of the incorporated emergency plan[,] and hence the NRC doesn't need to look at it in detail." Tr. at M-2147. In response to a Board inquiry about how the NRC

ensures that a site evacuation at the SRS will not conflict with a Vogtle evacuation if the NRC did not review the SRS emergency plan, Mr. Musico responded that the MOA between SNC and DOE addresses in detail communication and coordination between the Vogtle site and SRS. *See* Tr. at M-2147 to -2148.

4.175 Mr. Musico also discussed the evacuation time estimate (ETE) updated by SNC in April 2006. The ETE provides an estimate of the time to evacuate the 10-mile EPZ. He indicated that the ETE serves as an information resource in making the decision whether sheltering or evacuation is appropriate. Using this information, the projected time that a release might occur, which the offsite authorities would obtain from the applicant, and other factors, the state authorities would decide whether it would be appropriate to shelter or to evacuate. The ETE applies to all four units and was reviewed by the Staff, with the assistance of PNNL staff. *See* Tr. at M-2154 to -2156; Staff Site Emergency Plan Presentation at 11; *see also* Evacuation Time Estimate Study at 1. Mr. Musico stated that the ETE was updated to support the application, even though there was no requirement to do so. *See* Tr. at M-2163. In this regard, after exchanging requests for additional information with SNC, the Staff determined that "the updated ETE in support of the emergency plan was adequate." Tr. at M-2164. Mr. Musico also informed the Board that the ETE "was subsequently shared with the off-site authorities to make sure the results of that updated ETE were reflected in the off-site plans to ensure they recommend the appropriate protective action recommendations." Tr. at M-2164.

4.176 As the Board indicated in its original request for a site emergency plan presentation, the Board was seeking additional information relative to the aspects of the emergency plan that related to emergency coordination on a multi-unit site. *See* Licensing Board Safety Questions at 3. In response to one Board question, Mr. Amundson explained that the emergency plan is not necessarily limited to one reactor unit at a time, but involves "a site-level response to the emergency." Tr. at M-2156. In response to another Board question regarding the ability of the emergency response facilities to handle emergencies simultaneously at more than one unit at a time (such as might occur with a common mode event, e.g., high winds), Mr. Amundson declared that the "TSC is designed to handle an accident on more than one unit at a time." He explained further that "you could have something going on in Unit 1 and something else going on in Unit 4. And the TSC is designed to handle that situation. As is the EOF in Birmingham. In fact, that was demonstrated as part of the EOF approval process for the centralized EOF facility." Tr. at M-2157.

4.177 On behalf of the Staff, Mr. Musico indicated that the classification of an emergency situation at one unit, multiple units, or sitewide would be established to encompass the worst case. In this way, if there were an unusual event at one unit and an alert at another unit, the classification with the higher severity (i.e, alert) would apply to the entire emergency response organization. *See* Tr. at

M-2157 to -2158. With respect to a site level emergency (i.e., an event affecting multiple units simultaneously), in response to a Board inquiry Mr. Amundson stated that while it was not yet clear who would be the emergency director in the 60 minutes prior to the activation of the TSC and EOF, such details were considered at the level of the implementing procedures that are currently under development, taking into account best practices in the industry and experience from other multi-unit sites. *See* Tr. at M-2159 to -2161. Mr. Musico likewise agreed that such details are at the level of the implementing procedures, stating that the Staff has not reviewed such procedures yet since, in accord with ITAAC being imposed, they are not scheduled to be submitted for review until 180 days prior to fuel load. *See* Tr. at M-2162. In addition, Mr. Musico testified that a table in NUREG-0654/FEMA-REP-1 addresses onsite staffing, identifying "major functional areas, locations, major tasks, position, title, or expertise, the number of staff on shift, capabilities for additional staff, 30 minutes and 60 minutes." Tr. at M-2162. According to Mr. Musico, the Staff reviewed the comparable staffing table that SNC provided with the ESP application and, after exchanging requests for additional information, was satisfied that the SNC table was consistent with that in NUREG-0654/FEMA-REP-1. *See* Tr. at M-2162 to -2163.

4.178 Finally, with regard to the ITAAC that have been imposed relating to emergency planning, *see* FSER IC, at A-33 to -57, as Staff witness Mr. Musico noted, these ITAAC, which relate to a number of different planning standards, including the emergency classification system, emergency communications, emergency facilities and equipment (in particular, establishing a TSC), accident assessment, protective response, and exercises and drills, are derived from generic ITAAC developed by the Staff based on an assessment of what they perceived could not reasonably be addressed under Part 52 prior to physical construction of a plant. *See* Tr. at M-2132 to -2136. And in this regard, all but one of these emergency planning ITAAC are to be resolved prior to fuel load. The only emergency planning ITAAC that does not end at the time of fuel load is an ITAAC that involves the offsite exercise of the emergency plan, which is reviewed by the Federal Emergency Management Agency (FEMA). *See* Tr. at M-2139 to -2141. This provision, ITAAC 8.1.3, states that "[t]he exercise is completed within the specified time periods of Appendix E to 10 CFR Part 50, offsite exercise objectives have been met, and there are either no uncorrected offsite deficiencies, or a license condition requires offsite deficiencies to be corrected prior to operation above 5% of rated power." FSER at 13-135, 13-147.

4.179 Mr. Musico concluded the Staff's site emergency presentation by stating that "the NRC and FEMA findings[,] subject to the permit conditions [and] the ITAAC[,] have found that the on-site and off-site plans are adequate and that there is reasonable assurance that they can be implemented" and "the finding by the staff . . . pursuant to 10 CFR 50.47(a) is that there is reasonable

assurance that adequate protective measures can and will be taken in the event of a radiological emergency, subject of course, to the permit conditions and the ITAAC." Tr. at M-2186.

e. Board Findings Relating to Site Emergency Plan

4.180 The Board finds that the Staff's independent review of the proposed complete and integrated emergency plan and information provided by SNC, including the ETEs and the emergency planning-related ITAAC, was sufficient to conclude that the emergency plan provides an adequate basis for an acceptable state of onsite and offsite emergency preparedness, and that there is a reasonable assurance that the plan can be implemented without any significant impediments, provided that the permit conditions are adequately addressed and the ITAAC are met.

4.181 The Board concurs that the Staff's decision to limit its review to proposed Units 3 and 4 and to the common features of the plan was appropriate. The Board also concurs that, given the high level of communications and data processing capabilities that exists today, the use of a centrally located TSC for all four units is acceptable for the multi-unit site and that the proximity of the TSC to each of the control rooms still would facilitate face-to-face communications if necessary. The Board notes that the Staff performed an independent review of the proposed communication and data capabilities and found them to be redundant, dedicated, and diversified.

4.182 The Staff identified seven permit conditions that are meant to address those aspects of the emergency plan that might be impacted by the agency's review of NEI-07-01 and the ongoing AP1000 design certification revision rulemaking proceeding. The Board finds that the proposed permit conditions are necessary to allow the development of EAL schemes for Vogtle Units 3 and 4 that reflect the approved version of NEI-07-01, the final AP1000 design, and as-built plant conditions and instrumentation, and to resolve differences between the proposed Vogtle Units 3 and 4 common TSC location and the TSC location specified in the AP1000 DCD.

4.183 The Board further finds that the Staff performed an adequate review of the local, state, and federal governmental agencies' emergency planning responsibilities certifications provided by SNC as part of the complete and integrated emergency plans. The Staff found that SNC submitted the required certifications that indicate that the proposed emergency plans are practicable; that these agencies are committed to participating in any further development of the plans, including any required field demonstrations; and that these agencies are committed to executing their responsibilities under the plans in the event of an emergency.

4.184 The Board finds that the ITAAC associated with emergency planning

for both Vogtle Units 3 and 4, which include ITAAC concerning EALs; communication among response organizations; emergency facilities and equipment; accident assessment methods, systems and equipment; development of protective actions; a full participation exercise; and emergency plan implementing procedures, will provide reasonable assurance of acceptable onsite and offsite emergency preparedness by assuring that the requirements of the emergency plan have been effectively implemented. The Board notes that the full participation exercise ITAAC, which is the only ITAAC that is not to be completed prior to fuel load, requires as a prerequisite to operation above 5% of rated power that there are no uncorrected offsite exercise deficiencies.

7. Seismic Evaluation

a. Introduction

4.185 One of the crucial issues associated with an ESP is the evaluation of the seismic suitability of a site for the construction and operation of any proposed nuclear units. In this instance, Applicant SNC provided its initial seismic evaluation in its SSAR,[27] and the Staff conducted a review of seismic matters in SER §§ 2.5 and 3.7 to cover the seismic implications of both the SNC ESP and LWA requests, *see* FSER §§ 2.5, 3.7. The SNC SSAR evaluation of tectonic features in chapter 2.5.1 included a literature review, contact with local researchers, air photo interpretation, aerial reconnaissance, review of seismicity, seismic reflection profiles, and geomorphic analysis of river terraces. *See* SSAR 80A, at 2.5.1-50; Tr. at M-2239; *see also* Exh. SNC000091, at 8 (Vogtle ESP Mandatory Hearing Presentation #7, Seismic Evaluation) [hereinafter SNC Seismic Evaluation Presentation]. The Staff's FSER for Vogtle Units 3 and 4 evaluates SNC's ESP application relative to geologic, seismic, and geotechnical engineering, as well as provides the safety analysis for the LWA request, in chapters 2.5, 3.7, and 3.8 of the FSER. *See* FSER at 2-178 to -449, 3-5 to -24.

4.186 After issuing RAIs to SNC, the Staff generated its DSER, released in August 2007. Among its forty open items, twenty-two related to seismic matters.

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[27] *See* Exhs. SNC00080A ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] § 2.5.1, at 2.5.1-1 to -96 (rev. 5 Dec. 2008)) [hereinafter SSAR 80A]; SNC00080B ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] § 2.5.1, at 2.5.1-97 to -116 (rev. 5 Dec. 2008)); SNC00080C ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] § 2.5.1, at 2.5.1-117 to -131 (rev. 5 Dec. 2008)) [hereinafter SSAR 80C]; SNC00080D ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] § 2.5.1, at 2.5.1-132 to -162 (rev. 5 Dec. 2008)); SNC00080E ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] § 2.5.2 (rev. 5 Dec. 2008)) [hereinafter SSAR 80E]; SNC00080F ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] § 2.5.4 (rev. 5 Dec. 2008)); SNC00080G ([SNC], Vogtle [ESP] Application, pt. 2, [SSAR] App. 2.5E (rev. 5 Dec. 2008) (Westinghouse Elec. Co. LLC, AP1000 Vogtle Site Specific Seismic Evaluation Report (rev. 4 Oct. 2008)) [hereinafter SSAR 80G].

See [NRO/NRC], Safety Evaluation of the [ESP] Application in the Matter of [SNC] for the Vogtle [ESP] Site at 1-5 to -7 (Aug. 2007) (ADAMS Accession No. ML072250471) [hereinafter DSER]. By the time the ASER was released for ACRS review in November 2008, these seismic-related open items had been closed. *See* ASER at 1-5. The analysis in the SSAR had shown that the Vogtle site ground motion response spectra (GMRS), which is equivalent to the safe shutdown earthquake for the site, *see* FSER at 2-317, had exceeded the AP1000 DCD, revision 15 certified seismic design response spectra (CSDRS) in certain frequency ranges, *see id.* at 3-7. As a result, SNC provided a site-specific analysis to demonstrate the suitability of the site. *See id.* This analysis was reviewed by the ACRS, and was an issue in its report to the Commission. *See id.* at E-2 (Letter from William J. Shack, Chairman, ACRS, to NRC Chairman Dale E. Klein (Dec. 22, 2008)).

4.187 Because of the importance of the seismic evaluation as a factor in constructing and operating a facility in a safe and environmentally sound fashion, the Board asked SNC and the Staff to review the seismic evaluation at the mandatory hearing, including outlining the Staff's rationale for concluding that SNC's site-specific analysis met applicable agency requirements. *See* Licensing Board Safety Questions at 2-3. The SNC and Staff mandatory hearing presentations were organized around the key topic areas in section 2.5, Geology, Seismology and Geotechnical Engineering, and section 3.7, Seismic Design, in the SNC SSAR and the Staff's SER.

b. Witnesses and Evidence Presented

4.188 SNC, as the lead party, and the Staff presented a total of ten witnesses during the March 2009 evidentiary hearing on the mandatory/uncontested portion of this ESP proceeding in support of their respective positions on the adequacy of the SER seismic evaluation discussion and analysis relative to proposed Vogtle Units 3 and 4. At the evidentiary hearing, each of these witnesses provided oral testimony, in conjunction with the parties' prefiled slide presentations that were admitted as exhibits. *See* Tr. at M-2225 to -2364; SNC Seismic Evaluation Presentation; Exh. NRC000065 (NRC Staff Presentation Topic #7, Seismic Evaluation) [hereinafter Staff Seismic Evaluation Presentation].

(i) SNC WITNESS

4.189 SNC presented one witness regarding the seismic evaluation issue, Donald P. Moore. Mr. Moore, an SNC Consulting Engineer, provided overall technical oversight of SSAR section 2.5 that comprises the geology, seismology, and geotechnical portions of the ESP and LWA applications. Mr. Moore, who received a B.S. in Civil Engineering from the University of Alabama

and an M.S. in Engineering from the University of Alabama at Birmingham, has 40 years of experience in the commercial nuclear power plant industry in the areas of civil, structural, and seismic analysis and design, soil dynamic behavior, and seismic qualification of structures, systems, and components. He is a registered professional engineer and his consulting engineer position is the highest SNC engineering technical classification. Mr. Moore has been a member of various national standards and code committees on seismic analysis and design of nuclear facilities, and seismic qualification of electrical and mechanical equipment, including American Society of Civil Engineers Standard 43, which is the basis for the methodology used to develop the Vogtle site-specific ground motion response analysis. *See* Tr. at M-2234 to -2235; Exh. SNC000092 (Donald P. Moore CV).

(ii) STAFF WITNESSES

4.190 The Staff presented five witnesses in support of its ESP-related evaluation of the seismic and geologic characteristics of the Vogtle Units 3 and 4 site: Dr. Gerry Stirewalt, Senior Geologist, Division of Site and Environmental Reviews, NRC/NRO/SERD; Sarah Gonzales, NRC/NRO/SERD, Laurel Bauer, Geologist/Paleoseismologist, NRC/NRO/SERD; Bret Tegeler, Senior Structural Engineer, NRC/NRO/Division of Engineering (DE); and Dr. Carl Constantino, Professor Emeritus from the City University of New York. *See* Tr. at M-2297 to -2333. In addition, Mr. Tegeler, Dr. John Ma, NRC/NRO/DE, Dr. Constantino, and Christian J. Araguas, NRC Lead Project Manager for the Vogtle Units 3 and 4 ESP application, presented evidence regarding the Staff's seismic evaluation of the SNC LWA request.[28] *See* Tr. at M-2334 to -2361.

4.191 Dr. Stirewalt received a Bachelor of Arts (B.A.) degree in Geology and Mathematics from Catawba College and a Ph.D. in Structural Geology from the University of North Carolina at Chapel Hill. His professional experience includes 4 years of teaching geology at the university level, 6 years with Ebasco Overseas Corporation and Ebasco Services, Inc., on geologic and geotechnical site characterization projects for siting nuclear and fossil-fuel power plants, 9 years with Battelle Memorial Institute providing support for DOE efforts associated with siting an HLW repository; 14 years with SRI and Mandex, Inc., providing support to the Staff regarding, among other things, the geologic, tectonic, and

[28] Dr. Weijun Wang, Senior Geotechnical Engineer, NRC/NRO/SERD, *see* Exh. NRC000084 (CV of Weijun Wang), also was seated and sworn in as a witness as part of the Staff panel on seismic matters, but did not provide any oral testimony relative to this subject. In addition, Mark D. Notich, Environmental Project Manager for the Vogtle ESP application, whose background and credentials have previously been described in section IV.A.1.b, *supra,* was sworn and presented testimony regarding the environmental impact review process as it relates to seismic matters, which he indicated were deferred to the safety review process. *See* Tr. at M-2362 to -2363.

volcanic characteristics of the potential DOE HLW repository site at Yucca Mountain, Nevada; and 4 years with the Staff engaged in stakeholder outreach efforts associated with the Yucca Mountain licensing process and, most recently, leading teams involved in the geologic and geotechnical safety reviews of ESP and COL applications. *See* Tr. at M-2297; Exh. NRC000083 (Gerry L. Stirewalt, Ph.D., P.G., SPQ).

4.192 Ms. Gonzalez has a B.S. in Geological Sciences from Canterbury University, New Zealand, and an M.S. in Geophysics from San Diego State University. Before joining the NRC, Ms. Gonzalez worked for 3 years as a seismologist with the SRI where, among other things, she provided support for Staff reviews regarding earthquake hazards and seismic design criteria for the potential HLW repository at Yucca Mountain, Nevada. Since joining the NRC in 2006, she has been responsible for reviewing ESP and COL applications and preparing SER sections related to vibratory ground motion and seismic instrumentation. *See* Tr. at M-2303; Exh. NRC000082 (Sarah H. Gonzalez SPQ).

4.193 Ms. Bauer has a B.A. in Anthropology, a B.S. in Geology, and an M.S. in Earth Sciences, all from the University of Memphis. Prior to joining the NRC, Ms. Bauer worked as a USGS contract geologist responsible for coordinating and assisting on paleoseismology and earthquake hazard studies in the central United States. Since joining the NRC in 2007, she has been responsible for reviewing ESP and COL applications and preparing SER sections related to regional and site geology, surface faulting, and paleoseismology. *See* Tr. at M-2306 to -2307; Exh. NRC000081 (Laurel M. Bauer SPQ).

4.194 Mr. Tegeler has a B.S. in Mechanical Engineering from the University of Maryland, College Park, and an M.S. in Structural Engineering from George Washington University. Prior to joining the Staff in 2002, Mr. Tegeler had some 11 years' experience with the United States Navy, the United States Secret Service, and private consultant DLL Omni Engineering, analyzing blast effects and designing ships and vehicles to account for such effects. While with the NRC, Mr. Tegeler served for 5 years with RES providing technical guidance on the effects of aircraft impacts and terrorist attacks on nuclear power plant structures and spent fuel pools and, most recently, has worked in NRO reviewing seismic design parameters and seismic system analyses associated with applications for new reactor design certifications, ESPs, and COLs. *See* Tr. at M-2315, M-2334; Exh. NRC000087 (Bret Andrew Tegeler, P.E., SPQ).

4.195 Dr. Constantino holds a Bachelor of Civil Engineering degree from City College of New York, a Master of Civil Engineering degree from Columbia University, and a Ph.D. in Soil Mechanics and Foundations from the Illinois Institute of Technology. He has served as a consultant to both NRC and DOE for the last 40 years on a variety of seismic issues and has been involved in the development of standards associated with the seismic response of reactor and underground waste storage facilities as well as with seismic safety evaluations

and audits of particular facilities, including new and existing reactor facilities, the Waste Isolation Pilot Project, the Yucca Mountain facility, and the SRS. *See* Exh. NRC000085 (Carl J. Costantino CV).

4.196 Dr. Ma has B.S., M.S., and Ph.D. degrees in Civil Engineering from, respectively, Chung Yang University, Taiwan, China, the University of Missouri at Rolla, and the University of Texas. Since 1974, first for the Atomic Energy Commission and subsequently for the NRC, Dr. Ma has been involved in the review, audit, and inspection of nuclear power plant structures. *See* Exh. NRC000086 (Resume of John S. Ma).

4.197 The qualifications of Mr. Araguas were summarized previously in connection with the hearing presentation on radiological impacts. *See supra* section IV.A.2.b.

4.198 Based on the foregoing, and the respective background and experience of the proffered witnesses, the Board finds that each of these witnesses is qualified to testify as an expert witness on the subject of the seismic evaluations associated with the ESP and LWA applications for proposed Vogtle Units 3 and 4.

c. Regulations and Guidance Relating to Seismic Evaluation

4.199 Under 10 C.F.R. § 52.17(a)(1)(vi), an applicant's SSAR must include

> [t]he seismic . . . and geologic characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated.

In providing this information, applicants must conform to the requirements of 10 C.F.R. § 100.23, which stipulates that the information provides

> the principal geologic and seismic considerations that guide the Commission in its evaluation of the suitability of a proposed site and adequacy of the design bases established in consideration of the geologic and seismic characteristics of the proposed site, such that, there is a reasonable assurance that a nuclear power plant can be constructed and operated at the proposed site without undue risk to the health and safety of the public.

Among other things, this provision, in conjunction with Appendix A to 10 C.F.R. Part 100, sets forth in detail the geologic, seismic, and engineering characteristics as well as the siting factors and criteria that govern an applicant's seismic suitability showing. Additionally, the Staff provides further guidance in the form of Regulatory Guides 1.70, 1.165, 1.208, and SRP § 2.5.1, that detail the matters

that generally must be addressed in, and how the Staff will conduct its review of, an applicant's seismic evaluation of a proposed nuclear power reactor site.[29]

e. Evidentiary Presentation Regarding ESP Seismic Evaluation

(i) SEISMIC-RELATED BACKGROUND

4.200 The proposed Vogtle Units 3 and 4 site is located near Waynesboro, in Burke County, Georgia, just to the southwest of the Savannah River. *See* FSER at 2-1. The Vogtle Unit 3 site is approximately 1700 feet west of Vogtle Unit 2. According to SNC witness Mr. Moore, the geology and geotechnical soil conditions associated with proposed Vogtle Units 3 and 4 are identical in all material respects to the conditions for Vogtle Units 1 and 2. Moreover, Mr. Moore indicated, the VEGP site is directly across the river from DOE's SRS, where there have been a significant number of geological, seismological, and geotechnical studies performed, including multiple deep borings and fault identification studies. Much of its site information, Mr. Moore testified, was shared with SNC as part of the Vogtle ESP site investigation and proved to be very useful in supporting the Vogtle ESP. *See* Tr. at M-2238 to -2239. Further, Mr. Moore testified that, due to the technical complexity of the matters at issue in section 2.5 of the SSAR, SNC formed a Review and Advisory Panel of distinguished outside experts to review the work at key stages and to provide comments and recommendations. *See* Tr. at M-2237.

(ii) PEN BRANCH FAULT

4.201 A tectonic feature of significant concern during the seismic assessment associated with the Vogtle ESP application was a long underground fault, called the Pen Branch fault, that was known to underlie the SRS and was expected to extend under the Vogtle site. *See* FSER at 2-204 to -205. Although the fault previously had been determined not to be a capable seismic source relative to the SRS, *see* Tr. at M-2240, both SNC and the Staff considered it important to assess its potential impact on the Vogtle site.

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[29] *See* [OSD, NRC], Regulatory Guide 1.70, Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants, LWR ed., § 2.5 (rev. 3 Nov. 1978) (pt. I, ADAMS Accession No. ML011340072); [RES, NRC], Regulatory Guide 1.165, Identification and Characterization of Seismic Sources and Determination of Safe Shutdown Earthquake Ground Motion (Mar. 1997) (ADAMS Accession No. ML003740084); [RES, NRC] Regulatory Guide 1.208, A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion (Mar. 2007) (ADAMS Accession No. ML070310619); NUREG-0800, § 2.5.1 (rev. 4 Mar. 2007) (ADAMS Accession No. ML070730464).

4.202 According to SNC witness Mr. Moore, SNC performed a seismic reflection survey to pinpoint the location of the Pen Branch fault under the Vogtle site. *See* Tr. at M-2240; SNC Seismic Evaluation Presentation at 9-10. The fault exists in the deep bedrock at the interface between the crystalline basement rock to the northwest, and the Triassic basin rock to the southeast. *See* Tr. at M-2240 to -2241. The upper surface of these rock structures is about a thousand feet below the Vogtle site grade, and the upper tip of the fault fracture line is several hundred feet below grade. *See* Staff Seismic Evaluation Presentation at 6. Staff witness Dr. Stirewalt testified that the SNC survey shows that the stratigraphic layers above the fault, such as the Blue Bluff marl layer, have not been deformed by the fault. Moreover, according to Dr. Stirewalt, since it is known from radiometric dating that these strata are about 33.7 million years old, this provides strong evidence that the most recent fault movement happened more than 33.7 million years ago. *See* Tr. at M-2300.

4.203 Staff witness Dr. Stirewalt also testified that Regulatory Guide 1.208 specifies that faults that have not moved within the last 1.8 million years (the cutoff for the Quaternary Period in age) are defined to be noncapable. *See* Tr. at M-2300. He testified as well that SNC's careful mapping of the site surface, backed by its own field investigation, showed no deformation or distortion in the area where the fracture line would have intersected the surface. According to Dr. Stirewalt, this also provided good evidence that the Pen Branch fault is in fact pre-Quaternary in age, and therefore not a capable fault. *See* Tr. at M-2301 to -2302.

(iii) VIBRATORY GROUND MOTION

4.204 SNC witness Mr. Moore outlined the approach used by SNC to develop the site-specific probabilistic seismic hazard analysis (PSHA) utilized to determine the safe shutdown earthquake (SSE) vibratory ground motion. *See* Tr. at M-2264 to -2268; SNC Seismic Evaluation Presentation at 18; *see also* FSER at 2-236 to -239. SNC followed procedures recommended in Regulatory Guide 1.165, albeit while developing the SSE GMRS using the performance-based approach described in Regulatory Guide 1.208 (rather than the reference-probability approach in Regulatory Guide 1.165). Per Regulatory Guide 1.165, SNC used the 1986 Electric Power Research Institute (EPRI) seismic source and ground motion models for the central and eastern United States as the basis for their ground motion calculations. Given that the EPRI models were based on data taken up through 1984, Regulatory Guide 1.165 also recommends a review and update, if necessary, of both models to account for data taken since that time. *See id.* at 2-236. After a review, SNC opted to update both models. The major effort involved updating the so-called Charleston Seismic Source. *See* Tr. at M-2264 to -2265. The Charleston seismic zone is centered near the east coast of South

Carolina, *see* SNC Seismic Evaluation Presentation at 19, about 100 miles from the Vogtle site, and is the dominant seismic source for the site. *See* Tr. at M-2265, M-2269. SNC updates to the EPRI source model, which are summarized in FSER § 2.5.2.2.2, *see* FSER at 2-240 to -248, involved significant changes in geometry, maximum magnitudes, and the recurrence interval for maximum magnitude earthquakes. The recurrence interval was reduced from several thousand years to less than one thousand years, which has the effect of increasing the seismic hazard. *See* Tr. at M-2265 to -2266; Staff Seismic Evaluation Presentation at 9.

4.205 Staff witnesses sought to provide evidence that the Staff had carefully reviewed SNC's updating of the EPRI source model. Specific Staff questions about the model resulted in several open items in the DSER. *See* DSER at 1-5, 1-6. For example, the Staff questioned whether SNC had provided adequate paleoliquefaction evidence to rule out the occurrence of large inland earthquakes. The Staff was also concerned whether one of the teams providing input into the original EPRI source model had adequately characterized the hazard. Finally, the Staff questioned whether the potential impact of the Eastern Tennessee Seismic Zone (ETSZ) had been properly accounted for. According to the Staff witnesses, based on additional information and analyses provided by SNC, and in the case of the ETSZ, additional sensitivity studies performed by the Staff, the open items were all closed. *See* Tr. at M-2309 to -2313; Staff Seismic Evaluation Presentation at 13-18.

4.206 With respect to upgrading the ground motion model, Mr. Moore testified that SNC used an updated version developed by a 2004 EPRI-sponsored study. *See* Tr. at M-2265. This model was used to propagate the ground motion from the Charleston source, through the deep bedrock to the Vogtle site. Since Vogtle is a deep soil site, where the hard bedrock is more than a thousand feet below grade, site amplification factors were determined and used to calculate the uniform hazard spectra at the site surface. *See* Tr. at M-2265, M-2267. Ultimately, according to Mr. Moore, SNC calculated the SSE surface GMRS using the methodology specified in Regulatory Guide 1.208. *See* Tr. at M-2268. The horizontal and vertical GMRS results, which are set forth in Figure 2.5.2-44b in the SSAR, *see* SSAR 80E, at 2.5.2-153; SNC Seismic Evaluation Presentation at 23, show that the peak surface ground acceleration at 100 hertz (Hz) is 0.266*g*. *See* Tr. at M-2271.

4.207 The Staff witnesses testified that, following its review, the Staff concluded that the Vogtle GMRS was an adequate representation of the regional and local seismic hazard and met the applicable requirements of 10 C.F.R. Parts 52 and 100. Further, the Staff found that the GMRS values are within those that new reactor designs are generally engineered to withstand, but noted that the appropriateness of the specific design proposed for the Vogtle site will be determined at the COL stage when the detailed design of safety systems is

available. *See* Tr. at M-2313 to -2314; Staff Seismic Evaluation Presentation at 20.

4.208 Additionally, when the GMRS calculated for the site is compared to the AP1000 CSDRS, it was found that the GMRS is not bounded by the CSDRS. *See* SSAR 80G, at 14 (fig. 3-4). This is an issue for consideration relative to the LWA application, as is discussed in section IV.A.7.f, below.

(iv) SURFACE FAULTING

4.209 SNC's evaluation of potential surface faulting is provided in section 2.5.3 of the SSAR, while the Staff's review of this topic is in section 2.5.3 of the FSER. *See* FSER at 2-326. Based on its detailed review, the Staff concluded that SNC had provided a thorough and accurate characterization of surface and near-surface faulting and nontectonic deformation as required by 10 C.F.R. § 100.23(c)-(d). The Staff also stated that the SSAR provided an adequate basis to conclude that there is no evidence that surface faulting and deformation present a hazard for the site area. *See id.* at 2-343.

4.210 During the mandatory hearing, Staff witness Dr. Stirewalt made note of a DSER open item relating to what were referred to as injected sand dikes at the site. *See* Tr. at M-2318; Staff Seismic Evaluation Presentation at 21. As Dr. Stirewalt indicated, the Staff determined that SNC initially failed to demonstrate that these features were not associated with seismically induced liquefaction. In response, SNC provided field evidence to demonstrate that the dikes were most likely formed by sediment collapse overlying minor dissolution features. The Staff subsequently determined this evidence was sufficient to close the open item. *See* Tr. at M-2318 to -2320.

(v) STABILITY OF SUBSURFACE MATERIALS

4.211 Information on the stability of subsurface materials, i.e., those materials located directly under the proposed new Vogtle units, and SNC efforts to address stability issues regarding those materials, is presented in section 2.5.4 of the SSAR and SER. *See* FSER at 2-344. SNC witness Mr. Moore testified at the hearing that this information was required for developing the PHSA, *see* Tr. at M-2270, as well as to support the LWA and COL applications. *See* Tr. at M-2248 to -2249.

4.212 SNC witness Mr. Moore described four major layers that underlie the Vogtle site. The top layer, referred to as the upper sands or the Barnwell Group, extends down an average of 90 feet from the surface. These sands are quite variable, ranging from very loose to very dense. Near the bottom of these sands is what is called the Utley limestone. It is very porous, with cavities caused by dissolution. The layer below the Barnwell Group is called the Blue Bluff marl or the Lisbon Formation. It has an average thickness of 76 feet. It is a very hard,

slightly sandy, cemented, calcareous silt/clay layer. The third layer down is called the lower sands or the Coastal Plain Deposits and consists of about 900 feet of dense sands. The bottom layer is the Dunbarton Basin bedrock, the top of which is about 1050 feet below the surface. *See* Tr. at M-2249 to -2250; SNC Seismic Evaluation Presentation at 12-14; SSAR 80C, at 2.5.1-124 (fig. 2.5.1-41).

4.213 To improve the stability of the materials at the foundation level of the nuclear island for each facility, Mr. Moore testified that SNC plans to excavate the upper sands under Units 3 and 4 all the way down to the Blue Bluff marl layer. The excavated material would then be replaced with an engineered compacted granular backfill. This was also done in connection with the construction of existing Units 1 and 2. Mr. Moore testified that the reason for removing the Barnwell Group layer was to eliminate potential subsurface stability problems, and the potential for seismic liquefaction. *See* Tr. at M-2250 to -2252; SNC Seismic Evaluation Presentation at 13.

4.214 Also in this regard, SNC witness Mr. Moore described the construction of a test pad at which 20 feet of a hill at the site was excavated and backfilled employing the same material and placement procedures used in the construction of Units 1 and 2. Tests were then performed to document the static and dynamic properties of the backfill, including an important test that involved measuring the shear wave velocity, which is considered a good indicator of adequate soil. *See* Tr. at M-2257, M-2259. The AP1000 DCD requires a minimum shear wave velocity of at least 1000 feet per second (ft/s) at the foundation depth (i.e., 40 feet below the surface for Units 3 and 4). Mr. Moore testified that measurement results indicated the 1000-ft/s requirement can be achieved. *See* Tr. at M-2258 to -2260; SNC Seismic Evaluation Presentation at 17. He also stated that ITAAC have been established to ensure that the actual backfill to be emplaced for Units 3 and 4 will meet the design requirements necessary to ensure this minimum sheer wave velocity requirement is reached. *See* Tr. at M-2260.

4.215 The Staff witnesses also sought to present extensive evidence at the hearing regarding the Staff's review of the SNC analysis and its conclusions relating to subsurface materials stability. At the time the DSER was released in August 2007, the Staff had included open items relating to field and laboratory testing of subsurface materials, the measurements of shear-wave velocity and the development of soil degradation and damping ratio curves. *See* Tr. at M-2321 to -2322, M-2325 to -2328; Staff Seismic Evaluation Presentation at 22. The Staff felt that SNC had not initially provided sufficient field data and laboratory tests to determine the reliability of the subsurface soil index properties. See Staff Seismic Evaluation Presentation at 23. SNC performed additional field and laboratory investigations to address the Staff's concerns. *See* Tr. at M-2323 to -2324; Staff Seismic Evaluation Presentation at 23-26. Staff witness Dr. Costantino provided examples of the types of additional tests performed. He testified that, while there were only fourteen borings performed originally, SNC ultimately conducted

174, including forty-two borings that extended down through the Blue Bluff marl layer and into the dense sands below. According to Dr. Consantino, SNC more than doubled the number of cone penetrometer tests (CPTs) to provide additional velocity information for material that could be used as backfill material. *See* Tr. at M-2323 to -2324; SNC Seismic Evaluation Presentation at 24. Dr. Consantino indicated the Staff also was concerned that SNC had not provided sufficient shear-wave velocity measurements, nor performed dynamic testing to verify dynamic material property curves, both leading to open items in the DSER. SNC carried out sufficient additional testing and analyses to close these open items. *See* Tr. at M-2325 to -2328; Staff Seismic Evaluation Presentation at 25, 27. The subsurface material testing and analyses are summarized in FSER § 2.5.4.1. *See* FSER at 2-344 to -356.

4.216 The Staff ultimately concluded that SNC had adequately determined the engineering properties of subsurface soils, provided sufficient information to characterize the shear-wave velocity profiles, demonstrated static and dynamic stability of the site and structural backfill materials, and determined that subsurface soils and backfill materials are not subject to liquefaction. *See* Tr. at M-2331 to -2333; Staff Seismic Evaluation Presentation at 35.

4.217 The Staff had also identified twelve COL action items in the DSER. *See* Staff Seismic Evaluation Presentation at 22. All of these action items were resolved through the additional information SNC provided in support of the LWA request as SSAR revisions. *See* Tr. at M-2330; Staff Seismic Evaluation Presentation at 30.

f. Geotechnical and Structural Engineering Review of Limited Work Authorization

4.218 As set forth in its August 2007 LWA request, the scope of the LWA involves soil foundation (engineered backfill) work, placement of a concrete mud mat and waterproofing membrane and placement of a mechanically stabilized earth (MSE) wall. *See* Staff Seismic Evaluation Presentation at 40; FSER at i. The concrete floor of the nuclear island structure is to be poured directly on the mud mat, while the subsurface portion of the walls will be poured up against the MSE wall. *See* Tr. at M-2276 to -2277; SNC Seismic Evaluation Presentation at 25.

4.219 With regard to the engineered backfill, the Staff witnesses indicated that there are two ITAAC to ensure that the as-built backfill will meet certain seismic specifications. First, the backfill must meet a compaction criterion of 95% modified Proctor compaction. *See* Staff Seismic Evaluation Presentation at 47-49; *see also* Tr. at M-2340 to -2341. Second, the as-built backfill at and below the nuclear island foundation depth must have a shear-wave velocity of at least 1000 ft/s. *See* Tr. at M-2341; Staff Seismic Evaluation Presentation at 49-50. The Staff

concluded that SNC had developed adequate engineered backfill specifications and had established ITAAC that are adequate to ensure that these specifications will be met during actual placement of the backfill. *See* Tr. at M-2341 to -2342; Staff Seismic Evaluation Presentation at 51.

4.220 The emplacement of the mud mat is the subject of another ITAAC. SNC witness Mr. Moore testified that the mud mat is constructed by placing 6 inches of concrete on the engineered backfill material, spraying on a waterproofing membrane, and then placing another 6 inches of concrete over the membrane. *See* Tr. at M-2277. Staff witness Mr. Tegeler testified that to meet the requirements specified in the AP1000 DCD, the coefficient of friction between the waterproofing membrane and mud mat concrete must be at least 0.7. *See* Tr. at M-2349. Mr. Tegeler and Dr. Ma also explained that while preliminary data from a vendor indicate this requirement can be met, the ITAAC requires that realistic onsite testing be performed to ensure the requirement is met in the as-built mud mat. *See* Tr. at M-2350 to -2351.

4.221 Another important parameter in the LWA seismic evaluation is the foundation input response spectra (FIRS). SNC witness Mr. Moore and the Staff witnesses explained that this is similar to the GMRS, except it provides the seismic input at the base of the nuclear island foundation, 40 feet below grade. *See* Tr. at M-2271 to -2272; Staff Seismic Evaluation Presentation at 41. Mr. Moore testified that, as was the case with the GMRS, the FIRS also exceeded the AP1000 CSDRS in certain frequency ranges. *See* Tr. at M-2280; SNC Seismic Evaluation Presentation at 27. Therefore, SNC performed a site-specific analysis to attempt to show that the site seismic demand does not exceed the AP1000 certified design capability. *See* Tr. at M-2283. This site-specific analysis, which is documented in SSAR appendix 2.5E, *see* Tr. at M-2286, was described at the hearing by SNC witness Mr. Moore as a two-dimensional (2-D) soil-structure interaction (SSI) model used to evaluate the seismic stability of the nuclear island in terms of potential sliding or overturning, *see* Tr. at M-2283 to -2284. He stated that the model was the standard AP1000 2-D seismic model, except that it used Vogtle ground motion input, rather than the certified design ground motion, and the Vogtle site soil shear-wave velocity profiles. *See* Tr. at M-2285; SNC Seismic Evaluation Presentation at 29. The results of this analysis from SSAR appendix 2.5E, as presented by Mr. Moore at the hearing, showed that the site-specific calculations were bounded by the AP1000 certified design results. *See* Tr. at M-2286 to -2287; SNC Seismic Evaluation Presentation at 30.

4.222 Seismic stability safety factors also were calculated by SNC and compared to established limits in appendix 2.5E of the SSAR, the results of which Mr. Moore summarized at the hearing. The safety factor is defined as the ratio of seismic capacity to seismic demand (C/D). *See* Tr. at M-2278 to -2279; SNC Seismic Safety Evaluation Presentation at 26. According to Mr. Moore, the SNC analysis predicted a minimum sliding C/D of 1.83, and a minimum

overturning C/D of 2.45. Both of these exceed the stated safety margin lower limit of 1.1. The static bearing C/D was calculated to be 11.9, which also exceeds by a considerable degree the American Society of Civil Engineers-acceptable design guide for foundations of about 3.0. The dynamic bearing C/D of 5.6 likewise is greater than a typical safety factor for dynamic bearing of 2.25. *See* Tr. at M-2292 to -2293; SNC Seismic Safety Evaluation Presentation at 31. As a consequence, Mr. Moore concluded that, from SNC's perspective, "the backfill is fully acceptable, and able to support the nuclear island with a significant margin. And, therefore, supports the LWA." Tr. at M-2293.

4.223 For its part, according to the Staff witnesses, the Staff based its LWA-related seismic structural engineering review on SRP §§ 3.7.1, 3.7.2, and 3.8.5. *See* Tr. at M-2343; *see also* SRP §§ 3.7.1 (rev. 3 Mar. 2007), 3.7.2 (rev. 3 Mar. 2007), 3.8.5 (rev. 2 Mar. 2007) (ADAMS Accession Nos. ML070640306, ML070640311, ML070550055). The results of these reviews are summarized in the three counterpart sections in the FSER. With respect to FSER § 3.7.1, which covers seismic design parameters, including vibratory ground motion, critical damping, and supporting media pertaining to SSI modeling, *see* Staff Seismic Evaluation Presentation at 54, Staff witness Mr. Tegeler testified that, while an alternative method was used by SNC to develop the FIRS, the method resulted in a conservative estimate for the horizontal seismic demand. He stated that the Staff also concluded that the FIRS satisfied the 10 C.F.R. Part 50, Appendix S requirement that the free field motion at the foundation elevation exceeds a minimum peak ground acceleration value of 0.1*g*. Mr. Tegeler further testified that, relative to the Staff's LWA review, the Staff found the critical structural damping values used in the SNC SSI analysis were consistent with regulatory guidance, specifically Regulatory Guide 1.61, *see* [RES, NRC], Regulatory Guide 1.61, Damping Values for Seismic Design of Nuclear Power Plants (rev. 1 Mar. 2007) (ADAMS Accession No. ML070260029), and that the parameters used to characterize supporting media were consistent with the measured values. *See* Tr. at M-2347 to -2348.

4.224 FSER § 3.7.2 documents the Staff's review of the seismic systems analysis, including the model description and the SSI analysis. *See* Staff Seismic Evaluation Presentation at 54. Mr. Tegeler testified that the Staff found that the use of the 2-D SSI computer model was acceptable for the evaluation of sliding stability and bearing pressure demands. He noted that the Staff also compared some of SNC's SSI analysis results with the AP1000 DCD (revisions 16 and 17) soft soil case and found them to be similar. Finally, based on independent Staff calculations, the Staff determined that the maximum seismic base shear forces were acceptable. *See* Tr. at M-2348 to -2349; Staff Seismic Evaluation Presentation at 59-60.

4.225 FSER § 3.8.5 concerns the analysis of foundation stability. *See* Staff Seismic Evaluation Presentation at 54. Mr. Tegeler testified that the Staff reviewed

the maximum horizontal forces and maximum friction forces below the mud mat and concluded that the nuclear island structure will not slide during the safe shutdown earthquake. He also testified that the Staff concluded that the minimum safety factor with respect to failure of the dynamic soil bearing capacity during an SSE is 2.34. *See* Tr. at M-2356 to -2357.

4.226 In summary, Mr. Tegeler declared that, relative to its LWA seismic analysis, SNC had adequately developed the seismic design parameters and met the applicable regulatory requirements. He stated that, with respect to the seismic systems analysis, SNC had adequately performed the site-specific SSI analysis relative to determining the maximum seismic demands and likewise had met the applicable regulatory requirements. He further testified that, in its foundation analysis, SNC had demonstrated that the mud mat and waterproofing membrane are adequate, and that the nuclear island foundation is stable during an SSE event. *See* Tr. at M-2357 to -2358; Staff Seismic Evaluation Presentation at 64. Lastly, Mr. Araguas indicated that the Staff's evaluation of in-structure seismic response associated with LWA activities will be done as part of its ITAAC review during the COL review. *See* Tr. at M-2358 to -2362.

g. Board Findings Relating to Seismic Evaluation

4.227 The Board finds that the written record and mandatory hearing presentations clearly indicate the Staff conducted a thorough review of SNC's evaluation of seismic factors relevant to Vogtle Units 3 and 4, including LWA-associated activities. As is evidenced by the large number of seismic-related RAIs and DEIS open items pursued by the Staff, the Staff examined every major aspect of SNC's seismic analysis to ensure that regulatory requirements were met. The Staff made site visits, requested additional onsite measurements, checked input parameters, and performed relevant independent calculations. The Board further finds that SNC's approach of removing the Barnwell Group layer and replacing it with engineered backfill provides a sound basis for meeting seismic requirements at the site. As a consequence, we conclude that a preponderance of the evidence in the record before us supports the conclusion that the site, as modified with the proposed backfill, has seismic characteristics that meet the agency's regulatory requirements so as to support issuance of an ESP and an LWA.

4.228 Relative to the Staff's review of the technical information presented in the Vogtle ESP application pertaining to the LWA activities being requested, the Staff evaluated SNC's seismic analysis and design, including the design ground motion, the foundation input response spectra, and the supporting media for seismic design. The Staff also reviewed the applicable seismic system analyses, including the foundation stability of the nuclear island against sliding and overturning, the maximum dynamic bearing pressures developed beneath the foundation base mat, and the horizontal seismic shear stresses developed between

the base mat and the top of the mud mat, between the two halves of the mud mat through the waterproofing membrane, and between the bottom of the mud mat and the foundation soils. The Board finds that the Staff's review was sufficient to conclude that SNC adequately demonstrated that it met the applicable LWA requirements associated with the stability of subsurface materials and foundations for the requested LWA activities at the Vogtle site.

4.229 SNC also has provided ITAAC for LWA activities associated with backfill and the waterproof membrane. The LWA ITAAC charts are on FSER page A-32. The backfill ITAAC for the LWA includes requirements that the backfill material underneath seismic category 1 structures be installed to meet a minimum of 95% modified proctor compaction, and that the shear wave velocity be greater than or equal to 1000 ft/s at the depth of the nuclear island foundation and below. The waterproof membrane ITAAC requires that the friction coefficient to resist sliding is 0.7 or higher. The Board finds that the proposed ITAAC for the LWA are adequate to ensure that the installation of the foundation for the nuclear island will be in accordance with NRC regulations and guidance and will provide adequate margins of safety.

8. Severe Accident Mitigation Design Alternatives

a. Introduction

4.230 Severe accident mitigation alternatives (SAMAs), encompass potential plant modifications, sometimes referred to as severe accident mitigation design alternatives (SAMDAs), as well as plant procedural changes or training program changes that can reduce the risks of severe accidents. *See* ESRP at 7.3-1. Section 7.2 of SNC's ER considers the impact of severe accidents, *see* ER at 7.2-1 to 7.2-8, and section 7.3 of the ER addresses SAMAs and SAMDAs, *see id.* at 7.3-1 to 7.3-6.[30] Relative to the Staff's review, FEIS § 5.10.2 addresses severe accident impacts, *see* FEIS 1B, at 5-80 to 5-89, while FEIS § 5.10.3 considers SAMAs, including SAMDAs, *see id.* at 5-89 to 5-91. Both the Applicant's ER and the Staff's FEIS conclude that there are no cost-effective SAMDAs for the VEGP site. *See* ER at 7.3-1; FEIS 1B, at 5-90. Procedural and training SAMAs are to be addressed when the plant design is finalized and procedures are developed. *See* ER at 7.3-4; FEIS 1B, at 5-91.

4.231 The Board sought further information regarding the site-specific SAMDA analysis that formed the basis of the conclusion in the Staff's FEIS that there were no cost-beneficial design alternatives required to be implemented at the Vogtle ESP site. The Board also sought information on how uncertainties

[30] Chapter 7 of the ER, which was not among the parts of the ER proffered for admission into evidence, can be found under ADAMS Accession No. ML091540840.

were accounted for in this analysis and the major differences between the site-specific analysis and the analysis in the AP1000 DCD. *See* Licensing Board Memorandum and Order (Memorializing Results of Prehearing Conference and Providing Additional Administrative Directives) (Feb. 4, 2009) at 7 (unpublished).

b. Witnesses and Evidence Presented

4.232 Information relative to the Board's review of the Staff's SAMDA assessment came principally from oral testimony, and the associated presentation slides, of Staff witness James V. Ramsdell, Jr. *See* Tr. at M-2365 to -2374; Exh. NRC000066 (NRC Staff Presentation Topic #8: Severe Accident Mitigation Design Alternatives) [hereinafter Staff SAMDA Presentation]. Mark Notich was also available to respond to Board questions on the subject of SAMDAs at the hearing. *See* Tr. at M-2365. Applicant SNC did not provide testimony on this topic.

4.233 Mr. Ramsdell's qualifications are discussed in connection with radiological impacts. *See supra* section IV.A.2.b(ii). Mr. Notich's qualifications are discussed above in connection with water impacts. *See supra* section IV.A.1.b.

4.234 Based on the respective qualifications and experience of the proffered witnesses, the Board finds Mr. Ramsdell and Mr. Notich qualified to testify as expert witnesses regarding the SAMA/SAMDA analysis relative to the Vogtle ESP application.

c. Regulations and Guidelines Relating to SAMDA Analysis

4.235 Severe accidents are defined as accidents "in which substantial damage is done to the reactor core whether or not there are serious offsite consequences." Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants, 50 Fed. Reg. 32,138, 32,138 (Aug. 8, 1985). NRC safety and environmental regulations require consideration of the consequences of severe accidents. Section 52.17 of Title 10 of the *Code of Federal Regulations* requires an ESP applicant to submit a safety assessment that includes an analysis of a fission product release from an accident, "using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents." 10 C.F.R. § 52.17(a)(1)(ix). The fission product releases in question are associated with accidents that have "generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products." *Id.* § 52.17(a)(1)(ix) n.1. Thus, implicitly, some discussion of SAMAs is required under the safety regulations.

4.236 On the environmental side, NEPA § 102(2)(C) "implicitly requires

agencies to consider measures to mitigate [environmental] impacts." [NEI]; Denial of Petition for Rulemaking, 66 Fed. Reg. 10,834, 10,836 (Feb. 20, 2001); *see also Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 107-08 (2009). NRC regulations also require an applicant's ER to include an analysis of "alternatives available for reducing or avoiding adverse environmental effects." 10 C.F.R. § 51.45(c). NRC's policy statement on Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969, 45 Fed. Reg. 40,101 (June 13, 1980), specifically provides for consideration of measures to prevent or to mitigate the consequences of severe accidents in the ER and EIS of certain categories of nuclear plants. *See id.* at 40,103. The agency's 1985 severe accident policy statement, 50 *id.* at 32,138, provides for consideration of severe accidents for new plant designs.

4.237 ESRP §§ 7.2 and 7.3 provide further guidance on the evaluation of severe accidents and SAMAs. *See* ESRP at 7.2-1 to 7.3-8. The scope of SAMA analysis includes the identification and evaluation of design alternatives, procedural modifications, and training program changes that reduce the radiological risk from a severe accident by preventing substantial core damage or by mitigating the impacts by limiting releases from containment in the event that substantial core damage occurs. *See id.* at 7.3-1. As was noted above, SAMDAs, which are limited to potential design changes, are a subset of SAMAs; however, the terms are sometimes used interchangeably. *See id.*

4.238 In evaluating ESP applications, where detailed design information is not available, the Commission may defer resolution of SAMA issues until the 10 C.F.R. Part 50 construction permit (CP) or 10 C.F.R. Part 52 COL stage. *See North Anna ESP,* CLI-07-27, 66 NRC at 237 & n.126. SNC, however, has selected the AP1000 certified design for proposed Vogtle Units 3 and 4. Because NRC regulations require design certification applicants to address SAMDAs, *see, e.g.,* 10 C.F.R. §§ 51.30(d), 51.55(a), enough information was available, through the AP1000 DCD, to conduct a limited SAMDA analysis for the Vogtle ESP application.

4.239 Under the AP1000 revision 15 design certification rule, "[a]ll environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's [environmental assessment (EA)] for the AP1000 design and Appendix 1B of the generic DCD, for plants referencing this appendix whose site parameters are within those specified in the severe accident mitigation design alternatives evaluation" are considered resolved. *Id.* Part 52, App. D, § VI.B.7. Thus, because the Vogtle ESP application references the AP1000 certified design, if the VEGP site parameters are within those of the AP1000 DCD, the AP1000 SAMDA analysis resolves the issue of SAMDAs for the Vogtle ESP application.

d. Evidentiary Presentation

4.240 Initially, Staff witness Mr. Ramsdell pointed out that the option to include a SAMDA/SAMA analysis at the ESP stage is provided in ESRP § 7.3. Nonetheless, according to Mr. Ramsdell, the Vogtle ESP is the first ESP application to do so because it refers to a specific plant design, in contrast to the earlier ESPs that used a plant parameter envelope approach for which a SAMDA analysis would not be applicable. *See* Tr. at M-2367. In response to a Board question, Mr. Ramsdell pointed out that SAMDAs are limited to plant design changes, whereas SAMA is a more generic designation that also includes changes to plant procedures and training. *See* Tr. at M-2367 to -2368.

4.241 Mr. Ramsdell testified that the Vogtle ESP application references revision 15 of the AP1000 DCD (Appendix D of 10 C.F.R. Part 52). *See* Tr. at M-2368. In the FSER for this AP1000 DCD, the Staff looked at the probabilistic risk assessment provided by Westinghouse for the AP1000. *See* Tr. at M-2368 to -2369; Staff SAMDA Presentation at 5; [NRR, NRC], [FSER] Related to Certification of the AP1000 Standard Design, NUREG-1793, ch. 19 (Sept. 2004), *available at* http://www.nrc.gov/reading-rm/doc-collections/nuregs/Staff/sr1793/. As Mr. Ramsdell noted, for its part, Westinghouse started with a list of about 100 potential design alternatives and narrowed it down to sixteen (fourteen design alternatives identified by Westinghouse and two added by the Staff). *See* Tr. at M-2369. The Staff reviewed the results of the uncertainty analysis conducted previously for the AP600 (an earlier Westinghouse design) and then evaluated the potential benefits of implementing these design alternatives. *See id.* The Staff review was documented in an EA, *see* [EA] by the [NRC] Relating to the Certification of the AP1000 Standard Plant Design Docket No. 52-006 (ADAMS Accession No. ML053250292) [hereinafter AP1000 EA], that accompanied the design certification rule. *See* Tr. at M-2369. Presenting the conclusions from the AP1000 EA, Mr. Ramsdell noted that (1) none of the design modifications evaluated is justified on the basis of cost-benefit considerations; and (2) it is unlikely that any other design changes would be justified in the future on the basis of reducing person-rem exposure because the core damage frequencies are very low based on an absolute scale. *See* Tr. at M-2369; Staff SAMDA Presentation at 6. The EA also concluded that

> ”the evaluation provides reasonable assurance that there are no additional SAMDAs beyond those currently incorporated into the AP1000 design which are cost-beneficial, whether considered at the time of the approval of the AP1000 design certification or in connection with the licensing of a future facility referencing the AP1000 design certification, where the plant referencing this appendix is located

on a site whose site parameters are within those specified in Appendix 1B of the AP1000 [DCD]. These issues are considered resolved for the AP1000 design."

Staff SAMDA Presentation at 7 (quoting AP1000 EA at 4).

4.242 As indicated above, 10 C.F.R. Part 52, App. D, § VI.B.7, states that SAMDA issues are resolved for an application referencing the AP1000 DCD if the specific site parameters are covered by the site parameters assumed in the DCD SAMDA analysis. As a result, according to Mr. Ramsdell, the Staff's analysis focused on determining whether the Vogtle ESP site parameters were bounded by the generic site parameters in the AP1000 DCD. *See* Tr. at M-2371. Mr. Ramsdell testified that, given the extensive amount of meteorological data, economic cost parameters such as land-use information, and population numbers and distributions, the Staff decided that it was more "appropriate to use values that describe impacts to determine whether the site-specific values are bounded by the site parameters than to base the determination on comparison of individual elements of large data sets." Staff SAMDA Presentation at 8; *see also* Tr. at M-2371. Mr. Ramsdell also declared that the Staff decided that the person-rem per reactor year and the offsite economic costs (in dollars per reactor year) were the most appropriate values for determining whether the Vogtle site is bounded by the generic site. *See* Tr. at M-2371. These numbers were then used to determine the risk of severe accidents. Mr. Ramsdell further noted that, for the AP1000, the probability-weighted, mean population dose risks derived from table B1-3 in appendix B1 of the DCD and the base case and sensitivity case maximum attainable benefits listed in table B1-4 were judged to be the appropriate measures to determine whether the Vogtle site values are within the site parameters specified in appendix B1. *See* Staff SAMDA Presentation at 8.

4.243 As described by Mr. Ramsdell, the Staff compared the VEGP site-specific analysis results with the DCD values. In all cases, the Vogtle site-specific numbers were lower than the generic values included in appendix B1. *See* Tr. at M-2371 to -2372; Staff SAMDA Presentation at 9. The presentation slides accompanying Mr. Ramsdell's testimony provided a summary table that showed that the Vogtle site 24-hour and long-term population dose risk (person-rem per reactor year) were, respectively, 24% and 51% lower than the DCD generic analysis. The economic costs, referred to as the "Maximum Attainable Benefit," calculated using a 7% and 3% discount rate, were, respectively, 86% and 79% lower for the Vogtle site than the generic site. *See* Staff SAMDA Presentation at 9; *see also* Tr. at M-2371 to -2372. Thus, as Mr. Ramsdell testified, "the Staff conclude[d] that the Vogtle site is in fact bounded by the generic site considered previously and that therefore the issues related to SAMDA are resolved for an AP1000 at the Vogtle site," based upon revision 15 of the AP1000 DCD. Tr. at M-2372. Accordingly, no additional site-specific SAMDA review for the Vogtle ESP application was performed. *See* Staff SAMDA Presentation at 10.

4.244 In response to a Board question regarding the status of plant procedures and their relationship to the analyses discussed above, Mr. Ramsdell noted that the procedures do not exist at the ESP stage, so that the Staff is asking applicants at the COL stage to provide the Staff with (1) assurance that as an applicant develops procedures, the procedures will be based on risk information that is available within the plant's probabilistic risk assessment (PRA); and (2) a time schedule when those procedures will be developed. *See* Tr. at M-2372 to -2373. The Board also questioned the low probability-weighted economic costs associated with severe accidents and the implication that even the simplest plant modification would not be justified. Mr. Ramsdell responded that this is a direct consequence of the low core damage and offsite release frequencies for the AP1000 plant design relative to current generation plants and that he was comfortable with these numbers. *See* Tr. at M-2372 to -2374.

e. Board Findings Relating to SAMDAs

4.245 A severe accident mitigation alternatives (SAMAs) analysis is performed to determine if there are severe accident mitigation design alternatives (SAMDAs), new or modified procedural implementations, or new or modified training activities that can be justified to reduce the risk of severe accidents.

4.246 Because SAMDA issues are resolved for an application referencing the AP1000 DCD if the specific site parameters are covered by the site parameters assumed in the AP1000 DCD SAMDA analysis, the Board finds that in this instance the Staff appropriately focused its analysis on determining whether the Vogtle ESP site parameters were bounded by the generic site parameters in the AP1000 DCD.

4.247 The Board finds that the use of overall site impacts to determine whether the Vogtle site is bounded by the AP1000 DCD site parameters is an adequate approach. The Board concurs that the use of population dose risk (person-rem per reactor year) and the maximum attainable benefit (in dollars per reactor year) were appropriate parameters for determining whether the Vogtle site is bounded by the AP1000 DCD generic site.

4.248 The Board finds that the Staff performed an adequate review of the difference between these overall site impacts for the Vogtle site and the AP1000 DCD and that no additional site-specific SAMDA review for the Vogtle ESP application is necessary. Consequently the Board finds that the NRC Staff's conclusions constitute a reasonable evaluation of SAMDAs for the Vogtle ESP site.

4.249 The Board notes that the status of plant procedures and their adequacy under the analyses discussed are not being resolved at the ESP stage. Rather, at the COL stage the Staff will be asking SNC to (1) provide assurance that the procedures developed by SNC will be based on risk information that is available

within the plant's PRA; and (2) provide the Staff with a schedule outlining when those procedures will be developed.

9. Future Regulatory/Licensing Activities Associated with the ESP

4.250 As was the case with other ESP mandatory hearings, *see, e.g., Grand Gulf ESP,* LBP-07-1, 65 NRC at 88-91, the Board requested additional information regarding a number of future regulatory and licensing issues associated with the SNC ESP application for Vogtle Units 3 and 4. The first of these involved items that were being deferred from the ESP licensing process to the COL stage. The Board's interest in this regard was having the Staff identify the deferrals and outline the reasons why these subject matter areas (e.g., radioactive waste management system, per FEIS § 3.2.3, *see* FEIS 1A, at 3-14) were being postponed to the COL stage. *See* Licensing Board Environmental Questions at 4.

4.251 The second item with potential future import that the Board requested be addressed at the hearing was the proposed conditions associated with the ESP, as included in appendix A to the Staff's FSER. *See* Licensing Board Safety Questions at 4. The Staff likewise was asked to identify and to review the reasons for these proposed permit conditions as they impose requirements on SNC. Also under this general subject matter, another area of concern for the Board was the impacts, if any, on the Vogtle ESP application of AP1000 design certification revisions 16 and 17 that currently are under NRC review. In this regard, given that the ESP application currently references only AP1000 DCD revision 15, the Board was particularly interested in the Staff's explanation of the effect of these future DCD revisions on the requested LWA and the site redress plan.

4.252 Finally, during the course of the hearing, as an aid to its understanding, the Board asked the Staff for a briefing on the subject of the inspections, tests, analyses, and acceptance criteria, or ITAAC, associated with the ESP application. In particular, the Board was interested in the relationship between the ESP and COL ITAAC, given the current scheduling overlap between the agency's review of the ESP and COL applications for proposed Units 3 and 4, and the fact that the ESP application for the proposed Vogtle units is the first ESP application to include a complete, integrated emergency plan that incorporates ITAAC.

4.253 The Staff, as the lead party for all these issues, presented Christian J. Araguas as a witness for all four of these subjects as they related to the Staff's safety review. His background and qualifications were previously outlined in section IV.A.1.b, *supra.* Also called as a witness regarding the environmental aspects of the COL deferral and AP1000 certification revision items was Mark D. Notich, whose background and qualifications were described in section IV.A.1.b, *supra.* In addition, although not originally listed as witnesses for the COL deferral and AP1000 design certification revision discussions, included at the Staff's request as part of the panels on those subjects were, respectively, Michael

A. Smith and James V. Ramsdell, Jr., whose backgrounds and qualifications are set forth in section IV.A.2.b(ii), *supra.* The Board finds that all four of these witnesses are qualified to testify as expert witnesses regarding the various aspects of the future regulatory and licensing activities that are associated with the ESP for proposed Vogtle Units 3 and 4.

a. Deferrals to Combined License Stage

(i) INTRODUCTION

4.254 Although the ESP process is designed, among other things, to permit an applicant to resolve various safety, environmental, and emergency planning issues associated with the particular site at issue prior to the submission of a COL application, items for which sufficient information is lacking at the ESP stage of the licensing process may be subject to deferral for consideration at the COL stage of the process. *See Grand Gulf ESP,* LBP-07-1, 65 NRC at 90. To ensure that it was aware of the nature and justification for such deferrals relative to the proposed Vogtle units, the Board requested that a mandatory hearing presentation be provided identifying and explaining the deferrals being contemplated for these facilities. *See* Licensing Board Environmental Questions at 4; Licensing Board Safety Questions at 4.

(ii) WITNESSES AND EVIDENCE PRESENTED

4.255 As was noted above, *see supra* section IV.A.9, the Staff provided three witnesses to discuss the matter of deferrals to the COL process, in conjunction with Staff's prefiled slide presentation that was admitted as an exhibit. *See* Tr. at M-2188 to -2209; Exh. NRC000067 (NRC Staff Presentation Topic #9, Deferrals to COL) [hereinafter Staff COL Deferrals Presentation].

(iii) REGULATIONS AND GUIDELINES REGARDING COL DEFERRALS

4.256 Relative to the Staff's environmental review, although not a regulatory directive, as it encompasses all subject matter areas that the Staff believes need to be covered in an ESP, the ESRP forms the basis upon which the Staff makes a determination regarding the completeness and sufficiency of a given application's environmental report and, thereafter, the Staff's own DEIS and FEIS. *See* ESRP at 1. The SRP, NUREG-0800, provides guidance to the Staff in performing application safety reviews. *See* NUREG-0800, at 1 (rev. 1 Nov. 2007). The NRC's Review Standard (RS)-002, contains detailed guidance for Staff personnel reviewing the safety aspects of ESP applications. *See Grand Gulf ESP,* LBP-07-1, 69 NRC at 88.

(iv) EVIDENTIARY PRESENTATION

(1) Environmental Review

4.257 Staff witness Mr. Notich, the Staff's environmental project manager for the Plant Vogtle ESP, indicated that "the environmental review performed by the Staff [for the Vogtle ESP] encompasses all subject matter areas necessary for the ESP application and no other required review has been deferred to the combined license stage." Tr. at M-2191. In response to a Board inquiry as to the meaning of the word "required" as it is used in denoting what is required to be reviewed at the ESP stage, Mr. Smith responded by referring to NUREG-1555, the ESRP, declaring that it provides the guidance for the ESP review. He indicated that there are a lot of "gray areas" associated with the information that is provided at the ESP stage, but generally the Staff uses the guidance in the ESRP for the areas of review. *See* Tr. at M-2193 to -2194.

4.258 Relative to what appeared to the Board to be a COL deferral provision in the FEIS, *see* Licensing Board Environmental Questions at 4, Mr. Notich acknowledged that FEIS § 3.2.3 did indicate that the analysis of the radioactive waste management system was being deferred to the COL stage. Mr. Notich explained, however, that the analysis of that system had, in fact, been conducted by the Staff and the impacts resulting from liquid and gaseous effluent releases were determined for plant construction and operation as shown in FEIS §§ 4.9 and 5.9, respectively. He provided specific references to pages in these sections of the FEIS that documented the results of these analyses as well. *See* Tr. at M-2191 to -2192; Staff COL Deferrals Presentation at 10. Therefore, according to Mr. Notich, "[i]n Section 3.4.3 the staff only intended to indicate that the final design information may change at the combined license stage and this may constitute new and significant information for the combined license environmental review." Tr. at M-2193; *see also* Staff COL Deferrals Presentation at 10.

4.259 Further, in response to a specific Board request for verification that the Staff analysis in the FEIS was complete (absent new and significant information identified as the system design progresses in the COL stage, at which time the analysis will be revised as necessary), Mr. Notich stated that was correct. *See* Tr. at M-2194 to -2195. Although the Board again pursued the apparent contradiction between this statement indicating that nothing that was required was deferred to the COL and the FEIS statement that the radioactive waste management system analysis was deferred, Mr. Notich acknowledged that the Staff's FEIS wording could have been better in this regard.

4.260 Finally, during additional questioning, Mr. Notich indicated that, given the pending revisions to the AP1000 DCD and possible future revisions, the state of the design of the plant might change. In response to a Board inquiry about when SNC would be formally adopting AP1000 DCD revisions 16 and 17 (as opposed to revision 15 that was formally referenced in the application), SNC counsel Mr.

Blanton indicated that SNC anticipated adopting revisions 16 and 17 in the May 2009 time frame.[31] *See* Tr. at M-2196.

(2) Safety Review

4.261 Relative to the Staff's safety review of the Vogtle ESP application, Staff witness Mr. Araguas began by indicating that all the requirements have been met (subject to the permit conditions and ITAAC, which are identified in sections IV.A.9.b and IV.A.9.d, *infra,* and are to be met in the future), and "no review required for the ESP or LWA has been deferred to the COL stage." Tr. at M-2197. This being said, Mr. Araguas acknowledged that there were outstanding various COL action items, which he referenced as being defined in the Staff's presentation materials as

> identify[ing] certain matters that shall be addressed in the FSAR by an applicant for a CP or COL who submits an application referencing the Vogtle ESP. These items constitute information requirements but do not form the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. In addition, these items do not relieve an applicant from any requirement in 10 CFR Parts 50 and 52 that govern the application. After issuance of a CP or COL, these items are not controlled by NRC requirements unless such items are restated in the preliminary safety analysis report or FSAR, respectively.

Staff COL Deferral Presentation at 4; *see also* Tr. at M-2197 to -2198.

4.262 In response to Board questions regarding the meaning of the last sentence of this definition vis à vis the purported lack of any COL deferrals, Staff counsel Mr. Moulding indicated by way of clarification that an applicant may address a COL action item by inserting additional information in its preliminary or final SAR, which may resolve the action item. Moreover, according to Mr. Moulding, if the action item is resolved in this manner, that information would remain part of the FSAR, as an official licensing document, after issuance of the COL. *See* Tr. at M-2200 to -2201.

4.263 Mr. Araguas then discussed the Vogtle ESP COL action items included in appendix A to the Staff's FSER. COL Action item 2.2-1 requires the Applicant at the COL stage to address the effects of a release of hydrazine from onsite storage tanks that might have an impact on control room habitability for the new

[31] DCD revision 17 (which incorporates the revision 16 changes as well, *see Vogtle COL,* LBP-09-3, 69 NRC at 156 & n.5, was incorporated by reference into the Vogtle Units 3 and 4 COL application in revision 1 to that application, dated May 22, 2009. *See* Letter from Joseph A. (Buzz) Miller, SNC Exec. Vice President, Nuclear Development, to NRC, at 1 (May 22, 2009) (ADAMS Accession No. ML091630226).

units. According to Mr. Araguas, the reason that this item was not resolved for the ESP is that the analysis requires design information about the control room that is not available at the ESP stage. *See* Tr. at M-2201; Staff COL Deferral Presentation at 5.

4.264 In response to Board questions about why this particular item was not an ITAAC, and about the general differences between a COL action item and an ITAAC, Mr. Araguas responded that the purpose of an ITAAC is to demonstrate that the plant is constructed correctly, which is not the appropriate categorization for this item given that the analysis of post-chemical-release control room habitability can be performed without constructing the control room, at least as long as the final design information can be made available. *See* Tr. at M-2202 to -2203.

4.265 As for COL Action item 2.2-2, which, according to Mr. Araguas, requires the Applicant to identify the quantities of the chemicals that will be used for the proposed plants and their potential impact on control room habitability, it is a corollary to the first action item. Lacking both information about the quantity of hazardous chemicals involved and design information about the control room, this item likewise must await design information at the COL stage to perform the necessary analysis of control room habitability. *See* Tr. at M-2203 to -2204; Staff COL Deferral Presentation at 5.

4.266 Mr. Araguas next discussed COL Action item 2.3-1, which requires that

> [i]f, at the COL or CP stage, the applicant chooses an alternative plant design that requires the use of a ultimate heat sink (UHS) cooling tower, the applicant will need to identify the appropriate meteorological site characteristics (i.e., maximum evaporation and drift loss and minimum water cooling conditions) used to evaluate the design of the chosen UHS cooling tower.

Staff COL Deferral Presentation at 6; *see also* Tr. at M-2204 to -2205. Mr. Araguas explained that, even though the Applicant has based its application on the AP1000 DCD, at the ESP stage the Staff is not approving the AP1000 reactor, but instead the narrowly focused plant parameter envelope that the chosen design reflects. This, Mr. Araguas noted, can be contrasted to previous ESPs, which were based on a plant parameter envelope for which one of the important, specific site characteristics was a UHS cooling tower. According to Mr. Araguas, because SNC has requested approval for a plant that does not rely on a UHS cooling tower, this characteristic was not evaluated. With COL Action item 2.3-1, however, in the event there is a different plant design at the COL stage, SNC would be required to evaluate the UHS cooling tower site characteristic. *See* Tr. at M-2204 to -2205. Moreover, when questioned why this particular item was singled out as needed if a different plant design is later chosen at the COL stage given there

could be a large number of items, in addition to the UHS cooling tower issue, that would change, Mr. Araguas indicated that the Staff singled out this particular item because it reflected an omission of key site characteristic information that was unique to the AP1000 passive design and had not been evaluated at all for this site. In contrast, the other information that would change for a different plant design would require an update of information that has already been evaluated. *See* Tr. at M-2205 to -2208.

4.267 Mr. Araguas then described COL Action item 2.4-1, which he characterized as rather straightforward. According to Mr. Araguas, this item involves confirmation that no chelating agents will be comingled in the radioactive waste liquids or used to mitigate an accidential release. If such agents were to be comingled and/or so used, then they would have to be specifically accounted for in the dose analyses provided for under 10 C.F.R. Part 20, App. B, tbl. 2. *See* Tr. at M-2208; Staff COL Deferral Presentation at 7.

4.268 Finally, with regard to COL Action item 13.6-1, Mr. Araguas indicated this provision requires that, because it was not specifically addressed in the Vogtle ESP application, in the context of the Vogtle COL application SNC must provide specific access control measures to address the existing rail spur that enters the VEGP site controlled area. According to Mr. Araguas, specific security plan access control measures are not required for review at the ESP stage, so that the railroad spur can be addressed at the COL stage. *See* Tr. at M-2208.

(v) BOARD FINDINGS REGARDING COL DEFERRALS

4.269 The Board finds that the deferral of the analysis of the radioactive waste management system noted in the ESP FEIS is acceptable given that (1) it was only intended to indicate that the final design information might change at the COL stage, which could in turn constitute new and significant information for the COL environmental review; and (2) the analysis of that system had, in fact, been conducted by the Staff and the impacts resulting from liquid and gaseous effluent releases were determined as required in the FEIS. The Board notes that such design changes may be associated with DCD revisions currently under Staff review and only recently formally adopted by SNC in its COL application, *see supra* note 31, while the SNC ESP application remains based on DCD revision 15.

4.270 The Board concurs that the analysis of the effects of a hydrazine spill on control room habitability cannot be completed until the COL stage when the required design information needed to perform this analysis becomes available. Likewise, the Board concurs that the analysis of impacts on control room habitability from chemicals used for the proposed plants cannot be completed until the COL stage.

4.271 The Board concurs that the UHS cooling tower site characteristic was

not evaluated at the ESP stage because of the reference to the AP1000 reactor design, and that this would have to be evaluated in the event that another reactor design were chosen at the COL stage.

4.272 The Board concurs that if chelating agents were to be comingled in the radioactive waste liquids or used to mitigate an accidental release, then they have to be specifically accounted for in the dose analyses under 10 C.F.R. Part 20, App. B, tbl. 2.

4.273 The Board concurs that the access control measures to address the existing rail spur that enters the VEGP site controlled area are an item properly addressed at the COL stage.

4.274 The Board finds that no safety or environmental review required for the ESP or LWA was deferred to the COL stage and that all requirements applicable to the ESP and LWA have been met, subject to permit conditions and ITAAC.

b. Permit Conditions

(i) INTRODUCTION

4.275 Appendix A of the FSER for the Vogtle ESP application includes a list of nine permit conditions proposed by the Staff. *See* FSER at A-2 to A-3. Permit Condition 1 addresses excavation and replacement of soil under Seismic Category 1 structures at the site. *See id.* at A-2. Permit conditions 2 through 8 relate to the site emergency plan, with permit conditions 2 through 7 addressing EALs and permit condition 8 addressing the location of the TSC. *See id.* at A-2 to A-3. Permit Condition 9 requires the COL applicant to demonstrate either that the site-specific Chi/Q values from the ESP fall within those approved in a referenced certified design or, if no certified design is referenced, that the values in the final design are bounded by the ESP values. *See id.* at A-3.

(ii) WITNESSES AND EVIDENCE PRESENTED

4.276 As was noted above, *see supra* section IV.A.9, the Staff provided one witness to discuss the matter of ESP permit conditions, in conjunction with a prefiled slide presentation that was admitted as an exhibit. *See* Tr. at M-2209 to -2217; Exh. NRC000068 (NRC Staff Presentation Topic #10, Proposed Permit Conditions) [hereinafter Staff Permit Conditions Presentation].

(iii) REGULATIONS AND GUIDELINES RELATING TO PERMIT CONDITIONS

4.277 The concept of attaching permit conditions to an ESP arises from 10 C.F.R. § 52.24(b), which states

> The [ESP] must specify the . . . terms and conditions of the [ESP] the Commission

> deems appropriate. Before issuance of either a construction permit or combined license referencing an [ESP], the Commission shall find that any relevant terms and conditions of the [ESP] have been met. Any terms or conditions of the [ESP] that could not be met by the time of issuance of the construction permit or combined license, must be set forth as terms or conditions of the construction permit or combined license.

10 C.F.R. § 52.24(b). Thus, any permit conditions imposed that are not met before a COL referencing the ESP is issued will attach to the COL.

(iv) EVIDENTIARY PRESENTATION

4.278 Staff witness Mr. Araguas began by defining a permit condition according to the terms of 10 C.F.R. § 52.24(b) and explained that "[a] permit condition is not needed when an existing NRC regulation requires a future regulatory review of a matter to ensure adequate safety during [ ] design[,] construction[,] or inspection activities for a new plant." Tr. at M-2210; *see also* Staff Permit Conditions Presentation at 3. Mr. Araguas then provided examples of three instances in which a permit condition should be used: (1) when there is an unsupported assumption that can only be supported after ESP issuance; (2) when there is an important site attribute that is unacceptable and must be corrected during plant construction; and (3) when there is a future act upon which the Staff evaluation depends. *See* Tr. at M-2210 to -2211; Staff Permit Conditions Presentation at 4.

4.279 Relative to the Vogtle ESP, Mr. Araguas indicated that a total of nine permit conditions have been identified. *See* Tr. at M-2211. Seven of those conditions are associated with emergency planning and have been discussed above relative to that topic. *See supra* section IV.A.6. The remaining two permit conditions are discussed below.

4.280 The first of these, PC-1, requires that "[t]he ESP holder shall either remove and replace, or shall improve, the soils directly above the Blue Bluff Marl for soils under or adjacent to Seismic Category 1 structures, to eliminate any liquefaction potential." Staff Permit Conditions Presentation at 5; FSER at A-2; *see also* Tr. at M-2211. Mr. Araguas explained that the ESP application indicated that portions of the soil above the Blue Bluff marl are susceptible to liquefaction during a seismic event and that the Applicant stated that it would need to remove the soil directly above the Blue Bluff marl to meet a proposed site characteristic of no liquefaction potential at the VEGP site. The Staff, therefore, proposed PC-1 "to ensure this future act occurs." Tr. at M-2211 to -2212; Staff Permit Conditions Presentation at 5. For its part, the Board asked a series of questions regarding the difference between accomplishing this result using a permit condition as opposed to an ITAAC given this permit condition is associated in a limited way with plant construction. Mr. Araguas pointed out that this was excavation-related work

involving removal of the soil followed by replacing that soil with a material that eliminates the potential for liquefaction. As such, it does not relate to any specific safety criteria, which are what are covered under the ITAAC for backfill placement. *See* Tr. at M-2212 to -2214.

4.281 The other non-emergency planning-related permit condition referenced by Mr. Araguas, PC-9, reads as follows:

> If a COL or CP application referencing this ESP also references a certified design, the COL or CP applicant may demonstrate compliance with the radiological consequence evaluation factors in 10 CFR 52.79(a)(1) or 10 CFR 50.34(a)(1), respectively, by demonstrating that the site-specific [Chi]/Q values determined in the ESP fall within those evaluated in the approval of the referenced certified design. However, if a COL or CP referencing this ESP does not reference a certified design, the applicant would still need to demonstrate that its source term is bounded by the source term values included in the ESP.

FSER at A-3; *see also* Tr. at M-2214; Staff Permit Conditions Presentation at 10. The Board questioned the need for this permit condition given that it appeared to be already satisfied by the Vogtle COL application, which references the AP1000 certified design, and the fact that the ESP analysis has already demonstrated that the site Chi/Q is bounded by that certified design. *See* Tr. at M-2215. Mr. Araguas stated that the ESP is a stand-alone permit that does not depend on the existence of a COL application that specifies a certified design for the proposed facilities. *See* Tr. at M-2216. As a consequence, if Applicant SNC chooses at a later time to reference another certified design, or to proceed with a custom design, then this permit condition would be applicable and would have to be satisfied. *See* Tr. at M-2215. In addition, Mr. Araguas testified that the intent of this permit condition was to incorporate the accident source term as part of the ESP and to clarify that the COL applicant would have to show that it is bounding unless the COL application references a certified design. *See* Tr. at M-2215 to -2216. Mr. Araguas agreed, however, that, given the current Vogtle situation with an ESP application and a COL application that both refer to the AP1000 certified design and are being reviewed simultaneously, this permit condition has been met. *See* Tr. at M-2216.

(v) BOARD FINDINGS REGARDING PERMIT CONDITIONS

4.282 The Board finds that the non-emergency plan-related ESP permit conditions are appropriate and notes that PC-9 is already being met, at least so long as the Vogtle COL application continues to reference the AP1000 certified reactor design.

c. AP1000 Design Certification Revisions

(i) INTRODUCTION

4.283 Because the Vogtle ESP application references revision 15 of the AP1000 DCD, the FSER and FEIS also primarily reference revision 15. *See, e.g.,* FSER at 2-344; FEIS 1A, at 3-1. Since SNC filed the initial Vogtle ESP application, however, Westinghouse Electric Company has submitted two proposed amendments, revisions 16 and 17, to the AP1000 DCD. *See* Westinghouse Electric Co. LLC, AP1000 Design Control Document (rev. 16 May 2007) (ADAMS Accession No. ML071580939); Westinghouse Electric Co. LLC, AP1000 Design Control Document (rev. 17 Sept. 2008) (ADAMS Accession No. ML083230868). As a consequence, the Board requested a presentation at the mandatory hearing on the effects, if any, of revisions 16 and 17 on SNC's ESP application. *See* Dec. 31, 2008 Order at 1-2.

(ii) WITNESSES AND EVIDENCE PRESENTED

4.284 As was noted above, *see supra* section IV.A.9, the Staff provided three witnesses to discuss the matter of AP1000 design certification revisions, in conjunction with a prefiled slide presentation that was admitted as an exhibit. *See* Tr. at M-2273 to -2397; Exh. NRC000069 (NRC Staff Presentation Topic #11, AP1000 Design Certification Revisions) [hereinafter Staff AP1000 Revisions Presentation].

(iii) REGULATIONS AND GUIDELINES RELATING TO REVISIONS TO REFERENCED CERTIFIED DESIGN

4.285 An ESP is an approval for a nuclear plant site, *see* 10 C.F.R. § 52.1, and specifies design parameters for the site, *see id.* § 52.24(b). The ER for an ESP application may evaluate the environmental impacts of a reactor or reactors falling "within the site characteristics and design parameters for the [ESP] application." *Id.* § 51.50(b)(2). At the COL stage, an applicant may reference both an ESP and a standard design certification in its application. *See id.* § 52.73(a). If the application references an ESP, the applicant must demonstrate that the chosen design (e.g., the certified design) falls within the parameters specified in the ESP or, on the safety side, request a variance. *See id.* §§ 51.50(c)(1)(i), 52.79(b)(1)-(2).

4.286 Additionally, an LWA applicant must submit, as part of the safety analysis report for the LWA, design information related to activities within the scope of the requested LWA. *See id.* § 50.10(d)(3)(i).

(iv) EVIDENTIARY PRESENTATION

(1) Safety Review

4.287 Staff witness Mr. Araguas began by noting that the Vogtle ESP SSAR (and all of its revisions), the SAR associated with the LWA request, and the Staff's FSER for the ESP and the LWA all were based upon revision 15 of the AP1000 DCD. *See* Tr. at M-2376 to -2377. He then noted that the Staff safety evaluation at the ESP stage "rel[ies] on a very limited set of design information," Tr. at M-2377, and clarified that, when the NRC issues an ESP that references a certified design, it does not mean that there is NRC approval of the site for that specific design. *See* Tr. at M-2377. Rather, according to Mr. Araguas, such approval is associated with the review that is done at the COL stage. *See* Tr. at M-2377.

4.288 With respect to the LWA, Mr. Araguas indicated that an applicant must submit the design and construction information relating to the LWA activities:

> Since design information is required in an LWA to support the requested activities, an applicant must either incorporate by reference a certified design or furnish design details for review under an LWA. Granting of the LWA by the NRC approves the requested activities under the LWA as well as that specific design information that were within the scope of those LWA activities.

Tr. at M-2377 to -2378. In this instance, SNC has incorporated by reference the applicable portions of the AP1000 DCD revision 15 relative to the Vogtle LWA request. *See* Staff AP1000 Revisions Presentation at 5; *see also* Tr. at M-2376 to -2377.

4.289 With this background, Mr. Araguas then addressed the differences between revisions 15 and 16 of the AP1000 DCD relative to the evaluation of the ESP application. Of note in this regard, according to Mr. Araguas, was that the accident source term proposed in revision 16 of the AP1000 DCD has changed from revision 15. *See* Tr. at M-2378; Staff AP1000 Revisions Presentation at 6. Nonetheless, because SNC referenced DCD revision 15, design changes associated with any subsequent revisions were not considered in the Staff's safety review. *See* Tr. at M-2378; Staff AP1000 Revisions Presentation at 6. The Staff thus proposes to include the revision 15 accident source term as a set of bounding parameters in the ESP such that any differences between the COL and ESP source terms would need to be reviewed and resolved at the COL stage. *See* Tr. at M-2378 to -2379; Staff AP1000 Revisions Presentation at 6.

4.290 Relative to the LWA, Mr. Araguas testified that only a major change in the footprint of the nuclear island base mat would affect the basis for the LWA approval, while moderate changes in the structural design would not invalidate the basis for the LWA approval. He also noted that, if there are incompatibilities

between the design information approved in the LWA and design information submitted in the COL application, they likewise would need to be reviewed at the COL stage. Any activities performed under an LWA are thus at the risk of the applicant because the COL or CP may not be approved by the agency or the design adopted may be incompatible with the LWA construction. *See* Tr. at M-2379; Staff AP1000 Revisions Presentation at 7.

4.291 The Board inquired about revision 17 and any subsequent revisions to the AP1000 design that might arise. *See* Tr. at M-2379 to -2381. Initially, the Board asked whether, if SNC adopts revision 17, the Staff would then begin an active review of that revision relative to the COL application. Mr. Araguas indicated that it was his understanding that adoption of revision 17 by SNC would result in such a review by the Staff. *See* Tr. at M-2379. He also affirmed the Board's understanding that no COL would be issued for proposed Vogtle Units 3 and 4 until SNC either adopted all of the current DCD revisions in its COL application or, if it chose not to incorporate the latest revisions, underwent an agency review process in which any design differences between the COL design and the DCD revisions were treated as custom design elements. *See* Tr. at M-2380 to -2381.

4.292 Finally, in response to a Board inquiry as to why there was no COL action item associated with the transition between the dose analyses in the ESP and the COL, Mr. Araguas indicated that one of the ESP permit conditions (i.e., PC-9) covers that issue. *See* Tr. at M-2390 to -2391. He also indicated that at the COL stage, the Staff will issue an entirely new FSER, not just a supplement.[32] *See* Tr. at M-2393.

(2) Environmental Review

4.293 Staff witness Mr. Notich indicated in connection with the environmental review process that the original ER submitted with the Vogtle ESP application (i.e., revision 0) referenced revision 15 of the AP1000 DCD, as did ER revisions 1 and 2. Consequently, the Staff FEIS likewise is based on revision 15 of the DCD. *See* Tr. at M-2381; Staff AP1000 Revisions Presentation at 9. Moreover, certain revision 15 design characteristics were used for the Staff's environmental impacts analysis. These included characteristics associated with the plant and its facilities, the reactor fuel, normal and accidental radioactivity releases, plant water use, and

[32] Indeed, as Staff counsel Patrick Moulding pointed out at the hearing, *see* Tr. at M-2393 to -2394, for a COL application referencing an ESP, 10 C.F.R. § 52.79(b) requires that the application include a safety analysis report that "either include[s] or incorporate[s] by reference the [ESP] site safety analysis report" and that contains additional information and analyses "sufficient to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the [ESP]." *See* 10 C.F.R. § 52.79(b)(1).

cooling system characteristics. *See* Staff AP1000 Revisions Presentation at 10; FEIS 1C, at I-1 to I-9 (app. I).

4.294 Thereafter, according to Mr. Notich, in a letter dated December 26, 2007, SNC submitted comments on the DEIS that contained new information based on DCD revision 16, which was then under Staff consideration as part of the separate DCD review process. This new information related to the circulating water system, final effluent discharge, auxiliary emissions, additional diesel generators, fuel irradiation levels, and service water system usage. *See* Tr. at M-2382 to -2383; Staff AP1000 Revisions Presentation at 11-12. Mr. Notich testified that, based on this new information, the Staff revised certain sections of the FEIS, including section 3.2, Plant Description; section 5.2, Meteorological and Air-Quality Impacts; section 5.3, Water-Related Impacts; section 5.4, Ecological Impacts; section 6.2, Transportation Impacts; section 7.3, Water Use and Quality; and section 7.5, Aquatic Ecosystem. *See* Tr. at M-2382. Mr. Notich also testified that, from the analysis of the new information provided by SNC, the Staff concluded that the changes between AP1000 DCD revisions 15 and 16 would not affect the impact conclusions stated in the FEIS. The design parameter values used in the COL application would, however, be considered new and potentially significant information and would be reviewed by the Staff at the COL stage. *See* Tr. at M-2383; Staff AP1000 Revisions Presentation at 13. In this regard, Mr. Notich noted, changes associated with AP1000 DCD revision 17 would also be considered as part of the Staff's review of the COL application. *See* Tr. at M-2383 to -2384.

4.295 With this explanation in mind, the Board questioned the Staff witnesses regarding the process that would be used to transition between the ESP, referencing AP1000 DCD revision 15, and the COL, if it references a subsequent revision. In response, Staff witness Mr. Ramsdell indicated that, at the COL stage, the Staff would issue a new EIS addressing any new information, determining whether the new information is significant, and if it is significant, performing a detailed analysis based on the new information. *See* Tr. at M-2385 to -2386. By way of clarification, Staff counsel Patrick Moulding indicated that the applicant would be responsible for identifying new and significant information and that the COL-stage EIS would not be a new EIS, but a supplement to the ESP FEIS discussing only new and significant information. *See* Tr. at M-2386 to -2387. According to Mr. Notich, the supplemental EIS would be issued first in draft form for public comment and then in final form after incorporating changes from the comment period. *See* Tr. at M-2388. Moreover, the draft and final supplemental EIS would be issued even if the Staff concluded that there was no new and significant information, and the public would have an opportunity to comment on this conclusion. *See* Tr. at M-2389.

(v) BOARD FINDINGS REGARDING AP1000 DESIGN CERTIFICATION REVISIONS

4.296 With respect to safety considerations, the Board finds that the inclusion of the AP1000 DCD revision 15 accident source term as a set of bounding parameters in the ESP is appropriate because any differences between the COL and ESP source terms would need to be reviewed and resolved at the COL stage. The Board notes that the COL cannot be issued based upon revision 15 of the DCD and must be either updated to reference the final DCD as revised, or incorporate the deviations from the DCD revisions as custom design features.

4.297 The Board finds that, to the degree there are incompatibilities between the design information approved in the LWA and design information submitted in the COL application, those deviations would need to be reviewed at the COL stage, leaving any construction activities performed under an LWA a source of risk for Applicant SNC if the design is later found to be incompatible with the LWA construction.

4.298 The Board notes that a new FSER will be issued at the COL stage that will either incorporate or reference the ESP FSER and contain all of the additional safety considerations evaluated for the COL.

4.299 From the environmental perspective, the Board finds that issuance of the ESP based upon AP1000 DCD revision 15 is acceptable because Applicant SNC would be responsible for identifying new and significant information at the COL stage, including changes between AP1000 DCD revision 15 and the DCD revision SNC ultimately adopts in the COL application at the COL stage. Further, the Board notes that the COL EIS would not be a new EIS, but a supplement to the ESP FEIS discussing only the new and significant information.

d. Inspections, Tests, Analyses, and Acceptance Criteria

(i) INTRODUCTION

4.300 During the course of the hearing, the Board requested a briefing on the subject of the ITAAC associated with the Vogtle ESP application. The Board was interested in better understanding the ESP ITAAC, their relationship to the COL ITAAC, and the overall manner in which the ESP ITAAC would be handled by the Staff in this licensing proceeding. *See* Tr. at M-1910 to -1911. This was especially so given the current schedule overlap between the ESP and COL applications, and the fact that the Vogtle ESP is the first ESP application to include a complete and integrated emergency plan that, as discussed in section IV.A.6.d, *supra,* includes ITAAC. Appendix § A.5 of the FSER contains the ITAAC, in table format, for the ESP and LWA. *See* FSER at A-32 to -56.

(ii) WITNESS AND EVIDENCE PRESENTED

4.301 As was noted above, *see supra* section IV.A.9, the Staff provided one witness to discuss the matter of ITAAC. *See* Tr. at M-2120 to M-2127.

(iii) REGULATIONS AND GUIDANCE RELATED TO ITAAC

4.302 To grant an ESP, the Commission must find that "[t]he proposed [ITAAC], including any on emergency planning, are necessary and sufficient, within the scope of the [ESP], to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the Act, and the Commission's regulations." 10 C.F.R. § 52.24(a)(5). As discussed above, an applicant has the option of submitting a complete and integrated emergency plan under section 52.17(b)(2)(ii), but if the applicant chooses to do so, it must include in the ESP application the proposed inspections, tests, and analyses that will be performed, and the acceptance criteria that are "necessary and sufficient" for the Commission's required findings for issuance of the ESP. *See id.* § 52.17(b)(3). In addition, the Commission will review any proposed ITAAC relative to a request for an LWA submitted with an ESP application. *See* FSER at A-32; *see also* 10 C.F.R. § 50.10(d)(3).

4.303 At the COL stage, a COL application likewise must include, among other things, the "proposed inspections, tests and analyses, including those applicable to emergency planning," to be performed and "the acceptance criteria that are necessary and sufficient" to support the Commission's finding that a COL can be granted. *See* 10 C.F.R. § 52.80(a). If a COL application "references an early site permit with ITAAC or a standard design certification or both, the application may include a notification that a required inspection, test, or analysis in the ITAAC has been successfully completed and that the corresponding acceptance criterion has been met." *Id.* § 52.80(a)(3). If the applicant makes this notification, which is essentially a request for a Commission finding on the completion of ITAAC needed for issuance of a COL, the Commission is required to identify these ITAAC in the notice of hearing published in the *Federal Register* for the COL proceeding. *See id.* §§ 52.80(a)(3), 52.85.

4.304 If the Commission finds that these ESP or design certification ITAAC have been met, "[t]his finding will finally resolve that those acceptance criteria have been met, those acceptance criteria will be deemed to be excluded from the combined license, and findings under § 52.103(g) [(i.e., findings required before operation of the facility)] with respect to those acceptance criteria are unnecessary." *Id.* § 52.97(a)(2). Upon issuance of a COL, the Commission also must identify any ITAAC that have not yet been met. *See id.* § 52.97(b). Thereafter, but no later than "1 year after issuance of the [COL] or at the start of construction as defined in 10 CFR 50.10(a), whichever is later" the COL licensee must submit "its schedule for completing the inspections, tests, or analyses in

the ITAAC." *Id.* § 52.99(a). The licensee must provide schedule updates as outlined in section 52.99(a), with appropriate notifications of completed ITAAC as required by section 52.99(c) and with the NRC reviewing the licensee's ITAAC submissions to "ensure that the prescribed inspections, tests, and analyses in the ITAAC are performed." *Id.* § 52.99(e). Prior to operation under a COL, a notice of intended operation will be published in the *Federal Register* "[n]ot less than 180 days before the date scheduled for initial loading of fuel." *Id.* § 52.103(a). An opportunity for hearing will be provided in this notice regarding certain matters, one of which is ITAAC that have not been found to have been met under section 52.97(a)(2) prior to issuance of the COL. *See id.* § 52.103(a), (b). To this end, "[a]t appropriate intervals" during the time between issuance of a COL and "the last date for submission of requests for hearing under § 52.103(a), the NRC shall publish notices in the *Federal Register* of the NRC Staff's determination of the successful completion of inspections, tests, and analyses." *Id.* § 52.99(e)(1). Additionally, the NRC is required to make publicly available any notifications from the COL licensee indicating that the licensee believes certain ITAAC have been met as well as any notifications that any uncompleted ITAAC will be met prior to operation. *See id.* § 52.99(e)(2).

4.305 Guidance relevant to the development and review of proposed ITAAC is provided in NUREG-0800. Section 14.3 of NUREG-0800 explains that, for an ESP, the Staff review of proposed ITAAC is focused on any that are provided with the site emergency plan. *See* NUREG-0800, at 14.3-3 n.1, 14.3-4 (Mar. 2007). NUREG-0800 explains that the Staff reviewer should use section 14.3.10 to perform the review of the ESP site emergency plan ITAAC, which contains a table of generic ITAAC that can be used. *See id.* at 14.3-7, 14.3.10-2, 14.3.10-11 to -12 (tbl. 14.3.10-1). Section 14.3.10 also references the generic ITAAC table in Regulatory Guide 1.206 that, notwithstanding its title relating to COL applications, provides additional guidance. *See id.* at 14.3.10-4 to -5; [NRR, NRC], Regulatory Guide 1.206, Combined License Applications for Nuclear Power Plants (LWR ed.), at C.II.1-B-2 to -13, tbl. C.II.1-B1 (June 2007), *available at* http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/active/01-206/.

(iv) EVIDENTIARY PRESENTATION

4.306 Staff witness Mr. Araguas began his explanation regarding ITAAC by indicating that the ITAAC, including those associated with the ESP site emergency plan, are used to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the COL and the provisions of the Commission's rules and regulations. In other words, they will verify that an as-built facility conforms to the approved plant design and applicable regulations. If SNC demonstrates that the ESP and COL ITAAC are

met, and the NRC agrees that they are successfully met, then Plant Vogtle would be permitted to load fuel. *See* Tr. at M-2120 to -2121.

4.307 Mr. Araguas also explained that ITAAC are usually documented in a table with a three-column format (although the ITAAC for the site emergency plan have four columns). The first column contains the specific design commitments. The second column contains the inspections, tests, analyses, or combination of the three methods to be used by the licensee to demonstrate that the design commitments have been met. The third column contains the acceptance criteria for the methods described in column 2 that, if met, demonstrate that the commitments in the first column have been met. *See* Tr. at M-2121 to -2122. The ESP application for Vogtle includes ITAAC associated with emergency planning and LWA activities. The Board questioned how the ESP ITAAC would be integrated with the COL ITAAC. Mr. Araguas replied that the regulations allow the ESP ITAAC to be completed prior to the issuance of the COL, but if not completed, they will be carried forward and included with the COL ITAAC. *See* Tr. at M-2122 to -2123.

4.308 Consistent with the regulations described above, Mr. Araguas indicated that, for ESP ITAAC completed prior to the issuance of the COL, a notice of hearing would be issued delineating the ITAAC that were closed out. *See* Tr. at M-2123. In this regard, Mr. Araguas agreed with the observations by Mr. Blanton, SNC counsel, that, as set forth in 10 C.F.R. § 52.103(a) relative to the time period after the issuance of the COL:

> [T]he way it would work is whatever ITAAC are imposed in the ESP will be incorporated by reference in the COL. Those ITAAC will be satisfied at whatever point in the construction process they are satisfied. The COL would state what the ITAAC are, both from the ESP and the COL and the DCD. Then before fuel load which will be after the issuance of the COL, that we would provide notice that the ITAAC had been satisfied or about to be satisfied and at that point you'd have a potential notice of opportunity for hearing on whether or not the ITAAC had been satisfied.

Tr. at M-2125. In addition, Staff witness Mr. Araguas cited section 52.80(a)(3) as affording the potential for another notice of hearing that would be put forth prior to issuance of the COL regarding any ITAAC that have been closed out at that point. *See* Tr. at M-2125 to -2126. And in this regard, Mr. Moulding, as counsel for the Staff, clarified that section 52.80(a)(3) indicates that "if the application references an [ESP] with ITAAC or a standard design certification or both, the application may include a notification that a required inspection test or analysis in the ITAAC has been successfully completed and that the corresponding acceptance criterion has been met." Tr. at M-2126. In that event, according to Mr. Moulding, "the Federal Register notification required by 52.85 must indicate that the application

includes this notification. So that's just indicating if there are ITAAC and the Applicant believes that that's been met, that would be indicated in the COL application." Tr. at M-2126 to -2127.

4.309 The Board noted in its discussion with the Staff that because for Vogtle Units 3 and 4 there is an existing COL application in conjunction with an ESP application for which ITAAC have not been completed, the COL application does not include such a notification. The Board assumed, however, that there are ITAAC, in particular those associated with LWA activities such as backfill and waterproof membrane installation, that seemingly would have to be closed out while the COL review is in process. Mr. Araguas did not disagree, but did not know when SNC would submit a notice indicating that a particular ITAAC, including LWA-related ITAAC, has been completed. It nonetheless was clear from the discussion that, at some point, SNC would have to notify the Staff in some manner that ITAAC, including the LWA ITAAC, are complete. Whether that would be prior to issuance of a COL is not clear.[33] *See* Tr. at M-2127 to -2128.

(v) BOARD FINDINGS RELATED TO ITAAC

4.310 The Board findings relative to the LWA ITAAC are discussed in section IV.A.6.e, *supra.* The Board findings relative to the site emergency plan ITAAC are discussed in section IV.A.5.e, *supra.* The Board findings required by 10 C.F.R. § 52.24(a)(5) relative to the proposed ITAAC are provided in section V.C, *infra.* In this regard, the Board concurs with the Staff that the proposed ESP and LWA ITAAC for Vogtle Units 3 and 4, when properly completed, will "provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the [AEA], and the Commission's regulations." 10 C.F.R. § 52.24(a)(5).

[33] A related matter concerns the lack of any delineated schedule in the licensing scheme for the Staff's review of completed ITAAC, other than the logical requirement that review of all ITAAC must be complete upon NRC approval for operation beyond 5% power, *see* section IV.9.d(iii), *supra.* In addition, it is unclear whether LWA ITAAC must be found to be met prior to issuance of any LWA under 10 C.F.R. § 50.10(e). Because of this, the Board is concerned that in a proceeding where, as here, there are LWA ITAAC, combined with the possibility that the Staff seemingly could issue a COL without these ITAAC being found to be met, *see* 10 C.F.R. § 52.97(b), a COL licensee might begin construction prior to a Staff determination on the LWA ITAAC. In the event that the Staff determines that certain LWA ITAAC have not been met, this could mean that a COL licensee would have to undo any construction to correct deficiencies in those LWA activities, likely at considerable time and expense. Notwithstanding the warning in section 50.10(f) that "[a]ny activities undertaken under a limited work authorization are entirely at the risk of the applicant," the Commission might wish to provide clarification on this issue.

B. Additional Items

1. Environmental and Safety Topics Not Addressed at Hearing

4.311 Following the issuance of the Staff's FEIS and ASER, in its orders providing presentation topics for the evidentiary hearing, the Board posed questions to the Staff and Applicant in a number of environmental and safety areas. *See* Licensing Board Environmental Questions, app. A; Licensing Board Safety Questions, app. A. These questions related to the presentation topics, as well as to other portions of the FEIS and ASER not encompassed by the presentation topics. Among the question areas not covered by the presentation topics were socioeconomic impacts, air quality impacts, construction costs, *see* Licensing Board Environmental Questions, app. A, at 2-3, 6, physical security, meteorology, and certain aspects of hydrology such as flood and freeze hazards, *see* Licensing Board Safety Questions, app. A, at 1-2. The Board finds that the Staff's and Applicant's written responses to the questions, *see* SNC Response to Environmental Questions at 3-24; Staff Response to Environmental Questions, attach. A, at 1-56; *id.,* attach. C; SNC Response to Safety Questions at 2-4; Staff Response to Safety Questions, attach. A, at 1-62, adequately addressed the Board's concerns in those areas. Accordingly, we consider these issues resolved for this ESP proceeding.

4.312 Additionally, there are portions of the FEIS, such as those dealing with historical and cultural resources and environmental justice, and of the FSER, such as that dealing with SNC's quality assurance program, that the Board did not specifically inquire into in this proceeding. We found those portions to be sufficient on their face and therefore did not pursue them further. *See Clinton ESP,* CLI-06-20, 64 NRC at 21-22. We consider the issues addressed in those portions of the FEIS and FSER to be resolved in favor of issuance of the ESP and LWA.

2. Applicability of the Aircraft Impact Rule

4.313 In a March 6, 2009 memorandum and order, the Board requested that the parties discuss at the mandatory hearing the impacts of a then-proposed aircraft impacts rule on this ESP proceeding. *See* Licensing Board Memorandum and Order (Additional Matters Relating to Contested and Mandatory Hearings) (Mar. 6, 2009) at 5 (unpublished). At the hearing, Staff counsel indicated that the aircraft rule in question had not yet been published but that it would not affect the issuance of an ESP or LWA for the Vogtle site. *See* Tr. at M-2396 to -2397.

4.314 Subsequently, a final rule requiring consideration of aircraft impacts for new nuclear power reactor licenses was published on June 12, 2009. *See* Consideration of Aircraft Impacts for New Nuclear Power Reactors, 74 Fed. Reg. 28,112 (June 12, 2009). By its terms, the rule requires an aircraft impact

assessment as part of certain construction permit, operating license, standard design certification and approval, combined license, and manufacturing license applications. *See id.* at 28,146. It does not, however, mention ESP or LWA applicants among those who must perform the aircraft impact assessment. Thus, the adequacy of any aircraft impact assessment concerning proposed Vogtle Units 3 and 4 is appropriately a topic of the COL proceeding and not this proceeding.

4.315 Accordingly, we find that the Applicant and Staff have satisfied their ESP and LWA-stage obligations with regard to the aircraft impact rule.

3. Additional Information in Satisfaction of 10 C.F.R. § 52.24

4.316 Finally, because this proceeding involves a notice of hearing issued before a subsequent change in the Commission's rules concerning issuance of ESPs, in a March 12, 2009 memorandum and order the Board requested that the parties address in their opening statements the relationship between the findings the Board had been directed to make in the Notice of Hearing and those required under 10 C.F.R. § 52.24. *See* Licensing Board Memorandum and Order (Additional Mandatory Hearing Matters) (Mar. 12, 2009) at 1-2 (unpublished). Both SNC and the Staff addressed this topic at the hearing. *See* Tr. at M-1682 to -1685, M-1687 to -1689. Additionally, after the hearing, SNC filed a set of stipulations agreed to by the Staff, as well as an affidavit of SNC's Licensing Manager, Charles Pierce, and accompanying documents, addressing SNC's compliance with certain portions of 10 C.F.R. § 52.24. *See* [SNC] Submittal of Affidavit Addressing Requirements Under 10 C.F.R. § 52.24 (Apr. 8, 2009) (identified as Exh. SNC000100, *see* Apr. 17, 2009 Order at 2). SNC and the Staff stipulated that (1) SNC's ESP application meets the applicable standards and requirements of the AEA and the Commission's regulations; (2) required notifications to other agencies or bodies regarding the ESP application have been duly made; and (3) the Applicant is technically qualified to engage in any activities authorized by the ESP and LWA. *See id.* at 1. In his affidavit, Mr. Pierce stated that (1) SNC, a subsidiary of Southern Company, holds operating licenses for three currently existing nuclear power plants; (2) SNC has a contract with Stone & Webster, Inc., a subsidiary of Shaw Construction and Westinghouse Electric Corporation, for construction activities, including those related to the LWA; (3) the ESP application for the Vogtle site was submitted to the NRC on August 15, 2006, and was determined to be complete and accepted for docketing on September 26, 2006; and (4) SNC has served copies of the application and/or notified all public officials required under NRC regulations to be served or notified. *See* Pierce Affidavit at 1. The affidavit was accompanied by Mr. Pierce's curriculum vitae, Part 1 (Administrative Information) of the Vogtle ESP application, Chapter 1 of the Vogtle ESP SSAR, the *Federal Register* notice announcing acceptance for docketing of the Vogtle ESP application, and

an affidavit listing public officials served with copies of, or notified of, the availability of the Vogtle ESP application. *See id.* attachs. 1-5.

4.317 Based on the information contained in this submission, in addition to the Board's review of the evidence presented in the course of this proceeding, we find that SNC satisfies the requirements of 10 C.F.R. § 52.24(a)(1), (2), and (4) for issuance of an ESP and an accompanying LWA.

V. SUMMARY FINDINGS OF FACT AND CONCLUSIONS OF LAW

5.1 In accordance with the Commission's directives, *see Clinton ESP,* CLI-05-17, 62 NRC at 34, 39; *Clinton ESP,* CLI-06-20, 64 NRC at 21-22, the Board conducted an independent sufficiency review of the Staff findings, and probed those Staff findings by focusing in detail on the safety and environmental issues addressed by the Staff and SNC in the mandatory hearing presentations. In this regard, as was noted in section IV.B.1, *supra,* to the extent the Board did not request a presentation or further information from either the Staff or SNC on items that were the subject of a series of Board questions prior to the hearing, *see* Licensing Board Environmental Questions, app. A; Licensing Board Safety Questions, app. A, the Board was satisfied with the answers provided. Similarly, the Board was satisfied with the Staff review of topics in the FSER and FEIS that were not the subject of either Board questions or presentations. With respect to each of the topics that were the subject of presentations (and which were described in detail in section IV.A, above), the Board concludes that the Staff review was sufficient and reasonably supported in logic and fact.

5.2 In accordance with the Commission's notices of hearing for this proceeding, *see* ESP Hearing Notice, 71 Fed. Reg. at 60,195; LWA Hearing Notice, 72 *id.* at 64,686; and 10 C.F.R. §§ 50.10(e), 52.24, the Board makes the following additional findings:

A. Safety Findings

5.3 Having reviewed the basis for the Staff's central safety-related conclusions, the Board finds that the Staff review is adequate to support a finding that the issuance of the Vogtle ESP will provide reasonable assurance of adequate protection to public health and safety and will not be inimical to the common defense and security or to the health and safety of the public (Safety Issues 1 and 5).

5.4 Further, the Board finds that the Staff review is adequate to support the finding that, taking into consideration the site criteria contained in 10 C.F.R. Part 100, a reactor, or reactors, having characteristics that fall within the parameters

for the site, can be constructed and operated without undue risk to the health and safety of the public, in accordance with the notices of hearing (Safety Issue 2).

5.5 Finally, the Board finds that, in accordance with 10 C.F.R. § 50.10(e)(iv), there are no unresolved safety issues relating to the activities to be conducted under the LWA that would constitute good cause for withholding the LWA. As such, the Board finds the LWA should be issued.

B. Environmental Findings

1. NEPA Baseline Issue 1

5.6 NEPA Baseline Issue 1 requires that the Board independently consider and decide whether the requirements of NEPA §§ 102(2)(A), (C), and (E) and the Commission's NEPA regulations at 10 C.F.R. Part 51, Subpart A, have been met.

5.7 The information provided by SNC in its ER is adequate and acceptable under 10 C.F.R. Part 51, Subpart A, and NEPA. Morever, as detailed in the FEIS, in accord with NEPA § 102(2)(A), 42 U.S.C. § 4332(2)(A), the Staff's independent technical analysis of that information, as supplemented by the Staff, utilizes a "systematic, interdisciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts in planning and in decisionmaking which may have an impact on man's environment," and therefore comports with the NRC's requirements in Appendix A of 10 C.F.R. Part 51. Furthermore, the Staff environmental findings in the FEIS constitute the "hard look" required by NEPA and have reasonable support in logic and fact.

5.8 The FEIS adequately addresses (1) the environmental impact of the proposed action; (2) any unavoidable adverse environmental effects; (3) alternatives to the proposed action; (4) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and (5) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented in accordance with NEPA § 102(2)(C)(i)-(v), 42 U.S.C. § 4332(2)(C)(i)-(v). The Board further concludes that the Staff has satisfied the requirements of NEPA § 102(2)(C) by consulting with and obtaining comments from other federal agencies with jurisdiction by law or special expertise. *See id.* § 4332(2)(C).

5.9 Consistent with NEPA § 102(2)(E), *id.* § 4332(2)(E), the Staff's FEIS shows that the Staff adequately considered alternatives to recommended courses of action to the proposed action to the extent that it involves unresolved conflicts concerning alternative uses of available resources. Accordingly, the Staff consideration of alternatives to the proposed action in the FEIS satisfies NEPA § 102(2)(E), *id.* § 4332(2)(E).

5.10 Having reviewed the basis for the Staff central environmental-related conclusions, the Board finds that the Staff review is adequate under 10 C.F.R.

Part 51, Subpart A. *See* 10 C.F.R. § 51.105(a)(4). Thus, all findings and analyses required by NEPA § 102(2)(A), (C), and (E), 42 U.S.C. § 4332(2)(A), (C), and (E), have been satisfied with respect to issuance of the ESP and LWA. *See North Anna ESP,* LBP-07-9, 65 NRC at 614.

2. NEPA Baseline Issue 2

5.11 NEPA Baseline Issue 2 requires the Board to consider independently the final balance among the conflicting factors contained in the record of the proceeding and to determine the appropriate action to be taken. In accordance with the notice of hearing, the Board has independently considered the final balance among the conflicting factors contained in the record of this proceeding, and concludes that, overall, the balance supports issuance of the ESP and LWA.

3. NEPA Baseline Issue 3

5.12 Finally, NEPA Baseline Issue 3 requires the Board to determine, after considering reasonable alternatives, whether the ESP should be issued, denied, or appropriately conditioned to protect environmental values. In accordance with the notice of hearing, after reviewing the evidence presented by the parties to this proceeding and considering the reasonable alternatives, the Board concludes that the ESP and the LWA should be issued, and no conditions on such (beyond those already imposed by the Staff) are necessary or appropriate to protect environmental values.

C. Section 50.10(e) and Section 52.24(a) Findings

5.13 The Board finds that the requirements of 10 C.F.R. §§ 50.10(e)(1)(iii) and 52.24(a)(1), (2), and (4) have been met, specifically that (1) the SNC ESP application, with which SNC also requests an LWA, meets the applicable standards and requirements of the AEA and the Commission's regulations (Safety Issue 3); (2) required notifications to other agencies or bodies regarding the application for the ESP have been duly made; and (3) Applicant SNC is technically qualified to engage in any activities authorized by the ESP and LWA that are the subject of this proceeding (Safety Issue 4).

5.14 The Staff review was sufficient to establish that there is reasonable assurance that the site is in conformity with the provisions of the AEA, and the Commission's regulations, as required by 10 C.F.R. § 52.24(a)(3).

5.15 The Board finds that, in accordance with 10 C.F.R. § 52.24(a)(5), the proposed ITAAC, including those on emergency planning, are necessary and sufficient and within the scope of the ESP, so as to provide reasonable assurance

that Vogtle Units 3 and 4 will be constructed and operated in conformity with the ESP and the LWA, the AEA, and the Commission's regulations.

5.16 The Board concludes based on the record of the proceeding that issuance of the ESP and LWA will not be inimical to the common defense and security or to the health and safety of the public, as required by 10 C.F.R. §§ 50.10(e)(1)(iii), 52.24(a)(6).

5.17 Per 10 C.F.R. § 52.24(a)(7) (and 10 C.F.R. § 51.105(c)(1)(iii)), the Board further concludes that any significant adverse environmental impact resulting from LWA activities can be redressed.

5.18 As required by 10 C.F.R. § 52.24(a)(8), and the notices of hearing, all findings required by Subpart A of 10 C.F.R. Part 51 have been made.

5.19 Finally, in accord with 10 C.F.R. § 52.24(b), the ESP should specify the site characteristics, design parameters, and terms and conditions that the Commission deems appropriate. *See* FSER, app. A. In addition, as required by 10 C.F.R. § 52.24(c), the ESP should specify the activities SNC is authorized to perform under 10 C.F.R. § 50.10.[34] *See* FEIS 1A, at 4-73 (citing SReP at 1-3).

6.1 Pursuant to 10 C.F.R. § 2.1210, it is, this 17th day of August 2009, ORDERED that:

A. The Director, NRR, or the Director, NRO, as appropriate, is *authorized* to issue to SNC an ESP for the VEGP Units 3 and 4 site for a duration of not less than ten (10) nor more than twenty (20) years, consistent with the AEA, the Commission's regulations, and this Final Partial Initial Decision.

B. The Director, NRR, or the Director, NRO, as appropriate, is *authorized* to issue to SNC an LWA for the VEGP Units 3 and 4 site consistent with the AEA, Commission regulations, and this Final Partial Initial Decision.

C. Pursuant to 10 C.F.R. §§ 2.341(a), 2.1210(a), this Partial Initial Decision will constitute a final decision of the Commission forty (40) days from the date of issuance (or the first agency business day following that date if it is a Saturday, Sunday, or federal holiday, *see* 10 C.F.R. § 2.306(a)), i.e., on *Monday, September 28, 2009,* unless a petition for review is filed in accordance with 10 C.F.R. §§ 2.341(b) and 2.1212, or the Commission directs otherwise. Any party wishing to file a petition for review on the grounds specified in 10 C.F.R. § 2.341(b)(4) must do so within fifteen (15) days after service of this Partial Initial Decision. The filing of a petition for review is mandatory for a party to have exhausted its administrative remedies before seeking judicial review. Within ten (10) days after service of a petition for review, parties to the proceeding may file an answer

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[34] Understanding that the Director, NRR, or the Director, NRO, as appropriate, would issue the ESP and the LWA, the Board expects that this information would be included consistent with 10 C.F.R. § 52.24(b), (c).

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).

D. Pursuant to 10 C.F.R. § 2.340(f), this Final Partial Initial Decision is immediately effective upon issuance.

THE ATOMIC SAFETY AND
LICENSING BOARD[35]

G. Paul Bollwerk, III, Chairman
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

James F. Jackson
ADMINISTRATIVE JUDGE

Rockville, Maryland
August 17, 2009

[35] Copies of this Second and Final Partial Initial Decision were sent this date by the agency's E-Filing system to counsel for (1) Applicant SNC; and (2) the Staff. Although Joint Intervenors were not parties to the mandatory/uncontested hearing portion of this proceeding, as a courtesy they also are being served with this issuance.

CASE NAME INDEX

AMERENUE
COMBINED LICENSE; MEMORANDUM AND ORDER (Approving Settlement Agreement and Terminating Contested Adjudicatory Proceeding); Docket No. 52-037-COL (ASLBP No. 09-884-07-COL-BD01); LBP-09-23, 70 NRC 659 (2009)

ANDREW J. SIEMASZKO
ENFORCEMENT; ORDER (Approving Proposed Settlement Agreement and Dismissing Proceeding); Docket No. IA-05-021-EA (ASLBP No. 05-839-02-EA); LBP-09-11, 70 NRC 151 (2009)

AREVA ENRICHMENT SERVICES, LLC
MATERIALS LICENSE; ORDER (Notice of Receipt of Application for License; Notice of Consideration of Issuance of License; Notice of Hearing and Commission Order; and Order Imposing Procedures for Access to Sensitive Unclassified Nonsafeguards Information and Safeguards Information for Contention Preparation); Docket No. 70-7015; CLI-09-15, 70 NRC 1 (2009)

CALVERT CLIFFS 3 NUCLEAR PROJECT, LLC
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket No. 52-016-COL; CLI-09-20, 70 NRC 911 (2009)
COMBINED LICENSE; MEMORANDUM AND ORDER (Granting Motion for Summary Disposition of Contention 2); Docket No. 52-016-COL (ASLBP No. 09-874-02-COL-BD01); LBP-09-15, 70 NRC 198 (2009)

COGEMA MINING, INC.
MATERIALS LICENSE RENEWAL; MEMORANDUM AND ORDER (Ruling on Petition for Review and Request for Hearing); Docket No. 40-08502-MLR (ASLBP No. 09-887-01-MLR-BD01); LBP-09-13, 70 NRC 168 (2009)

DAVID B. KUHL, II
REACTOR OPERATOR LICENSE; MEMORANDUM AND ORDER (Regarding Request for Hearing); Docket No. 55-62335-SP (ASLBP No. 09-891-01-SP-BD01); LBP-09-14, 70 NRC 193 (2009)

DAVID GEISEN
ENFORCEMENT; MEMORANDUM AND ORDER; Docket No. IA-05-052; CLI-09-23, 70 NRC 935 (2009)
ENFORCEMENT; INITIAL DECISION; Docket No. IA-05-052 (ASLBP No. 06-845-01-EA); LBP-09-24, 70 NRC 676 (2009)

DETROIT EDISON COMPANY
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket No. 52-033-COL; CLI-09-22, 70 NRC 932 (2009)
COMBINED LICENSE; MEMORANDUM AND ORDER (Ruling on Hearing Requests); Docket No. 52-033-COL (ASLBP No. 09-880-05-COL-BD01); LBP-09-16, 70 NRC 227 (2009)
LICENSE MODIFICATION; MEMORANDUM AND ORDER (Ruling on Standing and Contention Admissibility); Docket No. 72-71-EA (ASLBP No. 09-888-03-EA-BD01); LBP-09-20, 70 NRC 565 (2009)

DHIRAJ SONI
ENFORCEMENT; ORDER (Accepting Proposed Settlement and Dismissing Proceeding); Docket Nos. IA-08-023, IA-08-022 (EA-08-174) (ASLBP Nos. 09-882-02-EA-BD01, 09-881-01-EA-BD01); LBP-09-12, 70 NRC 159 (2009)

CASE NAME INDEX

DOMINION VIRGINIA POWER
COMBINED LICENSE; MEMORANDUM AND ORDER (Admitting Contention 10 in Part); Docket No. 52-017-COL (ASLBP No. 08-863-01-COL); LBP-09-27, 70 NRC 992 (2009)

DUKE ENERGY CAROLINAS, LLC
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-018-COL, 52-019-COL; CLI-09-21, 70 NRC 927 (2009)

EASTERN TESTING AND INSPECTION, INC.
ENFORCEMENT; ORDER (Accepting Proposed Settlement and Dismissing Proceeding); Docket Nos. IA-08-023, IA-08-022 (EA-08-174) (ASLBP Nos. 09-882-02-EA-BD01, 09-881-01-EA-BD01); LBP-09-12, 70 NRC 159 (2009)

ENTERGY NUCLEAR OPERATIONS, INC.
LICENSE RENEWAL; FULL INITIAL DECISION (Denying NEC's Motion to File a New Contention); Docket No. 50-271-LR (ASLBP No. 06-849-03-LR); LBP-09-9, 70 NRC 41 (2009)

ENTERGY NUCLEAR VERMONT YANKEE, LLC
LICENSE RENEWAL; FULL INITIAL DECISION (Denying NEC's Motion to File a New Contention); Docket No. 50-271-LR (ASLBP No. 06-849-03-LR); LBP-09-9, 70 NRC 41 (2009)

HIMAT SONI
ENFORCEMENT; ORDER (Accepting Proposed Settlement and Dismissing Proceeding); Docket Nos. IA-08-023, IA-08-022 (EA-08-174) (ASLBP Nos. 09-882-02-EA-BD01, 09-881-01-EA-BD01); LBP-09-12, 70 NRC 159 (2009)

INDIANA MICHIGAN POWER COMPANY
REQUEST FOR ACTION; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; Docket No. 50-315 (License No. DPR-58); DD-09-2, 70 NRC 899 (2009)

LUMINANT GENERATION COMPANY, LLC
COMBINED LICENSE; MEMORANDUM AND ORDER (Ruling on Standing and Contentions of Petitioners, and Other Pending Matters); Docket Nos. 52-034-COL, 52-035-COL (ASLBP No. 09-886-09-COL-BD01); LBP-09-17, 70 NRC 311 (2009)

OLD DOMINION ELECTRIC COOPERATIVE
COMBINED LICENSE; MEMORANDUM AND ORDER (Admitting Contention 10 in Part); Docket No. 52-017-COL (ASLBP No. 08-863-01-COL); LBP-09-27, 70 NRC 992 (2009)

PA'INA HAWAII, LLC
MATERIALS LICENSE; ORDER; Docket No. 30-36974-ML; CLI-09-17, 70 NRC 309 (2009)
MATERIALS LICENSE; MEMORANDUM AND ORDER; Docket No. 30-36974-ML; CLI-09-19, 70 NRC 864 (2009)

PPL BELL BEND, LLC
COMBINED LICENSE; MEMORANDUM AND ORDER (Ruling on Petitions to Intervene and Requests for Hearing); Docket No. 52-039-COL (ASLBP No. 09-890-10-COL-BD01); LBP-09-18, 70 NRC 385 (2009)

PROGRESS ENERGY FLORIDA, INC.
COMBINED LICENSE; MEMORANDUM AND ORDER (Rulings on Standing, Contention Admissibility, Motion to File New Contention, and Selection of Hearing Procedure); Docket Nos. 52-029-COL, 52-030-COL (ASLBP No. 09-879-04-COL-BD01); LBP-09-10, 70 NRC 51 (2009)
COMBINED LICENSE; INITIAL SCHEDULING ORDER; Docket Nos. 52-029-COL, 52-030-COL (ASLBP No. 09-879-04-COL-BD01); LBP-09-22, 70 NRC 640 (2009)
COMBINED LICENSE; ORDER (Denying Motion to Compel Disclosure of Bases for Expert Opinion); Docket Nos. 52-029-COL, 52-030-COL (ASLBP No. 09-879-04-COL-BD01); LBP-09-30, 70 NRC 1039 (2009)

SOUTH TEXAS PROJECT NUCLEAR OPERATING COMPANY
COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-012-COL, 52-013-COL; CLI-09-18, 70 NRC 859 (2009)
COMBINED LICENSE; MEMORANDUM AND ORDER (Ruling on Standing and Admissibility of Certain Contentions); Docket Nos. 52-012-COL, 52-013-COL (ASLBP No. 09-885-08-COL-BD01); LBP-09-21, 70 NRC 581 (2009)

CASE NAME INDEX

COMBINED LICENSE; MEMORANDUM AND ORDER (Ruling on Admissibility of Contentions 8-16); Docket Nos. 52-012-COL, 52-013-COL (ASLBP No. 09-885-08-COL-BD01); LBP-09-25, 70 NRC 867 (2009)

SOUTHERN NUCLEAR OPERATING COMPANY

COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-025-COL, 52-026-COL; CLI-09-16, 70 NRC 33 (2009)

EARLY SITE PERMIT; SECOND AND FINAL PARTIAL INITIAL DECISION (Mandatory/Uncontested Proceeding); Docket No. 52-011-ESP (ASLBP No. 07-850-01-ESP-BD01); LBP-09-19, 70 NRC 433 (2009)

TENNESSEE VALLEY AUTHORITY

COMBINED LICENSE; MEMORANDUM AND ORDER; Docket Nos. 52-014-COL, 52-015-COL; CLI-09-21, 70 NRC 927 (2009)

OPERATING LICENSE; MEMORANDUM AND ORDER (Granting Petition to Intervene); Docket No. 50-391-OL (ASLBP No. 09-893-01-OL-BD01); LBP-09-26, 70 NRC 939 (2009)

UNISTAR NUCLEAR OPERATING SERVICES, LLC

COMBINED LICENSE; MEMORANDUM AND ORDER; Docket No. 52-016-COL; CLI-09-20, 70 NRC 911 (2009)

COMBINED LICENSE; MEMORANDUM AND ORDER (Granting Motion for Summary Disposition of Contention 2); Docket No. 52-016-COL (ASLBP No. 09-874-02-COL-BD01); LBP-09-15, 70 NRC 198 (2009)

U.S. DEPARTMENT OF ENERGY

CONSTRUCTION AUTHORIZATION; MEMORANDUM AND ORDER (Addressing Contentions Filed After Initial Petitions); Docket No. 63-001-HLW (ASLBP No. 09-892-HLW-CAB04); LBP-09-29, 70 NRC 1028 (2009)

VIRGINIA ELECTRIC AND POWER COMPANY

COMBINED LICENSE; MEMORANDUM AND ORDER (Admitting Contention 10 in Part); Docket No. 52-017-COL (ASLBP No. 08-863-01-COL); LBP-09-27, 70 NRC 992 (2009)

WESTINGHOUSE ELECTRIC COMPANY, LLC

MATERIALS LICENSE AMENDMENT; MEMORANDUM AND ORDER (Ruling on Request for Hearing); Docket No. 70-36-MLA (ASLBP No. 10-894-01-MLA-BD01); LBP-09-28, 70 NRC 1019 (2009)

LEGAL CITATIONS INDEX
CASES

Abourezk v. Reagan, 785 F.2d 1043, 1053 (D.C. Cir. 1986), *aff'd,* [484 U.S. 1] (1987)
- although administrative history and other available guidance may be consulted for background information and the resolution of ambiguities in a regulation's language, its interpretation may not conflict with the plain meaning of the wording used in that regulation; LBP-09-15, 70 NRC 214 (2009)

Advanced Medical Systems, Inc. (One Factory Row, Geneva, Ohio 44041), CLI-93-8, 37 NRC 181, 185 (1993)
- although the Commission is not strictly bound by mootness doctrine, the agency's adjudicatory tribunals have generally adhered to the principle; LBP-09-15, 70 NRC 209 (2009)
- the mootness doctrine derives from the Constitution's limitation of federal courts' jurisdiction to cases or controversies; LBP-09-15, 70 NRC 209 (2009)

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, that present unique problems, or that cause extraordinary costs; LBP-09-16, 70 NRC 298 (2009)

Alaska Department of Transportation and Public Facilities, CLI-04-26, 60 NRC 399, 406 n.28 (2004)
- it is unlikely that petitioners will often obtain hearings on confirmatory enforcement orders because such orders presumably enhance rather than diminish public safety; LBP-09-20, 70 NRC 578 n.67 (2009)

Alfred J. Morabito (Senior Operator License for Beaver Valley Power Station, Unit 1), CLI-88-4, 28 NRC 5, 6 (1988)
- unlike many cases in which a contention becomes moot, this is not an instance where an analysis of the merits would be an empty exercise; LBP-09-15, 70 NRC 212 (2009)
- where an applicant proposed that a senior reactor operator license be both issued and cancelled retroactively, the Commission declined to engage in such an empty exercise; LBP-09-14, 70 NRC 196 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111 (2006)
- challenges to board rulings on late-filed contentions normally fall under the rules for interlocutory review; CLI-09-18, 70 NRC 862 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 118 (2006)
- contention admissibility rules are strict by design; LBP-09-26, 70 NRC 952 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 121 (2006)
- the Commission gives substantial deference to a board's rulings on threshold issues such as standing and contention admissibility in the absence of clear error or abuse of discretion; CLI-09-16, 70 NRC 35 (2009); CLI-09-20, 70 NRC 914 (2009); CLI-09-22, 70 NRC 933 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124 (2007), *aff'd sub nom., New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132 (3d Cir. 2009)
- terrorism-related issues are outside the scope of NRC adjudications; LBP-09-17, 70 NRC 371, 381-82 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 126 (2007)
- the Commission has declined to require the agency to consider terrorist threats outside the Ninth Circuit as part of the NEPA review process; LBP-09-10, 70 NRC 116 (2009); LBP-09-17, 70 NRC 343 (2009)

LEGAL CITATIONS INDEX

CASES

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 128-29 (2007), *aff'd sub nom., New Jersey Department of Environmental Protection v. NRC,* 561 F.3d 132 (3d Cir. 2009)

NRC is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question; LBP-09-17, 70 NRC 382 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 128-31 (2007)

NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews outside the Ninth Circuit; LBP-09-26, 70 NRC 980, 981 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 128-34 (2007)

licensing boards are required apply the Commission's directive that outside the Ninth Circuit, NEPA does not require the evaluation of the impact of terrorist attacks by aircraft or other means; LBP-09-18, 70 NRC 413 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 129 (2007)

NEPA does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks on NRC-licensed facilities; CLI-09-15, 70 NRC 5 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 260 (2009)

a board may view petitioner's supporting information in a light favorable to petitioner, but petitioner (not the board) is required to supply all required elements for a valid intervention petition; LBP-09-10, 70 NRC 72 (2009)

requirements for filing both new and nontimely contentions are stringent; LBP-09-27, 70 NRC 998 (2009)

AmerGen Energy Co. (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 261 (2009)

good cause for the failure to file on time is the most important of the late-filing factors; LBP-09-26, 70 NRC 949 (2009)

AmerGen Energy Co. (Oyster Creek Nuclear Generating Station), CLI-09-7, 69 NRC 235, 275 (2009)

although a board may appropriately view petitioners' support for its contention in a light that is favorable to the petitioner, the petitioner must provide some support for his or her contention, in the form of either facts or expert testimony; LBP-09-26, 70 NRC 955 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), LBP-06-11, 63 NRC 391, 396 n.3 (2006)

if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-09-27, 70 NRC 998-99 (2009)

AmerGen Energy Co., LLC (Oyster Creek Nuclear Generating Station), LBP-06-16, 63 NRC 737, 744-45 (2006)

the first step in assessing the admissibility of a new contention is to determine if it is timely under 10 C.F.R. 2.309(f)(2)(iii) or nontimely under section 2.309(c); LBP-09-10, 70 NRC 138 (2009)

Andrew Siemaszko, CLI-06-12, 64 NRC 495 (2006)

there were no factors that would interfere with the criminal prosecution if discovery in the civil enforcement matter went forward; LBP-09-24, 70 NRC 804-05 n.17 (2009)

APWU v. Potter, 343 F.3d 619, 626 (2d Cir. 2003)

a text should be construed so that effect is given to all its provisions, so that no part will be inoperative or superfluous, void or insignificant, and so that one section will not destroy another unless the provision is the result of obvious mistake or error; LBP-09-16, 70 NRC 264 n.118 (2009)

Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991)

although a board may appropriately view petitioners' support for its contention in a light that is favorable to the petitioner, the petitioner must provide some support for his or her contention, in the form of either facts or expert testimony; LBP-09-17, 70 NRC 328 (2009); LBP-09-26, 70 NRC 955 (2009)

failure to present the factual and expert support for a contention requires that the contention be rejected; LBP-09-26, 70 NRC 954 (2009)

if petitioner fails to provide the requisite support for its contentions, the board may not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-09-18, 70 NRC 404 (2009)

Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 143, 155-56 (1991)
failure of a contention to meet any of the pleading requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi) precludes its admission; LBP-09-17, 70 NRC 324 (2009); LBP-09-21, 70 NRC 592 (2009); LBP-09-26, 70 NRC 952 (2009)

Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 156 (1991)
a contention must explain why the application is deficient through reference to specific portions of the application, and it must directly controvert a position taken by the applicant in the application; LBP-09-17, 70 NRC 327 (2009)

Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 NRC 397, 401 (1991)
petitioners are usually permitted to amend petitions containing curable defects and *pro se* petitioners are held to a less rigorous standard; LBP-09-18, 70 NRC 396-97 (2009)

Atlantic Research Corp. (Alexandria, Virginia), ALAB-594, 11 NRC 841, 849 (1980)
licensing boards review NRC Staff's enforcement order *de novo*; LBP-09-24, 70 NRC 706 (2009)

Babcock and Wilcox (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 81, *appeal dismissed,* CLI-93-9, 37 NRC 190 (1993)
every petitioner bears the burden of demonstrating standing in order to participate in hearings before a licensing board; LBP-09-18, 70 NRC 400 (2009)

Babcock and Wilcox (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 83 (1993)
the nontrivial increased risk of living within 50 miles of a proposed reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; CLI-09-20, 70 NRC 917 (2009)

Bailey v. United States, 516 U.S. 137, 145 (1995)
in interpreting regulations, not only the bare meaning of the word but also its placement and purpose in the statutory scheme are considered; LBP-09-15, 70 NRC 216 n.56 (2009)

Bellotti v. NRC, 725 F.2d 1380, 1381 (1983)
the Commission, rather than petitioner, holds the authority to define the scope of a proceeding; LBP-09-20, 70 NRC 575 (2009)
where the notice of hearing limits the scope to whether the order should be sustained, petitioner's sole remedy is rescission of the order; LBP-09-20, 70 NRC 575 (2009)
with respect to orders modifying a license, petitioner must always request a remedy that falls within the scope of the proceeding, as articulated in the notice of hearing; LBP-09-20, 70 NRC 575 (2009)

Bellotti v. NRC, 725 F.2d 1380, 1382 n.2 (1983)
intervention petitioners who think an order modifying a license should not be sustained, but might want further corrective measures, are precluded from intervention; LBP-09-20, 70 NRC 575 (2009)

Bellotti v. NRC, 725 F.2d 1380, 1383 (1983)
the Commission's power to define the scope of a proceeding will lead to the denial of intervention when the Commission amends a license to require additional or better safety measures; LBP-09-20, 70 NRC 578 n.67 (2009)

Bourjaily v. United States, 483 U.S. 171, 179-80 (1987)
individual pieces of evidence, insufficient in themselves to prove a point, may in cumulation prove it; LBP-09-24, 70 NRC 849 (2009)

Brock v. Nellis, 809 F.2d 753, 755 (11th Cir. 1987)
establishing a party's actual knowledge requires showing more than that a party had a suspicion that something was awry; LBP-09-24, 70 NRC 708 n.46 (2009)

LEGAL CITATIONS INDEX

CASES

Brown v. Navajo Regional Director, 41 IBIA 314, 2005 I.D. LEXIS 99, at *11 (Bureau of Indian Affairs, Dep't of Interior, Oct. 26, 2005)

federal agencies, especially when acting through the adjudicatory process,) and state courts have recognized that similar policy considerations counsel against proceeding with an adjudication if there is no possibility of awarding the petitioner meaningful relief; LBP-09-14, 70 NRC 196 n.15 (2009)

Butchers' Union Co. v. Crescent City Co., 111 U.S. 746, 762 (1884)

the right to follow any of the common occupations of life is an inalienable right that was formulated as such under the phrase "pursuit of happiness" in the Declaration of Independence and it is a large ingredient in the civil liberty of the citizen; LBP-09-24, 70 NRC 806 n.20 (2009)

Business and Professional People for the Public Interest v. AEC, 502 F.2d 424, 428 (D.C. Cir. 1974)

the purpose of the contention admissibility rules is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-09-26, 70 NRC 952 (2009)

California v. Federal Energy Regulatory Commission, 329 F.3d 700, 707 (9th Cir. 2003)

publication in the *Federal Register* is legally sufficient notice to all interested or affected persons regardless of actual knowledge or hardship resulting from ignorance, except those who are legally entitled to personal notice; LBP-09-20, 70 NRC 570 (2009)

California Valley Miwok Tribe v. United States, 515 F.3d 1262, 1264 (D.C. Cir. 2008)

federal recognition by the Bureau of Indian Affairs is a formal political act confirming a tribe's existence as a distinct political society and institutionalizing the government-to-government relationship between the tribe and the federal government; LBP-09-13, 70 NRC 185 n.30 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915-16 (2009)

the Commission recognizes a 50-mile proximity presumption to establish standing in proceedings concerning nuclear power reactor construction and operating licenses; LBP-09-28, 70 NRC 1024 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 917 (2009)

there is no conflict between the basic requirements for standing, as applied in the federal courts, and the NRC's proximity presumption; CLI-09-22, 70 NRC 933 (2009)

Calvert Cliffs Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI 09-20, 70 NRC 911, 923 (2009)

the licensing board did not commit reversible error by admitting a contention based on low-level radioactive waste storage duration because the NRC Staff itself had issued a Request for Additional Information on this very issue and thus this conflicted with Staff's argument that the issue is immaterial to the findings that must be made on the application; LBP-09-27, 70 NRC 1015 n.123 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 181-86 (2009)

under the proximity presumption, petitioner in an operating license proceeding who lives within 50 miles of a nuclear power reactor is presumed to have standing without the need specifically to plead injury, causation, and redressability; LBP-09-26, 70 NRC 947 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 183 (2009)

a board is not at liberty to abandon the Commission's 50-mile proximity presumption; LBP-09-16, 70 NRC 242 (2009)

NRC's proximity presumption does not disregard contemporaneous judicial concepts of standing, but rather the Commission applied its expertise to determine that persons living within a 50-mile radius of a nuclear reactor face a realistic threat of harm if a release of radioactive material were to occur from the facility; LBP-09-16, 70 NRC 242 (2009)

the nontrivial increased risk to persons living within a 50-mile radius of a nuclear reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; LBP-09-16, 70 NRC 242 (2009)

LEGAL CITATIONS INDEX

CASES

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 187 (2009)

favorable rulings on petitioners' NEPA contentions would ensure that procedures are observed that require adequate analysis of potential impacts to their members' health and safety and to the environment where the members reside; LBP-09-16, 70 NRC 243 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 199 (2009)

a board can only decide whether or not a current funding proposal fulfills NRC requirements; LBP-09-18, 70 NRC 422 (2009)

it is beyond the authority of a board to say which method applicant must use to fulfill the decommissioning funding assurance requirement; LBP-09-18, 70 NRC 422 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 200 (2009)

it is beyond licensing board authority to require applicant to choose a particular method of decommissioning funding; LBP-09-15, 70 NRC 207 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 202 (2009)

although applicant's description of existing water quality conditions did not separately evaluate the contributions of specific sources, it nonetheless formed an environmental baseline against which to measure the cumulative impact of the proposed new reactor; LBP-09-16, 70 NRC 247 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 203-05 (2009)

the environmental baseline reflects the effects of all currently existing pollution sources in the relevant watershed, including contributions of all nuclear power plants, and petitioners failed to provide information indicating that this aggregate analysis was insufficient under NEPA; LBP-09-16, 70 NRC 248 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 208 (2009)

the NEPA requirement to consider alternatives to a proposed action is governed by the rule of reason applicable to all NEPA-required alternatives analyses and does not extend to events that are remote and speculative; LBP-09-26, 70 NRC 970 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 217-18 (2009)

a decision may be referred to the Commission if it raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; LBP-09-18, 70 NRC 407 (2009)

an attack on the Commission's proximity presumption is rejected; LBP-09-18, 70 NRC 397 (2009)

contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-17, 70 NRC 337 (2009)

contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 406 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 220-21 (2009)

boards have authority to narrow low-level radioactive waste contentions; LBP-09-16, 70 NRC 253 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 220-31 (2009)

contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 253 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 221 (2009)

only the management of Class B and Class C wastes is properly the subject of a contention in a combined license proceeding; LBP-09-16, 70 NRC 254 (2009)

Part 61 does not apply to onsite facilities where the licensee intends to store its own low-level radioactive waste; LBP-09-10, 70 NRC 121 n.57 (2009)

LEGAL CITATIONS INDEX

CASES

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 222 (2009)

although boards are not required to narrow contentions to make them acceptable, they may do so; LBP-09-25, 70 NRC 875 n.37 (2009)

arguments premised on the prediction that someday a nuclear plant site will become a permanent storage or disposal facility for low-level radioactive waste are too speculative and therefore not material to the findings the NRC must make to support the action that is involved in the present proceeding; LBP-09-16, 70 NRC 255 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 224-25 (2009)

an application's lack of consideration of any alternative to offsite disposal of low-level radioactive waste is a material issue for litigation; LBP-09-18, 70 NRC 424 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-4, 69 NRC 170, 226-27 (2009)

low-level radioactive waste disposal contentions have been admitted when that issue was not sufficiently discussed in the applications and there was no mention of the closure of the Barnwell facility; LBP-09-18, 70 NRC 410-11 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-15, 70 NRC 198, 214-19 (2009)

at the time the combined license application is submitted, applicant must specify the method for decommissioning funding assurance that it proposes to use and must show that the method satisfies the applicable financial test; LBP-09-18, 70 NRC 422 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-15, 70 NRC 198, 218-19 (2009)

at the time the combined license application is submitted, it must identify the method of decommissioning funding assurance that the applicant proposes to use and to show that the method complies with any applicable financial test; LBP-09-18, 70 NRC 418 n.215 (2009)

Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), LBP-09-15, 70 NRC 198, 223 n.83 (2009)

the role of a licensing board is to decide whether an applicant has supplied the requisite information to the NRC, and whether the petitioners have identified any defect in that information; LBP-09-18, 70 NRC 419 (2009)

Calvert Cliffs Coordinating Committee, Inc. v. AEC, 449 F.2d 1109, 1123 (D.C. Cir. 1971)

abdicating water quality effects entirely to other agencies' certifications subverts the special purpose of NEPA; LBP-09-16, 70 NRC 278 (2009)

NRC is required to evaluate and balance both the claimed benefits and the environmental costs of a proposed new reactor; LBP-09-16, 70 NRC 301 (2009)

Carolina Power & Light Co. (H.B. Robinson, Unit 2), ALAB-569, 10 NRC 557, 561-62 (1979)

when water quality decisions have been made by a state pursuant to the Clean Water Act and these decisions are raised in NRC licensing proceedings, the NRC is bound to take EPA's considered decisions at face value; LBP-09-25, 70 NRC 885 (2009)

Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 66 NRC 41, 52 (2007)

if an organization seeks to intervene as a representative of its members, it must identify at least one member by name and address, show that member would have standing in his or her own right, and demonstrate that the member has authorized the organization to intervene on his or her behalf; LBP-09-26, 70 NRC 947 (2009)

to demonstrate standing, an organization seeking to intervene in a proceeding must allege that the challenged action will cause a cognizable injury to the organization's interests or to the interests of its members; LBP-09-26, 70 NRC 947 (2009)

under the proximity presumption, petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if petitioner lives within 50 miles of the proposed facility; LBP-09-18, 70 NRC 395 (2009)

LEGAL CITATIONS INDEX

CASES

Cincinnati Gas and Electric Co. (Wm. H. Zimmer Nuclear Power Station), ALAB-595, 11 NRC 860, 863 (1980)
the appeal board declined to entertain appeals by license applicants challenging partial board rulings; CLI-09-18, 70 NRC 861 n.10 (2009)

Citizens Against Burlington, Inc. v. Busey, 938 F.2d 190, 199 (D.C. Cir.), *cert. denied,* 502 U.S. 994 (1991)
an agency cannot redefine the applicant's goals, and the EIS alternatives analysis should be based around the applicant's goals, including its economic goals; LBP-09-17, 70 NRC 379 (2009)
applicant may not define the objectives of its action in terms so unreasonably narrow that only one alternative would accomplish the applicant's goals, because this would make the agency's EIS alternatives analysis a foreordained formality; LBP-09-10, 70 NRC 128 (2009); LBP-09-17, 70 NRC 379 (2009)
goals of the project's sponsor are given substantial weight in determining whether an alternative is reasonable, and an agency cannot redefine the applicant's goals; LBP-09-10, 70 NRC 127 (2009); LBP-09-17, 70 NRC 379 (2009)

Citizens Awareness Network, Inc. v. NRC, 391 F.3d 338, 351 (1st Cir. 2004)
a party is entitled to conduct such cross-examination as may be required for a full and true disclosure of the facts; LBP-09-10, 70 NRC 145 (2009); LBP-09-22, 70 NRC 656 n.34 (2009)

City of Bridgeton v. Federal Aviation Administration, 212 F.3d 448, 458 (8th Cir. 2000)
a rule of reason governs the agency's duty to identify and consider all reasonable alternatives under NEPA; LBP-09-10, 70 NRC 127 (2009); LBP-09-17, 70 NRC 379 (2009)
federal courts now review the range of alternatives in an environmental impact statement under the rule of reason; LBP-09-21, 70 NRC 626 n.271 (2009)

City of Chicago v. Environmental Defense Fund, 511 U.S. 328, 337 (1994)
it is presumed that Congress knows how to draft an exemption when it wants to; LBP-09-15, 70 NRC 218 n.61 (2009)

City of New York v. U.S. Department of Transportation, 715 F.2d 732, 742 (2d Cir. 1983)
goals of a project's sponsor are given substantial weight in determining whether a NEPA alternative is reasonable; LBP-09-10, 70 NRC 127 (2009); LBP-09-17, 70 NRC 379 (2009)

City of Shoreacres v. Waterworth, 420 F.3d 440, 450 (5th Cir. 2005)
the NEPA alternatives analysis is the heart of the environmental impact statement; LBP-09-10, 70 NRC 126 (2009); LBP-09-17, 70 NRC 378 (2009)

Clements v. Airport Authority of Washoe County, 69 F.3d 321, 329-30 (9th Cir. 1995)
a party's failure to advance a collateral estoppel argument does not perforce trigger the waiver principle, thus precluding a tribunal from applying collateral estoppel; LBP-09-24, 70 NRC 822 (2009)
a tribunal retains discretion to overlook waiver in the collateral estoppel context, and its exercise of discretion should be based on a balancing of the relevant public and private interests; LBP-09-24, 70 NRC 822 (2009)

Clements v. Airport Authority of Washoe County, 69 F.3d 321, 330 (9th Cir. 1995)
the collateral estoppel doctrine promotes the compelling public interest in preserving the acceptability of judicial dispute resolution against the corrosive disrespect that would follow if the same matter were twice litigated to inconsistent results; LBP-09-24, 70 NRC 809-10, 813 n.5, 822 (2009)

Cleveland Board of Education v. Loudermill, 470 U.S. 532, 542 (1985)
prior to issuance of the immediately effective enforcement order the accused should be afforded some form of predeprivation hearing; LBP-09-24, 70 NRC 801 n.11, 852 n.45 (2009)

Cleveland Board of Education v. Loudermill, 470 U.S. 532, 543 (1985)
when the NRC Staff can, consistent with its duty to protect public health and safety, accord some form of predeprivation hearing, such a course of action is advisable in light of the important private interest in retaining employment and the fact that such a proceeding provides some opportunity for the employee to present his side of the case; LBP-09-24, 70 NRC 801 n.11, 852 n.45 (2009)

Cleveland Board of Education v. Loudermill, 470 U.S. 532, 543 n.8 (1985)
providing predeprivation notice and informal hearing permits the employee to give his version of the events and provides a meaningful hedge against erroneous action; LBP-09-24, 70 NRC 801 n.11, 852 n.45 (2009)

LEGAL CITATIONS INDEX

CASES

Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993)
intervention petitioner must establish a concrete and particularized injury that is fairly traceable to the challenged action, is likely to be redressed by a favorable decision, and is arguably within the zone of interests protected by the governing statute; CLI-09-20, 70 NRC 915 (2009); LBP-09-13, 70 NRC 176 (2009); LBP-09-16, 70 NRC 240 (2009)
when assessing whether an individual or organization has set forth a sufficient interest, the Commission has applied contemporaneous judicial concepts of standing; CLI-09-20, 70 NRC 915 (2009); LBP-09-16, 70 NRC 240 (2009)

Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Units 1, 2, and 3), LBP-92-4, 35 NRC 114, 125-26 (1992)
merely because a petitioner might have had standing in an earlier proceeding does not automatically grant standing in subsequent proceedings; LBP-09-18, 70 NRC 402 (2009)

Clyde A. Wilson International Investigations, Inc. v. Travelers Insurance Co., 959 F. Supp. 756, 763 (S.D. Tex. 1997)
one who signs a contract is presumed to know its contents; LBP-09-24, 70 NRC 708 n.47 (2009)

Commissioner of Internal Revenue v. Sunnen, 333 U.S. 591, 597 (1948)
the collateral estoppel doctrine is grounded on considerations of economy of judicial time and the public policy favoring the establishment of certainty in legal relations; LBP-09-24, 70 NRC 809, 813 n.5 (2009)

Commonwealth Edison Co. (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986)
good cause for the failure to file on time is the most important of the late-filing factors; LBP-09-26, 70 NRC 949 (2009)

Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), ALAB-616, 12 NRC 419, 426 (1980)
the scope of a contention is bounded by the scope of the notice of hearing; LBP-09-25, 70 NRC 889 n.138 (2009)

Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 192 (1999)
in demonstrating that a proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences, petitioner cannot rely on conclusory allegations about potential radiological harm, but must show how these various harms might result from the proposed action; LBP-09-20, 70 NRC 577 (2009)

Communities, Inc. v. Busey, 956 F.2d 619, 627 (6th Cir. 1992)
reasonable alternatives under NEPA do not include alternatives that are impractical, that present unique problems, or that cause extraordinary costs; LBP-09-16, 70 NRC 298 (2009)

Conley v. Gibson, 355 U.S. 41, 47 (1957)
notice pleading is a broad standard requiring only a short and plain statement of the claim; LBP-09-17, 70 NRC 328 (2009)

Connecticut Bankers Association v. Board of Governors, 627 F.2d 245, 251 (D.C. Cir. 1980)
petitioner does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that a dispute exists, but must make a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate; LBP-09-17, 70 NRC 329 (2009)

Connecticut Yankee Atomic Power Co. (Haddam Neck Plant), LBP-01-21, 54 NRC 33, 47 (2001)
the statement of considerations should be given special weight in interpreting the regulations; LBP-09-15, 70 NRC 221 (2009)

Connecticut Yankee Atomic Power Co. (Haddam Neck Plant), LBP-03-18, 58 NRC 262, 264 (2003)
licensing boards have granted state agencies the right to participate in its proceedings as the state's representative; LBP-09-16, 70 NRC 291 (2009)

Consolidated Edison Co. of New York (Indian Point, Units 1 and 2), CLI-01-19, 54 NRC 109, 142 (2001)
decommissioning rules are designed to minimize the administrative effort of licensees and the Commission and to provide reasonable assurance that funds will be available to carry out decommissioning in a manner that protects public health and safety; LBP-09-21, 70 NRC 630 (2009)

LEGAL CITATIONS INDEX

CASES

Consumers Energy Co. (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-19, 65 NRC 423, 426 (2007)

an independent spent fuel storage installation is essentially a passive structure rather than an operating facility, and there therefore is less chance of widespread radioactive release; LBP-09-20, 70 NRC 577 (2009)

an individual's claim of residence within 50 miles of a plant might entitle him to a presumption of standing based on his proximity in a reactor construction permit or operating license proceeding; CLI-09-20, 70 NRC 916 n.16 (2009)

in proceedings other than for construction permits, operating licenses, or significant amendments thereto, the Commission decides on a case-by-case basis whether the proximity presumption should apply, taking into account any obvious potential for offsite radiological consequences, as well as the nature of the proposed action and the significance of the radioactive source; LBP-09-20, 70 NRC 575 (2009)

the Commission declined to adopt a proximity presumption in an independent spent fuel storage installation license transfer proceeding, where petitioner had not demonstrated that the mere transfer of the ISFSI somehow increased his risk of radiological harm; LBP-09-20, 70 NRC 577-78 (2009)

Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409 (2007)

for representational standing, a member must qualify for standing in his or her own right, the interests that the organization seeks to protect must be germane to its own purpose, and neither the petitioner's contentions nor the requested relief must require an individual member to participate in the proceeding; LBP-09-16, 70 NRC 240 (2009); LBP-09-18, 70 NRC 395, 399 (2009); LBP-09-20, 70 NRC 575 (2009); LBP-09-21, 70 NRC 591 (2009); LBP-09-28, 70 NRC 1024 (2009)

Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409-10 (2007)

representational standing will not be granted where petitioner has provided no supporting affidavits or other evidence that any member has authorized it to represent their interests in the proceeding; LBP-09-28, 70 NRC 1026 n.28 (2009)

Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409, 411 (2007)

for organizational standing, the organization must, in its own right, satisfy the same requirements of injury, causation, and redressability as an individual; LBP-09-28, 70 NRC 1024 (2009)

organizations may demonstrate standing in either an organizational or a representational capacity; LBP-09-28, 70 NRC 1024 (2009)

Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 411-12 (2007)

general environmental and policy interests are insufficient for organizational standing; LBP-09-20, 70 NRC 576 (2009)

Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 412 n.37 (2007)

not all entities with governmental ties are entitled to participate in licensing proceedings as local governmental bodies; LBP-09-13, 70 NRC 186 (2009)

Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 414 (2007)

petitioner's issue will be ruled inadmissible if petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-09-26, 70 NRC 954 (2009)

Costle v. Pacific Legal Foundation, 445 U.S. 198, 204 (1980)

petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-09-17, 70 NRC 329 (2009)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 336 (2009)

the Commission gives substantial deference to a board's rulings on contention admissibility in the absence of clear error or abuse of discretion; CLI-09-16, 70 NRC 35 (2009); CLI-09-22, 70 NRC 933 (2009)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 339 (2009)

when denial of a license would alleviate a petitioner's asserted potential injury, any admissible contention with such a result can be prosecuted by a petitioner, regardless of whether that contention is directly related to that petitioner's articulated injury; LBP-09-16, 70 NRC 242 (2009)

LEGAL CITATIONS INDEX

CASES

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 339-41 (2009)

as long as either denial of a license or issuance of a decision mandating compliance with legal requirements would alleviate a petitioner's potential injury, then under longstanding NRC jurisprudence the petitioner may prosecute any admissible contention that could result in the denial or in the compliance decision; CLI-09-20, 70 NRC 918 n.28 (2009)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 340 (2009)

a nexus between the injury and the relief is required rather than a nexus between the claimed injury and the contention; LBP-09-16, 70 NRC 242 (2009)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 343 (2009)

affidavits authorizing organizational representation are to be filed with specific reference to the proceeding in which standing is sought and providing the petitioners the opportunity to cure such defects in their affidavits; LBP-09-13, 70 NRC 182 n.26 (2009)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 345 (2009)

a board's determination of standing does not depend on whether the cause of the injury flows directly from the challenged action, but whether the chain of causation is plausible; LBP-09-13, 70 NRC 177 (2009)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 352 (2009)

at the contention admission stage, the Board simply has to find that each of the elements of contention admissibility is satisfied, and need not weigh the merits of petitioner's arguments; LBP-09-10, 70 NRC 86 n.28 (2009)

petitioner must provide a concise statement of the alleged facts or expert opinion that support the contention, references to sources and documents on which the petitioner intends to rely, and sufficient information to show that a genuine dispute exists; LBP-09-10, 70 NRC 136 n.75 (2009)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), LBP-08-24, 68 NRC 691, 760 (2008)

although a board in another materials license renewal proceeding allowed an Indian organization to participate in that proceeding as an interested Indian Tribe under 10 C.F.R 2.315(c), that ruling is not binding on other boards; LBP-09-13, 70 NRC 187 n.33 (2009)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 549 (2009)

the Commission upheld the licensing board's finding that the petitioner demonstrated good cause for its late filing; LBP-09-20, 70 NRC 572-73 (2009)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 549 n.61 (2009)

good cause is the most significant of the late-filing factors in 10 C.F.R. 2.309(c); LBP-09-20, 70 NRC 573 (2009)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552 (2009)

boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-09-16, 70 NRC 256 (2009)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 552-53 (2009)

if petitioner neglects to provide the requisite support for its contentions, the board should not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-09-26, 70 NRC 954 (2009)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 553 (2009)

because the reach of a contention necessarily hinges upon its terms and its stated bases, the brief explanation helps define the scope of the contention; LBP-09-26, 70 NRC 953 (2009)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 568 (2009)

a reply cannot expand the scope of the arguments set forth in the original hearing request; LBP-09-16, 70 NRC 254 (2009)

Curators of the University of Missouri (TRUMP-S Project),CLI-95-1, 41 NRC 71, 150 (1995)

NUREGs are guidance documents, with no binding effect, but are entitled to special weight, such that it is appropriate to consider in evaluating contentions; LBP-09-17, 70 NRC 368 (2009)

LEGAL CITATIONS INDEX

CASES

Curators of the University of Missouri (TRUMP-S Project), CLI-95-8, 41 NRC 386, 395 (1995)
the fact that a combined license application is subject to, or even expected to, change does not make it legally deficient because the NRC follows a dynamic licensing process; LBP-09-10, 70 NRC 77 (2009)

David B. Kuhl, II (Denial of Senior Reactor Operator License), LBP-09-14, 69 NRC 193, 196 (2009)
unlike many cases in which a contention becomes moot, this is not an instance where an analysis of the merits would be an empty exercise; LBP-09-15, 70 NRC 212 (2009)

Deal v. United States, 508 U.S. 129, 132 (1993)
it is a fundamental principle of statutory construction that the meaning of a word cannot be determined in isolation, but must be drawn from the context in which it is used; LBP-09-15, 70 NRC 217 n.57 (2009)

Defenders of Wildlife v. Andrus, 627 F.2d 1238, 1243-44 (D.C. Cir. 1980)
the National Environmental Policy Act applies to agencies of the federal government, not to private parties such as applicants for NRC licenses; LBP-09-10, 70 NRC 87 (2009)

Dellums v. NRC, 863 F.2d 968, 971 (D.C. Cir. 1988)
intervention petitioner must be able to show how it would have personally suffered or will suffer a distinct and palpable harm that constitutes injury in fact; LBP-09-18, 70 NRC 400 (2009)

Department of Transportation v. Public Citizen, 541 U.S. 752, 769 (2004)
controls that other countries may impose on mining and milling, and the impacts of such activities, are outside the scope of a combined license proceeding; LBP-09-17, 70 NRC 370 (2009)

Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), CLI-09-4, 69 NRC 80, 84-85 (2009)
applicant for a construction permit or a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted; LBP-09-17, 70 NRC 334 (2009)

Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), CLI-09-4, 69 NRC 80, 85 (2009)
challenges to the Commission regulations regarding the design certification process are inadmissible; LBP-09-18, 70 NRC 414 (2009)

Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), LBP-09-16, 70 NRC 227, 249-52 (2009)
contentions that challenge a Commission rule or rulemaking are inadmissible; LBP-09-26, 70 NRC 979 (2009)

Detroit Edison Co. (Greenwood Energy Center, Units 2 and 3), ALAB-472, 7 NRC 570 (1978)
the appeal board declined to entertain appeals by license applicants challenging partial board rulings; CLI-09-18, 70 NRC 861 n.10 (2009)

District of Columbia v. Schramm, 631 F.2d 854, 862 (D.C. Cir. 1980)
the National Environmental Policy Act applies to agencies of the federal government, not to private parties such as applicants for NRC licenses; LBP-09-10, 70 NRC 87 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003)
rules on contention admissibility are strict by design; LBP-09-10, 70 NRC 72 (2009); LBP-09-16, 70 NRC 244 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003)
with limited exceptions, no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-09-26, 70 NRC 956 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), CLI-09-5, 69 NRC 115, 126 (2009)
the standard for amendment of a contention is whether the information was available to the public, not whether the petitioner has recently found it; LBP-09-26, 70 NRC 988 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 3), LBP-08-9, 67 NRC 421, 431 (2008)
the scope of a proceeding is defined in the Commission's initial hearing notice and order referring the proceeding to the licensing board; LBP-09-26, 70 NRC 953 (2009)

LEGAL CITATIONS INDEX

CASES

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *petition for reconsideration denied,* CLI-02-1, 55 NRC 1 (2002)
petitioner must read the pertinent portions of the license application, including the safety analysis report and the environmental report, state the applicant's position and the petitioner's opposing view, and explain why petitioner disagrees with the applicant; LBP-09-17, 70 NRC 327 (2009)
the contention rule is strict by design, having been toughened in 1989 because in prior years licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation; LBP-09-17, 70 NRC 325 (2009); LBP-09-26, 70 NRC 952 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358-59 (2001)
rules on contention admissibility are strict by design; LBP-09-10, 70 NRC 72 (2009); LBP-09-16, 70 NRC 244 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 636 (2004)
failure to comply with any of the pleading requirements is grounds for rejecting a contention; LBP-09-10, 70 NRC 73 (2009); LBP-09-26, 70 NRC 952 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 637 (2004)
the Commission will affirm decisions on the admissibility of contentions where the appellant points to no error of law or abuse of discretion; CLI-09-20, 70 NRC 914 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 639 (2004)
the Commission has previously rejected claims that NRC regulations require discharge permits of their licensees; LBP-09-25, 70 NRC 885 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 564 (2005)
good cause for the failure to file on time is the most important of the late-filing factors; LBP-09-26, 70 NRC 949 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 564-65 (2005)
good cause for late filing was shown where petitioners lacked constructive or actual notice before the filing deadline, and they filed as soon as possible thereafter; LBP-09-20, 70 NRC 573 (2009)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 565 (2005)
absent good cause, petitioner's demonstration on the other late-filing factors must be compelling; LBP-09-26, 70 NRC 949 (2009)

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 interested or affected persons regardless of actual knowledge or hardship resulting from ignorance, except those who are legally entitled to personal notice; LBP-09-20, 70 NRC 570 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 223-24 (2007)
with regard to alternative sites for an early site permit, NRC Staff must evaluate both the methodology used by the applicant and the reasonableness of the potential sites identified by that method; LBP-09-19, 70 NRC 488 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 228-32 (2007)
where the final environmental impact statement discussion of alternative sites was insufficient, the board independently reviewed the record on greenfield, competitors' brownfield, noncompetitors' brownfield, and applicant's other nuclear sites to conclude that the Staff's underlying alternative site review was adequate; LBP-09-19, 70 NRC 488 (2009)

LEGAL CITATIONS INDEX

CASES

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 231-32 (2007)
brownfield sites owned by companies other than the applicant may reasonably be excluded as alternative sites; LBP-09-19, 70 NRC 496 n.18 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 232 (2007)
applicant's initial consideration of DOE's Portsmouth, Ohio, and SRS sites as alternative sites was reasonable as part of its alternative site analysis for an early site permit; LBP-09-19, 70 NRC 496 n.18 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 232 n.94 (2007)
noninclusion of DOE sites in alternative sites analysis that are far outside applicant's region of interest is reasonable; LBP-09-19, 70 NRC 496 n.18 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-07-27, 66 NRC 215, 237 & n.126 (2007)
in evaluating early site permit applications, where detailed design information is not available, the Commission may defer resolution of severe accident mitigation alternatives until the construction permit or combined license stage; LBP-09-19, 70 NRC 536 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-69 (2004)
challenges to the Waste Confidence Rule are prohibited by 10 C.F.R. 2.335; LBP-09-10, 70 NRC 114 (2009)
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 406 (2009)
licensing boards may not admit a contention that directly or indirectly challenges 10 C.F.R. 51.51, Table S-3; LBP-09-10, 70 NRC 115 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-04-18, 60 NRC 253, 268-70 (2004)
the Waste Confidence Rule is applicable to all new reactor proceedings and contentions challenging the rule or seeking its reconsideration are inadmissible; LBP-09-17, 70 NRC 337 (2009); LBP-09-18, 70 NRC 406 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 559-60, *permit issuance authorized,* CLI-07-27, 66 NRC 215 (2007)
with respect to certain NEPA findings, boards in early site permit proceedings are to make independent environmental judgments, though they need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities; LBP-09-19, 70 NRC 456 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 588, 642 *permit issuance authorized,* CLI-07-27, 66 NRC 215 (2007)
noninclusion of DOE sites in alternative sites analysis that are far outside applicant's region of interest is reasonable; LBP-09-19, 70 NRC 496 n.18 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 607 (2007)
the environmental impact statement need not consider an infinite range of alternatives, only reasonable or feasible ones; LBP-09-21, 70 NRC 626 n.271 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 614 (2007)
the environmental report must discuss each of the five subelements covered by NEPA § 102(2)(C); LBP-09-16, 70 NRC 263 (2009)

Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), LBP-07-9, 65 NRC 539, 629, *permit issuance authorized,* CLI-07-27, 66 NRC 215 (2007)
initial decisions are not effective until they are reviewed by the Commission; LBP-09-19, 70 NRC 460 (2009)

LEGAL CITATIONS INDEX

CASES

Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001)
if petitioner neglects to provide the requisite support for its contentions, the board should not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-09-26, 70 NRC 954 (2009)

Duke Energy Carolinas, LLC (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431 (2008)
challenges to the Waste Confidence Rule are prohibited; LBP-09-10, 70 NRC 114 (2009)

Duke Energy Carolinas, LLC (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431, 438 (2008)
the proximity presumption applies to combined license proceedings; LBP-09-16, 70 NRC 240 (2009)

Duke Energy Carolinas, LLC (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431, 438-39 (2008)
under the proximity presumption, petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if petitioner lives within 50 miles of the proposed facility; LBP-09-18, 70 NRC 395 (2009)

Duke Energy Carolinas, LLC (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431, 444-45 (2008)
contentions involving possible errors in Table S-3 have been referred to the Commission; LBP-09-21, 70 NRC 617 (2009)

Duke Energy Carolinas, LLC (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431, 446 (2008)
petitioner is obligated to read the pertinent portions of the license application, state the applicant's position and the petitioner's opposing view, and explain why it disagrees with the applicant; LBP-09-25, 70 NRC 882 n.87 (2009)

Duke Energy Carolinas, LLC (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431, 456-57 (2008)
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-17, 70 NRC 337 (2009)
the Waste Confidence Rule applies to combined license proceedings; LBP-09-18, 70 NRC 407 (2009)

Duke Energy Carolinas, LLC (William States Lee III Nuclear Station, Units 1 and 2), LBP-08-17, 68 NRC 431, 457 (2008)
licensing boards may not admit a contention that directly or indirectly challenges 10 C.F.R. 51.51, Table S-3; LBP-09-10, 70 NRC 114 (2009)

Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2), CLI-04-11, 59 NRC 203 (2004)
an appeal was dismissed as premature because the board decision that granted a hearing request constituted only a partial ruling on the intervention petition because it left unaddressed a group of proposed contentions; CLI-09-18, 70 NRC 861 (2009)

Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2), CLI-04-11, 59 NRC 203, 207 (2004)
to be appealable, a disputed order must dispose of the entire petition so that a successful appeal by a nonpetitioner will terminate the proceeding as to the appellee petitioner; CLI-09-18, 70 NRC 861 (2009)

Duke Energy Corp. (Catawba Nuclear Station, Units 1 and 2), CLI-04-11, 59 NRC 203, 208, 209 & n.15 (2004)
with respect to an applicant's appeal under section 2.311(d)(1), applicant must contend that, after considering all pending contentions, the board has erroneously granted a hearing to the petitioner; CLI-09-18, 70 NRC 861-62 n.10 (2009)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-17, 56 NRC 1, 12 (2002)
a contention that fails to provide even a ballpark figure for the cost of implementing any proposed severe accident mitigation alternatives is inadmissible because it is difficult to assess whether a SAMA may be cost-beneficial and thus warrant serious consideration; LBP-09-26, 70 NRC 969 n.151 (2009)

LEGAL CITATIONS INDEX

CASES

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002)
because the reach of a contention necessarily hinges upon its terms and its stated bases, the brief explanation helps define the scope of the contention; LBP-09-26, 70 NRC 953 (2009)

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)
submittal of the information by applicant is the basis for the finding of mootness of a contention, but the adequacy of the information submitted may be the subject of a new or amended contention; LBP-09-15, 70 NRC 211 (2009); LBP-09-21, 70 NRC 596 n.59 (2009)
when a contention of omission encompasses issues that are addressed completely in materials the applicant subsequently files, the contention is rendered moot; LBP-09-15, 70 NRC 210 (2009); LBP-09-16, 70 NRC 245 (2009); LBP-09-21, 70 NRC 596 (2009); LBP-09-27, 70 NRC 999 (2009)
where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by the Staff in a draft EIS, intervenors must timely file a new or amended contention that addresses the factors in section 2.714(b) in order to raise specific challenges regarding the new information; LBP-09-27, 70 NRC 999 (2009)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 424 (2003)
although technical perfection is not an essential element of contention pleading, the rules have nonetheless been held to bar contentions where petitioners have only what amounts to generalized suspicions, hoping to substantiate them later; LBP-09-17, 70 NRC 326 (2009); LBP-09-18, 70 NRC 404 (2009)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 NRC 419, 428-29 (2003)
a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-17, 70 NRC 323 (2009)
admission of new contentions under 10 C.F.R. 2.309(f)(2) does not run afoul of the Commission's aversion to petitioners who disregard NRC's timeliness requirements, nor does it allow petitioners to add new contentions that simply did not occur to them at the outset; LBP-09-10, 70 NRC 139 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)
standards for the admissibility of contentions originally came into being in 1989, when the Commission amended its rules to raise the threshold for the admission of contentions; LBP-09-17, 70 NRC 325 n.47 (2009)
the contention rule is strict by design, having been toughened in 1989 because in prior years licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation; LBP-09-17, 70 NRC 325 (2009)
the strict contention rule serves multiple interests; LBP-09-17, 70 NRC 325 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334-35 (1999)
rules on contention admissibility are strict by design; LBP-09-10, 70 NRC 72 (2009); LBP-09-16, 70 NRC 244 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 335 (1999)
the contention requirements were never intended to be turned into a fortress to deny intervention; LBP-09-21, 70 NRC 602 n.94 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336 (1999)
issuance of requests for additional information does not alone establish deficiencies in an application; LBP-09-16, 70 NRC 270 n.134 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-37 (1999)
a request for additional information by NRC, in itself, does not constitute grounds for a contention; LBP-09-10, 70 NRC 144 (2009)

LEGAL CITATIONS INDEX

CASES

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 336-39 (1999)
NRC Staff issuance of a request for additional information does not alone establish deficiencies in an application, and intervention petitioner must do more than merely quote an RAI to justify admission of a contention; CLI-09-16, 70 NRC 38 n.25 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 337 (1999)
contentions are inadmissible if petitioners provides no analysis, discussion, or information on their own on any of the issues raised in Staff requests for additional information; LBP-09-10, 70 NRC 76 (2009); LBP-09-16, 70 NRC 271 n.135 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 337-39 (1999)
although technical perfection is not an essential element of contention pleading, the rules have nonetheless been held to bar contentions where petitioners have only what amounts to generalized suspicions, hoping to substantiate them later; LBP-09-17, 70 NRC 326 (2009); LBP-09-18, 70 NRC 404 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 341-42 (1999)
a contention must explain why the application is deficient through reference to specific portions of the application, and it must directly controvert a position taken by the applicant in the application; LBP-09-17, 70 NRC 327 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 342 (1999)
petitioner is required to support its contentions with documents, expert opinion, or at least a fact-based argument; LBP-09-17, 70 NRC 329 (2009)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 345 (1999)
contentions that attack a Commission rule, or seek to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, are inadmissible; LBP-09-17, 70 NRC 338, 339, 340-41 (2009); LBP-09-18, 70 NRC 403 (2009); LBP-09-26, 70 NRC 978 (2009)
if petitioners are dissatisfied with NRC's generic approach to the waste disposal issue, their remedy lies in the rulemaking process, not in a licensing proceeding; LBP-09-10, 70 NRC 116 n.52 (2009); LBP-09-16, 70 NRC 251 (2009); LBP-09-18, 70 NRC 408 n.127 (2009); LBP-09-21, 70 NRC 600 (2009)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985)
the scope of a proceeding is defined in the Commission's initial hearing notice and order referring the proceeding to the Licensing Board; LBP-09-26, 70 NRC 953 (2009)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1049 (1983)
much of the information in an applicant's environmental report is used in the draft environmental impact statement; LBP-09-16, 70 NRC 263 (2009)

Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), LBP-83-8A, 17 NRC 282, 285 (1983)
although NRC may require an applicant to submit certain information, the NRC cannot delegate its duty to comply with the National Environmental Policy Act to the applicant; LBP-09-10, 70 NRC 87 (2009)

Eastern Testing & Inspection, Inc., LBP-96-11, 43 NRC 279, 282 n.1 (1996)
when an adjudicatory proceeding has been terminated before a licensing board pursuant to a settlement agreement, the board loses its jurisdiction over, and thus its authority to act with respect to, that licensing action; LBP-09-23, 70 NRC 668 n.27 (2009)

Emery Mining Co. v. Secretary of Labor, Mine Safety & Health Administration, 744 F.2d 1411, 1414 (10th Cir. 1984)
courts must construe regulations in light of the statutes they implement, keeping in mind that where there is an interpretation of an ambiguous regulation that is reasonable and consistent with the statute, that interpretation is to be preferred; LBP-09-16, 70 NRC 261 (2009)

EnergySolutions, LLC (Radioactive Waste Import/Export Licenses), CLI-08-24, 68 NRC 491, 493 (2008)
a facility that is licensed to receive only Class A low-level radioactive waste it is not pertinent to a contention regarding Class B and C waste; LBP-09-18, 70 NRC 423 n.250 (2009)

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-09-11, 69 NRC 529, 533 (2009)
a genuine material dispute is one that could lead to a different conclusion on potential cost-beneficial severe accident mitigation alternatives; LBP-09-26, 70 NRC 969 (2009)

LEGAL CITATIONS INDEX

CASES

Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 351-59 (2006)
a detailed summary of relevant case law on contention admissibility is provided; LBP-09-17, 70 NRC 324 n.44 (2009)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), CLI-09-6, 69 NRC 128, 132 (2009)
petitioners may request, and the Commission, in its discretion, may grant interlocutory review if it is shown that the issue threatens petitioners with immediate and serious irreparable impacts or affects the basic structure of the proceeding in a pervasive manner; LBP-09-10, 70 NRC 148 n.89 (2009)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 61 (2008)
the purpose of the contention admissibility rules is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-09-26, 70 NRC 952 (2009)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 62 (2008)
contentions that fall outside the scope of the proceeding must be rejected; LBP-09-26, 70 NRC 953 (2009)
materiality requires a showing that the alleged error or omission is of possible significance to the result of the proceeding; LBP-09-26, 70 NRC 953 (2009)
petitioner must show that the subject matter of the contention would impact the grant or denial of the license application at issue in the proceeding; LBP-09-26, 70 NRC 953 (2009)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 63 (2008)
determining whether the contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-09-26, 70 NRC 954 (2009)
providing any material or document as the foundation for a contention, without setting forth an explanation of its significance, is inadequate to support admission of the contention; LBP-09-26, 70 NRC 954 (2009)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 64 (2008)
a contention that attacks applicable statutory requirements or represents a challenge to the basic structure of the Commission's regulatory process must be rejected; LBP-09-26, 70 NRC 956 (2009)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 199 (2008)
NEPA is the only legal grounds for an admissible contention relating to environmental justice issues; LBP-09-18, 70 NRC 430 (2009)
to qualify as an environmental justice contention, the contention must show that the affected local population qualifies as a minority or low-income population; LBP-09-18, 70 NRC 430 (2009)

Entergy Nuclear Operations, Inc. (Palisades Nuclear Plant), CLI-08-19, 68 NRC 251, 260 (2008)
absent an obvious potential for harm, it is petitioner's burden to show how harm will or may occur; LBP-09-28, 70 NRC 1026 (2009)

Entergy Nuclear Operations, Inc. (Palisades Nuclear Plant), CLI-08-19, 68 NRC 251, 269-70 (2008)
no obvious potential for offsite consequences sufficient to establish organizational standing was shown even though the organization's office was a mere 3 miles from the facility; LBP-09-28, 70 NRC 1025 n.35 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 237 (2006)
a party seeking a stay must show it faces imminent, irreparable harm that is both certain and great; CLI-09-23, 70 NRC 936 n.4 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-04-31, 60 NRC 686, 704-06 (2004)
if no particular hearing procedure is compelled, the board must exercise its discretion and select the hearing procedure most appropriate for the newly admitted contentions; LBP-09-10, 70 NRC 146 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-04-33, 60 NRC 749 (2004)
it is common for applicants to modify and amend their applications, often many times, and this does not, per se, render the application deficient; LBP-09-10, 70 NRC 77 (2009)

LEGAL CITATIONS INDEX

CASES

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-05-32, 62 NRC 813, 821 n.21 (2005)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-09-27, 70 NRC 998-99 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 128 (2006)
to be sincere, movant should contact other parties sufficiently in advance to provide enough time for the possible resolution of the matter or issues in question; LBP-09-22, 70 NRC 649 n.24 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 572 (2006)
the first step in assessing the admissibility of a new contention is to determine if it is timely under 10 C.F.R. 2.309(f)(2)(iii) or nontimely under section 2.309(c); LBP-09-10, 70 NRC 138 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 573-74 (2006)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-09-27, 70 NRC 998-99 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 574 (2006)
thirty days is a reasonable limit for fulfilling the timing requirement of 10 C.F.R. 2.309(f)(2)(iii) because of the significant effort involved in identifying new information, assembling the required expertise, and then drafting a contention that satisfies 10 C.F.R. 2.309(f)(1); LBP-09-27, 70 NRC 1003 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 579 (2006)
when information forming the foundation for a new or amended contention becomes available piecemeal over time, the admissibility decision turns on a determination about when, as a cumulative matter, the separate pieces of the information puzzle were sufficiently in place to make the particular concerns reasonably apparent; LBP-09-10, 70 NRC 143 n.82 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 146-52 (2006)
a short discussion of the general admissibility criteria of 10 C.F.R. 2.309(f)(1)(i)-(vi) is provided; LBP-09-9, 70 NRC 45 n.12 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 147 (2006)
at the admission stage of the proceedings, boards admit contentions, not bases; LBP-09-26, 70 NRC 988 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 160 (2006), *aff'd,* CLI-07-3, 65 NRC 13, 17-18 (2007)
contentions dealing with risks associated with the high-density storage and racking of spent nuclear fuel in pools encompass information and grounds characterized as a board as well trod, rather than new information; LBP-09-10, 70 NRC 143 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 179 (2006), *rev'd on other grounds,* CLI-07-16, 65 NRC 371, 381-85 (2007)
while NEPA requires consideration of information regarding other regulatory requirements and permits, the fact that the applicant is subject to and complying with them does not obviate the NEPA mandate that the federal agency perform an EIS covering these topics; LBP-09-16, 70 NRC 279 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 182, 198-99 (2006)
a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-17, 70 NRC 323 (2009)

LEGAL CITATIONS INDEX

CASES

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 201 (2006), *aff'd,* CLI-07-3, 65 NRC 13 (2007)
under Part 2, Subpart G procedures, parties are permitted to propound interrogatories, take depositions, and cross-examine witnesses without leave of the Board; LBP-09-10, 70 NRC 145 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 202 (2006), *aff'd,* CLI-07-3, 65 NRC 13 (2007)
Subpart G procedures are used if the resolution of the contention meets specified criteria; LBP-09-10, 70 NRC 145 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 264 (2007)
if CUFen metal fatigue analysis produces a value of greater than unity, then the analysis indicates that the component would be likely to develop metal fatigue cracks that might affect their function during the 20-year license renewal period of extended operation, and thus requires an aging management program; LBP-09-9, 70 NRC 43 n.4 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 265 n.5 (2007)
the first step in assessing the admissibility of a new contention is to determine if it is timely under 10 C.F.R. 2.309(f)(2)(iii) or nontimely under section 2.309(c); LBP-09-10, 70 NRC 138 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 266-67 (2007)
a detailed analysis of the legal standards governing the admission of new contentions is provided; LBP-09-9, 70 NRC 45 n.11 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-07-15, 66 NRC 261, 272 (2007)
the availability of Subpart G procedures under 10 C.F.R. 2.310(d) depends critically on whether the credibility of eyewitnesses is important in resolving a contention, and witnesses relevant to each contention are not identified, under 10 C.F.R. 2.336(a)(1), until after contentions are admitted; LBP-09-10, 70 NRC 147 n.88 (2009)

Entergy Nuclear Vermont Yankee, LLC (Vermont Yankee Nuclear Power Station), LBP-08-25, 68 NRC 763, 824 (2008)
to defer determining a significant safety issue until after the license has already been issued would impermissibly remove it from the opportunity to be reviewed in the hearing process; LBP-09-15, 70 NRC 222 (2009)

Envirocare of Utah, Inc. v. NRC, 194 F.3d 72, 74 (D.C. Cir. 1999)
because agencies are not constrained by Article III of the Constitution, nor are they governed by judicially created standing doctrines restricting access to federal courts, the criteria for establishing administrative standing may permissibly be less demanding than the criteria for judicial standing; CLI-09-20, 70 NRC 915 (2009); LBP-09-18, 70 NRC 397 (2009)
even if NRC's proximity presumption is viewed as more lenient than judicial standing requirements, NRC may choose to retain it; CLI-09-20, 70 NRC 917 n.27 (2009)

Envirocare of Utah, Inc. v. NRC, 194 F.3d 72, 75 (D.C. Cir. 1999)
although the Commission commonly looks to Article III concepts for guidance, it is not required to automatically follow them in all respects because NRC proceedings are not subject to Article III; LBP-09-15, 70 NRC 210 (2009)

Environmental Law & Policy Center v. NRC, 470 F.3d 676, 683 (7th Cir. 2006)
blindly adopting applicant's goals is a losing proposition because it does not allow for the full range of alternatives required by NEPA; LBP-09-10, 70 NRC 128 (2009); LBP-09-17, 70 NRC 379 (2009)
NEPA requires an agency to exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals; LBP-09-10, 70 NRC 128 (2009); LBP-09-17, 70 NRC 379 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39 (2005)
when reviewing an early site permit application in an uncontested proceeding, licensing boards are to conduct a simple sufficiency review rather than a *de novo* review on both Atomic Energy Act and National Environmental Policy Act issues; LBP-09-19, 70 NRC 456 (2009)

when reviewing an early site permit application in an uncontested proceeding, licensing boards should inquire whether the NRC Staff performed an adequate review and made findings with reasonable support in logic and fact; LBP-09-19, 70 NRC 456 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 39-40 (2005)
a board's role in an early site permit proceeding is to carefully probe Staff findings by asking appropriate questions and by requiring supplemental information when necessary, but Staff's underlying technical and factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient; LBP-09-19, 70 NRC 457 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 44 (2005)
with respect to certain NEPA findings, boards in early site permit proceedings are to make independent environmental judgments, though they need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities; LBP-09-19, 70 NRC 456 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 45 (2005)
on baseline NEPA issues in early site permit cases, boards must reach their own independent determination, but should do so without second-guessing underlying technical or factual findings by the NRC Staff; LBP-09-19, 70 NRC 459 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801 (2005)
the reasonableness of energy conservation as an alternative in light of the need for a large amount of baseload electric power is questioned; LBP-09-10, 70 NRC 132 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 807 (2005)
applicant is not required to evaluate demand-side management as an alternative because it is not an alternative to the proposal to build new baseload power generation; LBP-09-21, 70 NRC 624 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 808 (2005), *aff'd sub nom. Environmental Law & Policy Center v. NRC,* 470 F.3d 676 (7th Cir. 2006)
applicant is not obliged to examine general efficiency or conservation proposals that would do nothing to satisfy the particular project's goals of producing baseload power; LBP-09-17, 70 NRC 377 (2009)
applicant is required to evaluate only alternatives that support the purpose of the project; LBP-09-21, 70 NRC 623 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 810 (2005), *aff'd sub nom. Environmental Law & Policy Center v. NRC,* 470 F.3d 676 (7th Cir. 2006)
a solely wind- or solar-powered facility could not satisfy a project's purpose of providing baseload power; LBP-09-17, 70 NRC 377 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), CLI-06-20, 64 NRC 15, 21-22 (2006)
in a mandatory hearing, a licensing board must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance; LBP-09-19, 70 NRC 456 (2009)

Exelon Generation Co., LLC (Early Site Permit for Clinton ESP Site), LBP-04-17, 60 NRC 229, 246-47 (2004)
a decision may be referred to the Commission if it raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; LBP-09-18, 70 NRC 407 (2009)
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-10, 70 NRC 114 (2009); LBP-09-17, 70 NRC 337 (2009)
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 406 (2009)
licensing boards may not admit a contention that directly or indirectly challenges 10 C.F.R. 51.51, Table S-3; LBP-09-10, 70 NRC 115 (2009)

Exelon Generation Co., LLC (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 580-81 (2005)
in proceedings other than for construction permits, operating licenses, or significant amendments thereto, the Commission decides on a case-by-case basis whether the proximity presumption should

apply, taking into account any obvious potential for offsite radiological consequences, as well as the nature of the proposed action and the significance of the radioactive source; LBP-09-20, 70 NRC 575 (2009)

Exelon Generation Co., LLC (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 580-83 (2005)

absent an obvious potential for harm, it is petitioner's burden to show how harm will or may occur; LBP-09-28, 70 NRC 1026 (2009)

Exelon Generation Co., LLC (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 581 (2005)

in nonreactor cases, the potential for offsite consequences is not always clear, and thus the burden falls on petitioner to demonstrate that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-09-20, 70 NRC 577 (2009)

Exxon Corp. v. Train, 554 F.2d 1310 (5th Cir. 1977)

the Clean Water Act does not authorize regulation of discharges to groundwater; LBP-09-25, 70 NRC 890 n.145 (2009)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 202 (2003)

the Commission has long recognized the benefits of participation in NRC proceedings by representatives of interested states; LBP-09-16, 70 NRC 291 (2009)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003)

a contention is inadmissible if intervenors offer no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-09-15, 70 NRC 224 (2009); LBP-09-16, 70 NRC 273, 290 (2009); LBP-09-17, 70 NRC 328 (2009); LBP-09-26, 70 NRC 954 (2009)

although a petitioner does not have to prove its contention at the admissibility stage, mere notice pleading is insufficient; LBP-09-17, 70 NRC 328 (2009); LBP-09-18, 70 NRC 404 (2009)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 204 (2003)

providing any material or document as the foundation for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of a contention; LBP-09-26, 70 NRC 954 (2009)

Fansteel, Inc. (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 204-05 (2003)

simply attaching material or documents in support of a contention, without explaining their significance, is inadequate to support the admission of the contention; LBP-09-17, 70 NRC 328 (2009); LBP-09-18, 70 NRC 404 (2009)

Federal Deposit Insurance Corp. v. Mallen, 486 U.S. 230, 240 (1988)

conviction of a crime that is identical to a charge in an enforcement order provides substantial assurance that the enforcement order was not baseless or unwarranted; LBP-09-24, 70 NRC 813 n.5 (2009)

where the government has deprived an individual of a property interest without a hearing, the government must be prepared to show an important government interest, accompanied by a substantial assurance that the deprivation is not baseless or unwarranted; LBP-09-24, 70 NRC 851-52 n.45 (2009)

Federal Deposit Insurance Corp. v. Mallen, 486 U.S. 230, 244 (1988)

returning of an indictment establishes probable cause to believe that the individual has committed a crime punishable by imprisonment for a term in excess of one year and demonstrates that the deprivation is not arbitrary; LBP-09-24, 70 NRC 852 n.45 (2009)

Federal Deposit Insurance Corp. v. Mallen, 486 U.S. 230, 247 (1988)

when the criminal trial precedes the enforcement proceeding, the defendant has not perforce been deprived of due process, but rather the criminal trial provides an additional forum to litigate the factual underpinnings of the administrative sanction and if the defendant is convicted, the administrative sanction is further supported; LBP-09-24, 70 NRC 852 n.45 (2009)

Field v. Mans, 516 U.S. 59, 68 n.7 (1995)

a court should not adopt an interpretation that would render a statutory provision redundant or nonsensical; LBP-09-16, 70 NRC 264 n.118 (2009)

LEGAL CITATIONS INDEX

CASES

Flast v. Cohen, 392 U.S. 83, 94 (1968)
the mootness doctrine derives from the Constitution's limitation of federal courts' jurisdiction to cases or controversies; LBP-09-15, 70 NRC 209 (2009)

Flast v. Cohen, 392 U.S. 83, 95 (1968)
the case or controversy jurisdictional limitation restricts the business of federal courts to questions presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-09-14, 70 NRC 195 (2009); LBP-09-25, 70 NRC 895 n.179 (2009)

Florida Power & Light Co. (St. Lucie Nuclear Power Plant, Unit 1), LBP 88-10A, 27 NRC 452, 463 (1988)
the scope of an adjudicatory proceeding is specified by the notice of hearing; LBP-09-25, 70 NRC 889 (2009)

Florida Power & Light Co. (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989)
having established proximity standing, petitioner need not separately establish the requisite injury, causation, and redressability elements; LBP-09-10, 70 NRC 115 (2009); LBP-09-18, 70 NRC 397 (2009)
living within 50 miles 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-09-10, 70 NRC 115 n.10 (2009); LBP-09-13, 70 NRC 177 n.19 (2009); LBP-09-16, 70 NRC 240 n.19 (2009); LBP-09-18, 70 NRC 395 (2009); LBP-09-20, 70 NRC 575 (2009); LBP-09-21, 70 NRC 590 n.15 (2009); LBP-09-26, 70 NRC 947 n.15 (2009)
NRC's proximity presumption does not disregard contemporaneous judicial concepts of standing, but rather the Commission applied its expertise to determine that persons living within a 50-mile radius of a nuclear reactor face a realistic threat of harm if a release of radioactive material were to occur from the facility; LBP-09-16, 70 NRC 242 (2009)

Florida Power & Light Co. (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329-30 (1989)
in certain types of cases, petitioner may establish standing based entirely upon his geographical proximity to the facility at issue; LBP-09-20, 70 NRC 575 (2009)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-952, 33 NRC 521, 528-30 (1991)
organizational standing requires the party to demonstrate a palpable injury in fact to its organizational interests that is within the zone of interests protected by the Atomic Energy Act or National Environmental Policy Act; LBP-09-21, 70 NRC 590 n.16 (2009)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), ALAB-952, 33 NRC 521, 530 (1991)
to establish organizational standing, an organization must demonstrate an injury-in-fact to the organization's interests or the interests of its members and that the injury is within the zone of interests protected by the National Environmental Policy Act or the Atomic Energy Act; LBP-09-13, 70 NRC 178 (2009)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 NRC 509, 521 & n.12 (1990)
stating that an allegation that some aspect of a license application is inadequate or unacceptable does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect; LBP-09-18, 70 NRC 404 n.102 (2009)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146 (2001)
under the proximity presumption, petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if petitioner lives within 50 miles of the proposed facility; LBP-09-18, 70 NRC 395 (2009)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146-50 (2001)
the Commission has clearly established a 50-mile presumption in the context of reactor licensing cases, where the potential for offsite radiological consequences is obvious; LBP-09-20, 70 NRC 577 (2009)

LEGAL CITATIONS INDEX

CASES

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 149 (2001)
- under the proximity presumption, petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if petitioner lives within 50 miles of the proposed facility; LBP-09-18, 70 NRC 395 (2009)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150, *aff'd on other grounds,* CLI-01-17, 54 NRC 3 (2001)
- in construction permit and operating license proceedings for power reactors, petitioner is presumed to have standing to intervene if petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm; CLI-09-20, 70 NRC 915 (2009)
- NRC's proximity presumption does not disregard contemporaneous judicial concepts of standing, but rather the Commission applied its expertise to determine that persons living within a 50-mile radius of a nuclear reactor face a realistic threat of harm if a release of radioactive material were to occur from the facility; LBP-09-16, 70 NRC 242 (2009)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995)
- an organization may base its standing on either immediate or threatened injury to its organizational interests or to the interests of identified members; LBP-09-13, 70 NRC 177 n.20 (2009); LBP-09-17, 70 NRC 322 (2009)
- in determining whether petitioner has established standing, boards are to construe the petition in favor of the petitioner; LBP-09-10, 70 NRC 70 (2009); LBP-09-18, 70 NRC 396 (2009); LBP-09-21, 70 NRC 591 (2009)
- to derive standing from a member, an organization must demonstrate that the individual member has standing to participate and has authorized the organization to represent his or her interests; LBP-09-13, 70 NRC 177-78 n.20 (2009)
- to establish organizational standing, an organization must demonstrate that the action at issue will cause an injury-in-fact to the organization's interests or the interests of its members and that the injury is within the zone of interests protected by the National Environmental Policy Act or the Atomic Energy Act; LBP-09-13, 70 NRC 178 (2009)
- to establish 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-09-16, 70 NRC 240 (2009)
- when assessing whether an individual or organization has set forth a sufficient interest, the Commission has applied contemporaneous judicial concepts of standing; LBP-09-16, 70 NRC 240 (2009); LBP-09-17, 70 NRC 321-22 n.30 (2009)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995)
- in nonreactor cases, the potential for offsite consequences is not always clear, and thus the burden falls on petitioner to demonstrate that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-09-20, 70 NRC 577 (2009)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116-17 (1995)
- in cases other than nuclear power reactor construction and operating licenses, licensing boards must address standing on a case-by-case basis, taking into account the nature of the proposed action and the significance of the radioactive source; LBP-09-28, 70 NRC 1024 (2009)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 118 (1995)
- at the contention admission stage, petitioner need not proffer facts in formal affidavit or evidentiary form sufficient to withstand a summary disposition motion; LBP-09-17, 70 NRC 328 (2009)

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 300 (1995)
- petitioner's inaccurate reading and presentation of applicant's spent fuel storage plan cannot serve as a litigable basis for a contention; LBP-09-27, 70 NRC 1008 (2009)

LEGAL CITATIONS INDEX

CASES

Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds,* CLI-95-10, 42 NRC 1, *and aff'd in part,* CLI-95-12, 42 NRC 111 (1995)

if petitioner neglects to provide the requisite support for its contentions, the board should not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-09-26, 70 NRC 954 (2009)

petitioner is obliged to present the factual and expert support for its contention; LBP-09-26, 70 NRC 954 (2009)

Gilbert v. Ferry, 413 F.3d 578, 580 (6th Cir. 2005)

a tribunal retains discretion to overlook waiver in the collateral estoppel context, and its exercise of discretion should be based on a balancing of the relevant public and private interests; LBP-09-24, 70 NRC 822 (2009)

the purposes of collateral estoppel are to shield litigants (and the judicial system) from the burden of relitigating identical issues and to avoid inconsistent results; LBP-09-24, 70 NRC 810, 822 (2009)

Gluck v. Unisys Corp., 960 F.2d 1168, 1176 (3d Cir. 1992)

constructive knowledge is knowledge of facts sufficient to prompt an inquiry that would have uncovered misrepresentations and is not actual knowledge; LBP-09-24, 70 NRC 708 n.46 (2009)

Goehring v. United States, 870 F. Supp. 106, 109 (D. Md. 1994)

to discount the maxim that the government wins when justice is done would be to adhere to the converse, that justice is done whenever the government wins; LBP-09-24, 70 NRC 799 n.8 (2009)

Goss v. Lopez, 419 U.S. 565, 583-84 (1975)

providing predeprivation notice and informal hearing permits the employee to give his version of the events and provides a meaningful hedge against erroneous action; LBP-09-24, 70 NRC 801 n.11, 852 n.45 (2009)

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 194 (2000)

an organization asserting representational standing must demonstrate that the interest of at least one of its members will be harmed, demonstrate that the member would have standing in his or her own right, identify that member by name and address, and demonstrate that the organization is authorized to request a hearing on behalf of that member; LBP-09-13, 70 NRC 178 (2009)

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 202 (2000)

representational standing requires the organization to demonstrate that the interest of at least one of its members will be harmed, to identify that member by name and address, and to show that the organization is authorized to request a hearing on behalf of that member; LBP-09-21, 70 NRC 590 n.16 (2009)

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)

a contention is inadmissible if intervenors offer no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-09-15, 70 NRC 224 (2009); LBP-09-17, 70 NRC 328 (2009); LBP-09-26, 70 NRC 954 (2009)

Greenbaum v. U.S. Environmental Protection Agency, 370 F.3d 527, 535-36 (6th Cir. 2004)

rules of statutory construction must be employed to give each word Congress used a separate and distinct significance which is consistent with its ordinary meaning; LBP-09-30, 70 NRC 1049 n.11 (2009)

Greene v. McElroy, 360 U.S. 474, 492 (1959)

the right to hold specific private employment and to follow a chosen profession free from unreasonable governmental interference comes within the "liberty" and "property" concepts of the Fifth Amendment; LBP-09-24, 70 NRC 806 n.20 (2009)

Groppi v. Leslie, 404 U.S. 496, 504 n.8 (1972)

the exercise of the summary contempt power is limited strictly to cases in which it is clear that all of the elements of misconduct are personally observed by the judge; LBP-09-24, 70 NRC 798-99 n.5 (2009)

GUARD v. NRC, 753 F.2d 1144, 1146 (D.C. Cir. 1985)

although administrative history and other available guidance may be consulted for background information and the resolution of ambiguities in a regulation's language, its interpretation may not conflict with the plain meaning of the wording used in that regulation; LBP-09-15, 70 NRC 215 (2009)

LEGAL CITATIONS INDEX

CASES

Gulf States Utilities Co. (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 226 (1974)
in construction permit and operating license proceedings for power reactors, petitioner is presumed to have standing to intervene if petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm; CLI-09-20, 70 NRC 915 (2009)

Gulf States Utilities Co. (River Bend Station, Unit 1), CLI-94-10, 40 NRC 43, 51 (1994)
although the contention admissibility rule imposes on a petitioner the burden of going forward with a sufficient factual basis, it does not shift the ultimate burden of proof from applicant to petitioner; LBP-09-27, 70 NRC 1006-07 (2009)
for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion, but must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-09-16, 70 NRC 290 (2009); LBP-09-17, 70 NRC 329 (2009); LBP-09-27, 70 NRC 1006-07 (2009)
the contention admissibility rule does not require a petitioner to prove its case at the contention stage; LBP-09-27, 70 NRC 1006-07 (2009)

Hamilton's Bogarts, Inc. v. Michigan, 501 F.3d 644, 650 (6th Cir. 2007)
four elements must be satisfied before a tribunal may apply collateral estoppel; LBP-09-24, 70 NRC 810 (2009)

Helvering v. Stockholms Enskilda Bank, 293 U.S. 84, 87 (1934)
since most words admit of different shades of meaning, susceptible of being expanded or abridged to conform to the sense in which they are used, the presumption that identical words in a statute always have identical meaning readily yields to the controlling force of the circumstance that the words, though in the same act, are found in such dissimilar connections as to warrant the conclusion that they were employed in the different parts of the act with different intent; LBP-09-30, 70 NRC 1049 n.11 (2009)

Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-535, 9 NRC 377, 389-400 (1979)
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; LBP-09-16, 70 NRC 240 n.22 (2009); LBP-09-20, 70 NRC 574 n.43 (2009)

Houston Lighting and Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 548 (1980)
the contention admissibility decision should not examine, under the guise of materiality or scope, whether the environmental impacts that petitioners allege have been omitted from the environmental report are indeed reasonable or significant, or whether an alternative that petitioners propound is reasonable; LBP-09-10, 70 NRC 86 n.29 (2009)

Houston Lighting and Power Co. (South Texas Project, Units 1 and 2), ALAB-549, 9 NRC 644, 649 (1979)
technical perfection is not an essential element of contention pleading; LBP-09-17, 70 NRC 326 (2009)

Houston Lighting and Power Co. (South Texas Project, Units 1 and 2), LBP-79-27, 10 NRC 563, 566 (1979), *aff'd,* ALAB-575, 11 NRC 14 (1980)
four elements must be satisfied before a tribunal may apply collateral estoppel; LBP-09-24, 70 NRC 711, 810 (2009)

Huron Holding Corp. v. Lincoln Mine Operating Co., 312 U.S. 183, 189 (1941)
pendency of an appeal need not preclude reliance on the lower court's decision being appealed to estop relitigation of the same matter in another forum; LBP-09-24, 70 NRC 713 n.62 (2009)

Hydro Resources, Inc. (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 121 (1998)
whether other permits may be required from other agencies is outside the scope of NRC proceedings, and those concerns are properly raised before those respective permitting authorities; LBP-09-21, 70 NRC 594 (2009)

Hydro Resources, Inc. (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261, 269 (1998), *rev'd on other grounds,* CLI-98-16, 48 NRC 119 (1998)
to assert an appropriate injury for organizational standing, an organization must demonstrate a palpable injury in fact to its organizational interests; LBP-09-13, 70 NRC 178 (2009)

LEGAL CITATIONS INDEX

CASES

Hydro Resources, Inc. (2929 Coors Road, Suite 101, Albuquerque, NM 87120), LBP-98-9, 47 NRC 261, 271 (1998), *rev'd on other grounds,* CLI-98-16, 48 NRC 119 (1998)
organizational standing requires the party to demonstrate a palpable injury in fact to its organizational interests that is within the zone of interests protected by the Atomic Energy Act or National Environmental Policy Act; LBP-09-21, 70 NRC 590 n.16 (2009)

Hydro Resources, Inc. (P.O. Box 777, Crownpoint, New Mexico 87313), LBP-05-17, 62 NRC 77, 91 (2005)
a justiciable controversy must involve adverse parties representing a true clash of interests and the questions raised must be presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-09-25, 70 NRC 895 n.179 (2009)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 55 (2001)
when reviewing a discrete license application filed by a private applicant, a federal agency may appropriately accord substantial weight to the preferences of the applicant, and may take into account the economic goals of the project's sponsor; LBP-09-10, 70 NRC 127 (2009); LBP-09-17, 70 NRC 379 (2009)

Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, NM 87174), CLI-04-33, 60 NRC 581, 596 (2004)
NUREGs are guidance documents, with no binding effect, but are entitled to special weight, such that it is appropriate to consider in evaluating contentions; LBP-09-17, 70 NRC 368 (2009)

Immigration and Naturalization Service v. Chadha, 462 U.S. 919, 959 (1983)
carefully crafted restraints in the Constitution preserve freedom by curbing the exercise of power; LBP-09-24, 70 NRC 799 n.5 (2009)

In re Campbell, 628 F.2d 1260, 1262 (9th Cir. 1980)
when a claim becomes moot, a decision on the merits may be appropriate if the same basic dispute is likely to recur in the future, unless it seems sufficient to await the event or better to defer to another court; LBP-09-15, 70 NRC 210 (2009)

Independent Bankers Association of Georgia v. Board of Governors of Federal Reserve System, 516 F.2d 1206, 1220 n.57 (D.C. 1975)
petitioner does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that a dispute exists, but must make a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate; LBP-09-17, 70 NRC 329 (2009)

Integrated Systems Analysts, Inc., SBA No. 1944, 1984 SBA LEXIS 19, at *4-5 (Small Business Administration Office of Hearings & Appeals, May 1, 1984)
appeal of business size assessment for contract bid eligibility was dismissed as moot because contract had already been awarded; LBP-09-14, 70 NRC 196 n.15 (2009)

International Uranium (USA) Corp. (Receipt of Material from Tonawanda, New York), CLI-98-23, 48 NRC 259, 264 (1998)
although the Commission commonly looks to Article III concepts for guidance, it is not required to automatically follow them in all respects because NRC proceedings are not subject to Article III; LBP-09-15, 70 NRC 210 (2009)

International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 252 (2001)
general environmental and policy interests are insufficient for organizational standing; LBP-09-20, 70 NRC 576 (2009)

International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-21, 54 NRC 247, 253 (2001)
standing cannot be based on unfounded conjecture; LBP-09-28, 70 NRC 1025 n.36 (2009)

Iron Arrow Honor Society v. Heckler 464 U.S. 67, 70 (1983) (per curiam)
when a claim becomes moot in federal court, the court loses jurisdiction to decide the merits of that claim; LBP-09-15, 70 NRC 210 (2009)

Jarecki v. G.D. Searle & Co., 367 U.S. 303, 307 (1961)
statutory language must be read in context and a phrase gathers meaning from the words around it; LBP-09-15, 70 NRC 217 (2009)

Jones v. United States, 527 U.S. 373, 389 (1999)
statutory language must be read in context and a phrase gathers meaning from the words around it; LBP-09-15, 70 NRC 217 (2009)

Katzenbach v. Morgan, 384 U.S. 641, 654 n.15 (1966)
the states can be required to tailor carefully the means of satisfying a legitimate state interest when fundamental liberties and rights are threatened; LBP-09-24, 70 NRC 798 n.5 (2009)
Kelley v. Selin, 42 F.3d 1501, 1508 (6th Cir. 1995)
NRC generally follows judicial concepts of standing, which require a petitioner to allege a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-09-17, 70 NRC 321-22 n.30 (2009); LBP-09-20, 70 NRC 574 (2009); LBP-09-26, 70 NRC 947 (2009)
Kelley v. Selin, 42 F.3d 1501, 1521 (6th Cir. 1995)
an alternative need not be considered in detail if it is technologically unproven, unsafe, too costly, or otherwise impracticable; LBP-09-16, 70 NRC 298-99 n.211 (2009)
Kerr-McGee Chemical Corp. (West Chicago Rare Earths Facility), ALAB-928, 31 NRC 263, 269 (1990)
for a party seeking a stay, an overwhelming showing of likelihood on the merits can overcome a weak showing of irreparable harm; CLI-09-23, 70 NRC 937 (2009)
Kleppe v. Sierra Club, 427 U.S. 390 (1976)
the environmental consequences of proposals being considered by an agency within a region must be considered together to determine the synergistic and cumulative environmental effects; LBP-09-16, 70 NRC 246 (2009)
Kodiak Oil Field Haulers, Inc. v. Teamsters Union Local No. 959, 611 F.2d 1286, 1290 (9th Cir. 1980)
when a claim becomes moot, a decision on the merits may be appropriate if the same basic dispute is likely to recur in the future, unless it seems sufficient to await the event or better to defer to another court; LBP-09-15, 70 NRC 210 (2009)
Leary v. United States, 395 U.S. 6, 46 n.93 (1969)
the conclusion that a finding of deliberate ignorance is a proxy for a finding of knowledge is supported by the definition of knowledge in the Model Penal Code, which has guided the Supreme Court in determining the intended scope of the word "knowing" in the criminal context; LBP-09-24, 70 NRC 817, 818 (2009)
"knowledge," is defined; LBP-09-24, 70 NRC 721 n.89 (2009)
Lewis v. United States, 445 U.S. 55, 60 (1980)
interpretation of any regulation must begin with the language and structure of the provision itself; LBP-09-15, 70 NRC 215 (2009)
Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 725, 743 (3d Cir. 1989)
although NRC does not consider Council on Environmental Quality pronouncements to be binding, they are entitled to substantial deference; LBP-09-10, 70 NRC 128 (2009); LBP-09-17, 70 NRC 380 (2009)
Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 741 (3d Cir. 1989)
severe accident mitigation alternatives analyses must be site specific and given careful consideration in order to comply with the National Environmental Policy Act and the Atomic Energy Act; LBP-09-10, 70 NRC 108 (2009)
Lone Wolf v. Hitchcock, 187 U.S. 553, 565 (1903)
plenary authority over the tribal relations of the Indians has been exercised by Congress from the beginning, and the power has always been deemed a political one, not subject to be controlled by the judicial department of the government; LBP-09-13, 70 NRC 187 n.32 (2009)
Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 831 (1973)
the agency's environmental review need only account for those impacts that have some likelihood of occurring or are reasonably foreseeable; LBP-09-26, 70 NRC 970 (2009)
Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 836 (1973)
the requirements of NEPA and, by extension, NRC's regulations implementing NEPA are subject to a rule of reason, and only reasonably foreseeable environmental impacts must be addressed; LBP-09-26, 70 NRC 963 (2009)
Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-855, 24 NRC 792, 795 (1986)
the Commission gives substantial deference to a board's rulings on contention admissibility in the absence of clear error or abuse of discretion; CLI-09-16, 70 NRC 35 (2009); CLI-09-22, 70 NRC 933 (2009)

LEGAL CITATIONS INDEX

CASES

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-900, 28 NRC 275, 288 (1988)
although administrative history and other available guidance may be consulted for background information and the resolution of ambiguities in a regulation's language, its interpretation may not conflict with the plain meaning of the wording used in that regulation; LBP-09-15, 70 NRC 215 (2009)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 71 (1991)
the alternatives discussion in the environmental report or environmental impact statement need not include every possible alternative, but every reasonable alternative; LBP-09-16, 70 NRC 298 (2009); LBP-09-19, 70 NRC 488 (2009)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-91-7, 33 NRC 179, 195 (1991)
licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing; LBP-09-18, 70 NRC 396 (2009)

Los Angeles v. Lyons, 461 U.S. 95, 105-06 (1983)
standing generally has been denied when the threat of injury is not concrete and particularized; LBP-09-13, 70 NRC 176 (2009)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-92-7, 35 NRC 93 (1992)
precedents for resolving issues concerning uranium enrichment licensing are provided; CLI-09-15, 70 NRC 17 (2009)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997)
precedents for resolving issues concerning uranium enrichment licensing are provided; CLI-09-15, 70 NRC 17 (2009)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 303 (1997)
the purpose of financial qualification requirements of 10 C.F.R. 50.33(f) is to ensure the protection of public health and safety and the common defense and security and not to evaluate the financial wisdom of the proposed project; LBP-09-10, 70 NRC 83 (2009)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294, 309 (1997)
the 10 C.F.R. Part 70 financial criteria can be met by conditioning the materials license to require funding commitments to be in place prior to construction and operation; CLI-09-15, 70 NRC 18 (2009)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77 (1998)
precedents for resolving issues concerning uranium enrichment licensing are provided; CLI-09-15, 70 NRC 17 (2009)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 104 (1998)
the requirement to discuss alternatives in the environmental report parallels NEPA's requirement that an environmental impact statement provide a detailed statement of reasonable alternatives to a proposed action; LBP-09-16, 70 NRC 298 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224 (2004)
although a licensing board will take into account any information from reply briefs that legitimately amplifies issues presented in the original petitions, it will not consider instances of what essentially constitute untimely attempts to amend the original petitions; LBP-09-17, 70 NRC 323 (2009)
reply briefs that raise new issues must address the nontimely filing and new-contention factors in section 2.309(c) or (f)(2); LBP-09-17, 70 NRC 324 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004)
a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-17, 70 NRC 323 (2009)
admission of new contentions under 10 C.F.R. 2.309(f)(2) does not run afoul of the Commission's aversion to petitioners who disregard NRC's timeliness requirements, nor does it allow petitioners to add new contentions that simply did not occur to them at the outset; LBP-09-10, 70 NRC 139 (2009)
petitioner may in instances of exigent or unavoidable circumstances file a request for an extension of time to file an original hearing petition and contentions; LBP-09-17, 70 NRC 323 n.41 (2009)
under current rules, contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register,* unless a longer period is therein specified, an extension is

granted, or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time; LBP-09-17, 70 NRC 325 n.50 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-35, 60 NRC 619, 622-23 (2004)
a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-17, 70 NRC 323 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004)
petitioner may in instances of exigent or unavoidable circumstances file a request for an extension of time to file an original hearing petition and contentions; LBP-09-17, 70 NRC 323 n.41 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623-25 (2004)
under current rules, contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register,* unless a longer period is therein specified, an extension is granted, or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time; LBP-09-17, 70 NRC 325 n.50 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-04-35, 60 NRC 619, 625 (2004)
although a licensing board will take into account any information from reply briefs that legitimately amplifies issues presented in the original petitions, it will not consider instances of what essentially constitute untimely attempts to amend the original petitions; LBP-09-17, 70 NRC 323 n.41 (2009)
in an abundance of caution and in order to give petitioners every benefit of the doubt, the board considers whether any of the material at issue in a reply brief that would not constitute legitimate amplification might be admissible under the criteria of section 2.309(c) or (f)(2); LBP-09-17, 70 NRC 324 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-5, 61 NRC 22, 36 (2005)
an approach that is consistent with the USEC Privatization Act, such as transfer to DOE for disposal, constitutes a plausible strategy for disposition of depleted tails; CLI-09-15, 70 NRC 18 (2009)
depleted uranium from an enrichment facility is appropriately classified as a low-level radioactive waste; CLI-09-15, 70 NRC 18 (2009)
precedents for resolving issues concerning uranium enrichment licensing are provided; CLI-09-15, 70 NRC 17 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-17, 62 NRC 5 (2005)
precedents for resolving issues concerning uranium enrichment licensing are provided; CLI-09-15, 70 NRC 17 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005)
the agency's environmental review need only account for those impacts that have some likelihood of occurring or are reasonably foreseeable; LBP-09-26, 70 NRC 970 (2009)
with limited exceptions, no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-09-26, 70 NRC 956 n.68 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), CLI-06-15, 63 NRC 687, 690 (2006)
applicants' assertion that low-level radioactive waste could be transferred to another licensee or that some other arrangement might be established in the future is not sufficient to erase the requirement that reasonably foreseeable environmental impacts be assessed in an environmental report; CLI-09-20, 70 NRC 924 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), LBP-04-14, 60 NRC 40, 55 (2004)
NRC's adjudicatory process is not the proper venue for the evaluation of a petitioner's own view regarding the direction that regulatory policy should take; LBP-09-26, 70 NRC 956, 981 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), LBP-04-14, 60 NRC 40, 57 (2004)
a proposed contention that fails to directly controvert the application or that mistakenly asserts the application does not address a relevant issue is subject to dismissal; LBP-09-27, 70 NRC 1014 (2009)
the reach of a contention necessarily hinges upon its terms and its stated bases; LBP-09-26, 70 NRC 953 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), LBP-04-14, 60 NRC 40, 58 (2004)
although a licensing board will take into account any information from reply briefs that legitimately amplifies issues presented in the original petitions, it will not consider instances of what essentially constitute untimely attempts to amend the original petitions; LBP-09-17, 70 NRC 323 (2009)

reply briefs that raise new issues must address the nontimely filing and new-contention factors in section 2.309(c) or (f)(2); LBP-09-17, 70 NRC 324 (2009)

Louisiana Energy Services, L.P. (National Enrichment Facility), LBP-06-8, 63 NRC 241, 258-59 (2006)
the requirements of NEPA and, by extension, NRC's regulations implementing NEPA are subject to a rule of reason, and only reasonably foreseeable environmental impacts must be addressed; LBP-09-26, 70 NRC 963, 970 (2009)

Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), ALAB-125, 6 AEC 371, 372 n.6 (1973)
in construction permit and operating license proceedings for power reactors, petitioner is presumed to have standing to intervene if petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm; CLI-09-20, 70 NRC 915 (2009)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 559-61 (1992)
intervention petitioner must establish a concrete and particularized injury that is fairly traceable to the challenged action, is likely to be redressed by a favorable decision, and is arguably within the zone of interests protected by the governing statute; CLI-09-20, 70 NRC 915 (2009)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992)
injury-in-fact is defined as an invasion of a legally protected interest that is concrete and particularized and actual or imminent; LBP-09-13, 70 NRC 176 (2009)
to establish causation, petitioner must show that there is a causal connection between the injury and the conduct complained of; LBP-09-13, 70 NRC 176 (2009)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 n.1 (1992)
an injury-in-fact must go beyond generalized grievances to affect a petitioner in a personal and individual way; LBP-09-13, 70 NRC 176 (2009)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-61 (1992)
the nontrivial increased risk to persons living within a 50-mile radius of a nuclear reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; LBP-09-16, 70 NRC 242 (2009)
to establish standing in federal court, a party must show injury-in-fact, causation, and redressability; CLI-09-20, 70 NRC 916 (2009); LBP-09-13, 70 NRC 175-76 (2009)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 561 (1992)
to establish 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-09-16, 70 NRC 240 (2009)
when assessing whether an individual or organization has set forth a sufficient interest, the Commission has applied contemporaneous judicial concepts of standing; LBP-09-16, 70 NRC 240 (2009)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 572 n.7 (1992)
persons living adjacent to federally licensed facilities need not satisfy ordinary standing requirements to challenge the federal license; CLI-09-20, 70 NRC 916-17 (2009)

Lujan v. Defenders of Wildlife, 504 U.S. 555, 573 n.7 (1992)
because NEPA is a procedural statute, petitioners need not show that favorable rulings on their NEPA contentions will require denial of the license, but rather that favorable rulings will require that procedures intended for protection of their members' concrete interests will be observed; LBP-09-16, 70 NRC 243 n.33 (2009)

Martin v. Malhoyt, 830 F.2d 237, 264 (D.C. Cir. 1987)
care should be taken in dealing with judgments that are final, but still subject to direct review, so as to avoid the risks of denying relief on the basis of a judgment that is subsequently overturned; LBP-09-24, 70 NRC 713 (2009)

Massachusetts v. U.S. Environmental Protection Agency, 549 U.S. 497 (2007)
carbon dioxide falls within the Clear Air Act's definition of air pollutants subject to EPA's regulatory authority; LBP-09-17, 70 NRC 363 (2009)

Massachusetts v. U.S. Environmental Protection Agency, 549 U.S. 497, 517-18 (2007)
an alleged injury to health and safety, shared equally by many, can form the basis for standing; LBP-09-18, 70 NRC 399 (2009)

LEGAL CITATIONS INDEX

CASES

Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), LBP-83-76, 18 NRC 1266, 1273 (1983)
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; LBP-09-16, 70 NRC 255 (2009)

Meyer v. Strouse, 221 A.2d 191, 192 (Pa. 1966)
defendant's appeal of ouster from office of tax collector was dismissed as moot because during pendency of appeal, the term of office had expired; LBP-09-14, 70 NRC 196 n.15 (2009)

Mississippi Power and Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423, 426 (1973)
the contention admissibility decision should not examine, under the guise of materiality or scope, whether the environmental impacts that petitioners allege have been omitted from the environmental report are indeed reasonable or significant, or whether an alternative that petitioners propound is reasonable; LBP-09-10, 70 NRC 86 n.29 (2009)

Morgan v. United States, 304 U.S. 1, 18-19 (1938)
the right to a hearing embraces not only the right to present evidence, but also a reasonable opportunity to know the claims of the opposing party and to meet them; LBP-09-24, 70 NRC 793 n.176 (2009)

National Credit Union Administration v. First National Bank, 522 U.S. 479, 492 (1998)
to determine whether an interest is in the zone of interests of a statute, it is necessary first to discern the interests arguably to be protected by the statutory provision at issue, and then to inquire whether petitioner's interests affected by the agency action are among them; LBP-09-13, 70 NRC 176 (2009)

Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 834 (D.C. Cir. 1972)
the NEPA requirement to consider alternatives to a proposed action is governed by the rule of reason applicable to all NEPA-required alternatives analyses; LBP-09-26, 70 NRC 970 (2009)

Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 834-36 (D.C. Cir. 1972)
in the context of NEPA, NRC is obligated to study matters that may be far afield of its primary mission, including the environmental impacts related to the permits and licenses issued by other governmental agencies; LBP-09-21, 70 NRC 594 n.36 (2009)
Staff and applicant must address matters such as the environmental impacts of unregulated seepage into adjacent groundwater in their environmental impact statement and environmental report; LBP-09-25, 70 NRC 889 (2009)
the fact that an agency other than NRC has jurisdiction to issue a permit concerning a certain environmental impact of the project does not mean that the subject may be excluded from the environmental report or environmental impact statement; LBP-09-10, 70 NRC 100 (2009); LBP-09-16, 70 NRC 278 (2009)

Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 837 (D.C. Cir. 1972)
an alternative need not be considered in detail if it is technologically unproven, unsafe, too costly, or otherwise impracticable; LBP-09-16, 70 NRC 299 n.211 (2009)

Natural Resources Defense Council, Inc. v. U.S. Environmental Protection Agency, 822 F.2d 104, 129 n.25 (D.C. Cir. 1987)
the National Environmental Policy Act applies to agencies of the federal government, not to private parties such as applicants for NRC licenses; LBP-09-10, 70 NRC 87 (2009)

New Jersey Department of Environmental Protection v. NRC, 561 F.3d 132 (3d Cir. 2009)
NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews; CLI-09-15, 70 NRC 5 (2009); LBP-09-26, 70 NRC , 981 n.229 (2009)

New Jersey Department of Environmental Protection v. NRC, 561 F.3d 132, 136-37 (3d Cir. 2009)
a state challenge to NRC's conclusion with regard to terrorist attacks failed to demonstrate that the NRC could undertake a more meaningful analysis of the specific risks associated with an aircraft attack on a nuclear plant; LBP-09-10, 70 NRC 116 (2009)

New Jersey Department of Environmental Protection v. NRC, 561 F.3d 132, 140 (3d Cir. 2009)
NEPA does not require NRC to consider the environmental consequences of hypothetical terrorist attacks at NRC-licensed facilities; LBP-09-18, 70 NRC 412-13 (2009)

LEGAL CITATIONS INDEX

CASES

Niagara Mohawk Power Corp. (Nine Mile Point Nuclear Station, Units 1 and 2), CLI-99-30, 59 NRC 333, 344 (1999)
the Commission has long recognized the benefits of participation in NRC proceedings by representatives of interested states; LBP-09-16, 70 NRC 291 (2009)

Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 54 (1978), *remanded on other grounds sub nom. Minnesota v. NRC,* 602 F.2d 412 (D.C. Cir. 1979)
although the Commission is not strictly bound by mootness doctrine, the agency's adjudicatory tribunals have generally adhered to the principle; LBP-09-15, 70 NRC 209 (2009)
because NRC is not subject to the jurisdictional limitations placed on the federal courts by the case or controversy provision in Article III of the Constitution, there is no insuperable barrier to its rendition of an advisory opinion on issues that have been indisputably mooted by events occurring subsequent to licensing board decision; LBP-09-15, 70 NRC 210 (2009)

Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), ALAB-455, 7 NRC 41, 55 (1978), *remanded on other grounds sub nom. Minnesota v. NRC,* 602 F.2d 412 (D.C. Cir. 1979)
given the expectation that the same issue will arise in other proceedings, the board decides a legal issue on the timing of applicant's financial assurance; LBP-09-15, 70 NRC 212 (2009)

Northern States Power Co. (Prairie Island Nuclear Generating Plant, Units 1 and 2), LBP-08-26, 68 NRC 905, 917 (2008)
any supporting material provided by petitioner, including those portions of the material that are not relied upon, is subject to board scrutiny; LBP-09-26, 70 NRC 954 (2009)

Northern States Power Co. (Tyrone Energy Park, Unit 1), ALAB-492, 8 NRC 251, 252 (1978)
any appeal by petitioners of the admitted contentions must abide the end of the case, i.e., wait approximately 2 or 3 years until the Staff issues the FSER and FEIS and the final disposition of the evidentiary hearing on the three admitted contentions; LBP-09-10, 70 NRC 147 n.89 (2009)

Nuclear Management Co., LLC (Monticello Nuclear Generating Plant), CLI-06-6, 63 NRC 161, 163 (2006)
judicial concepts of standing are generally followed in NRC proceedings; LBP-09-10, 70 NRC 69 (2009); LBP-09-18, 70 NRC 395 (2009)

Nuclear Management Co., LLC (Monticello Nuclear Generating Plant), CLI-06-6, 63 NRC 161, 164 (2006)
a request for additional information by NRC, in itself, does not constitute grounds for a contention; LBP-09-10, 70 NRC 144 (2009)

Nuclear Management Co., LLC (Monticello Nuclear Generating Plant), LBP-05-31, 62 NRC 735, 750 (2005)
at the contention admissibility stage, all that is required is that the petitioner provide an expert opinion or some alleged fact, or facts, in support of its position; LBP-09-26, 70 NRC 955 n.65 (2009)

Nuclear Management Co., LLC (Palisades Nuclear Plant), CLI-07-9, 65 NRC 139, 141-42 (2007)
licensing boards are required apply the Commission's directive that outside the Ninth Circuit, NEPA does not require the evaluation of the impact of terrorist attacks by aircraft or other means; LBP-09-18, 70 NRC 413 (2009)

Nuclear Management Co., LLC (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 328, *aff'd,* CLI-06-17, 63 NRC 727 (2006)
replies may provide only legitimate amplifications of the original contentions or a logical/legal response to the answers of the Staff and applicant; LBP-09-17, 70 NRC 323 (2009)

Nuclear Management Co., LLC (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 351 (2006)
the most important showing that petitioners must make for admission of a late-filed contention is good cause, if any, for the failure to file on time; LBP-09-10, 70 NRC 144 (2009)

Nuclear Management Co., LLC (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 351-63, *aff'd,* CLI-06-17, 63 NRC 727 (2006)
a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-17, 70 NRC 323 (2009)

Nuclear Management Co., LLC (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 362-363, *aff'd,* CLI-06-17, 63 NRC 727 (2006)
the issue that generally arises under 10 C.F.R. 2.309(f)(1)(i) is whether a contention is stated with sufficient specificity; LBP-09-17, 70 NRC 326 (2009)

LEGAL CITATIONS INDEX

CASES

Ocean Advocates v. U.S. Army Corps of Engineers, 402 F.3d 846, 866 (9th Cir. 2005)
information that the environmental report provides must be accurate and up-to-date in order to support an agency's determination that a project will have no significant impact on the environment; LBP-09-16, 70 NRC 268 n.127 (2009)

Otherson v. Department of Justice, Immigration & Naturalization Service, 711 F.2d 267, 274 (D.C. Cir. 1983)
a challenge is easily overcome by the board conducting a realistic and rational examination of the record in the criminal case to determine whether a reasonable jury could have grounded its verdict on any basis other than that asserted by the Staff as having been the controlling issue; LBP-09-24, 70 NRC 723 n.96(2009)
to determine whether to apply collateral estoppel to a general verdict, a trial judge is to examine the record of the prior trial in detail to see if the jury might have disbelieved some aspects of the acts charged; LBP-09-24, 70 NRC 723 n.96 (2009)

Pa'ina Hawaii, LLC, CLI-06-18, 64 NRC 1, 7 (2006)
although interested governmental entities would not have a formal role in a proceeding absent the admission of parties and contentions, boards expect that such entities would be kept appropriately apprised of the other participants' settlement efforts; LBP-09-23, 70 NRC 670 n.33 (2009)

Pa'ina Hawaii, LLC, LBP-06-12, 63 NRC 403, 413 (2006), *petition for reconsideration denied,* CLI-06-25, 64 NRC 128 (2006)
contentions of omission claim that the application fails to contain information on a relevant matter as required by law and provides supporting reasons for the petitioner's belief; LBP-09-10, 70 NRC 123 (2009); LBP-09-16, 70 NRC 264 (2009); LBP-09-27, 70 NRC 995 (2009)

Pa'ina Hawaii, LLC, LBP-06-12, 63 NRC 403, 414 (2006)
contentions that challenge the legal sufficiency of applicant's environmental report and final safety analysis report are within the scope of a combined proceeding; LBP-09-10, 70 NRC 124 (2009)
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-09-16, 70 NRC 245 (2009)
petitioner must show that information missing from a license application is required by the Commission's regulations; LBP-09-18, 70 NRC 431 (2009)
pleading requirements of 10 C.F.R. 2.309(f)(1)(v) call for a recitation of facts or expert opinion supporting the issue raised, but are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-09-16, 70 NRC 244 (2009)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-02-16, 55 NRC 317, 343 n.53 (2002)
ratepayer impacts are outside the scope of a combined license proceeding because the state, not the NRC, is charged with protecting ratepayers' interests; LBP-09-10, 70 NRC 80 (2009)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-92-27, 36 NRC 196, 198 (1992)
merely because a petitioner might have had standing in an earlier proceeding does not automatically grant standing in subsequent proceedings; LBP-09-18, 70 NRC 402 (2009)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-93-1, 37 NRC 5, 37 (1993)
nonparty interested state status has been granted to state utility commissions; LBP-09-16, 70 NRC 291 n.190 (2009)

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-07-11, 65 NRC 148 (2007)
NRC Staff should base its environmental analysis of a potential terrorist attack on information available in agency records and other information on the design, mitigative, and security arrangements bearing on likely environmental consequences, consistent with the requirements of NEPA, the Ninth Circuit's decision, and the regulations for the protection of sensitive and safeguards information; CLI-09-15, 70 NRC 5-6 (2009)

LEGAL CITATIONS INDEX

CASES

Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-1, 67 NRC 1 (2008)
guidance on how NRC treats NEPA-terrorism contentions is provided; CLI-09-15, 70 NRC 6 (2009)
Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-08-26, 68 NRC 509 (2008); CLI-08-8, 67 NRC 193 (2008)
guidance on how NRC treats NEPA-terrorism contentions is provided; CLI-09-15, 70 NRC 6 (2009)
Pacific Gas and Electric Co. (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 428, 429 (2002)
a 17-mile proximity presumption was adopted in a case involving an application to construct and operate an ISFSI where all parties agreed that 17 miles was an appropriate radius upon which to presume standing; LBP-09-20, 70 NRC 578 (2009)
Parklane Hosiery Co. v. Shore, 439 U.S. 322, 331 (1979)
where all factors are met, the application of collateral estoppel by the subsequent tribunal is to some degree a discretionary matter; LBP-09-24, 70 NRC 712 n.59 (2009)
Pennsylvania Power & Light Co. (Susquehanna Steam Electric Station, Units 1 and 2), LBP-76-6, 9 NRC 291, 295-96 (1979)
boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-09-10, 70 NRC 121 n.56 (2009); LBP-09-16, 70 NRC 256 (2009); LBP-09-25, 70 NRC 875 n.37 (2009)
Pharmacia & Upjohn Co. v. Mylan Pharmaceuticals, Inc., 170 F.3d 1373, 1381 (Fed. Cir. 1999)
the pendency of an appeal has no effect on the finality or binding effect of a trial court's holding; LBP-09-24, 70 NRC 813 (2009)
Philadelphia Electric Co. (Limerick Generating Station, Units 1 and 2), LBP-82-43A, 15 NRC 1423, 1434 (1982)
an alleged injury to health and safety, shared equally by many, can form the basis for standing; LBP-09-18, 70 NRC 399 (2009)
Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974)
the purpose of the contention admissibility rules is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-09-26, 70 NRC 952 (2009)
Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974)
a contention that attacks applicable statutory requirements or represents a challenge to the basic structure of the Commission's regulatory process must be rejected; LBP-09-26, 70 NRC 956 (2009)
Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 & n.33 (1974)
contentions that attack applicable statutory requirements, challenge the basic structure of the NRC's regulatory process, or merely express generalized policy grievances are not appropriate for a licensing board hearing; LBP-09-18, 70 NRC 403 (2009)
Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 21 (1974)
the contention requirements were never intended to be turned into a fortress to deny intervention; LBP-09-21, 70 NRC 602 n.94 (2009)
Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 21 n.33 (1974)
NRC's adjudicatory process is not the proper venue for the evaluation of a petitioner's own view regarding the direction that regulatory policy should take; LBP-09-26, 70 NRC 956, 981 (2009)
Portland Cement Association. v. Ruckelshaus, 486 F.2d 375, 394 (D.C. Cir. 1973), *cert. denied sub nom. Portland Cement Corp. v. Administrator, Environmental Protection Agency,* 417 U.S. 921 (1974)
materiality requires a showing that the alleged error or omission is of possible significance to the result of the proceeding; LBP-09-26, 70 NRC 953 (2009)
Portland General Electric Co. (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 613-14 (1976)
in assessing whether petitioner has standing, NRC has long applied contemporaneous judicial concepts of standing; CLI-09-20, 70 NRC 915 (2009); LBP-09-13, 70 NRC 175 (2009)

LEGAL CITATIONS INDEX

CASES

Portland General Electric Co. (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979)
contentions that fall outside the scope of the proceeding must be rejected; LBP-09-26, 70 NRC 953 (2009)

Potomac Electric Power Co. (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85 (1974)
contentions that attack a Commission rule, or seek to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, are inadmissible; LBP-09-18, 70 NRC 403 (2009); LBP-09-26, 70 NRC 978 (2009)

PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), LBP-09-18, 70 NRC 385, 411 (2009)
where applicant provided a plan for storage of low-level radioactive waste, there is no litigable issue; LBP-09-27, 70 NRC 1015-16 (2009)

PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), LBP-09-18, 70 NRC 385, 431 (2009)
the scope of an adjudicatory proceeding is specified by the notice of hearing; LBP-09-25, 70 NRC 889 (2009)

PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), CLI-07-25, 66 NRC 101, 107 (2007)
whether other permits may be required from other agencies is outside the scope of NRC proceedings, and those concerns are properly raised before those respective permitting authorities; LBP-09-21, 70 NRC 594 (2009)

PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 296 (2007)
a significant pattern of regular contacts within the 50-mile radius around the plant is sufficient to establish proximity-based standing; LBP-09-18, 70 NRC 401 (2009)

PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 302-12 (2007)
a detailed summary of relevant case law on contention admissibility is provided; LBP-09-17, 70 NRC 324 (2009)

PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 19 (2007)
a standing ruling in one proceeding is not dispositive of a determination in another proceeding with the same petitioner because the ruling was not the subject of appellate review; LBP-09-18, 70 NRC 401 (2009)
the process of sifting and weighing participants' factual proffers often calls upon a board to make difficult choices, so that a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself; LBP-09-18, 70 NRC 401-02 (2009)

PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 19 n.9 (2007)
the better practice for a petitioner is to submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings; LBP-09-18, 70 NRC 401 (2009)

PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 21 (2007)
a significant pattern of regular contacts within the 50-mile radius around the plant is sufficient to establish proximity-based standing; LBP-09-18, 70 NRC 401 (2009)

PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 21 n.13 (2007)
in seeking to establish standing in a licensing adjudication based on regular activities within a proximity zone, petitioner is best served by accurately delineating in as much detail as practicable the particulars associated with the proximity, timing, and duration of those activities; LBP-09-18, 70 NRC 402 n.88 (2009)

PPL Susquehanna LLC (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 24 (2007)
a contention should be dismissed if it does not directly controvert a position taken by the applicant in the license application; LBP-09-27, 70 NRC 1016 (2009)

LEGAL CITATIONS INDEX

CASES

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999)

petitioner's residence within a 50-mile radius of the proposed facility has established standing in his own right, and, accordingly, representational standing has been established through him; LBP-09-18, 70 NRC 399 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999)

a lack of specificity will be sufficient to reject a claim of standing; LBP-09-18, 70 NRC 402 n.85 (2009)

the Commission gives substantial deference to a board's rulings on contention admissibility in the absence of clear error or abuse of discretion; CLI-09-16, 70 NRC 35 (2009); CLI-09-22, 70 NRC 933 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999)

failure of a contention to meet any of the pleading requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi) precludes its admission; LBP-09-17, 70 NRC 324 (2009); LBP-09-21, 70 NRC 592 (2009); LBP-09-26, 70 NRC 952 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-00-2, 51 NRC 77, 80 (2000)

any appeal by petitioners of the admitted contentions must abide the end of the case, i.e., wait approximately 2 or 3 years until the Staff issues the FSER and FEIS and the final disposition of the evidentiary hearing on the three admitted contentions; LBP-09-10, 70 NRC 147 n.89 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-1, 53 NRC 1 (2001)

challenges to board rulings on late-filed contentions normally fall under the rules for interlocutory review; CLI-09-18, 70 NRC 862 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 259 (2001)

the agency uses a threshold probability for design basis events of 1 in 10 million for nuclear power plants; LBP-09-26, 70 NRC 972 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001)

NUREGs are guidance documents, with no binding effect, but are entitled to special weight, such that it is appropriate to consider in evaluating contentions; LBP-09-17, 70 NRC 368 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 265 (2001)

the threshold probability for design basis events should be set at one in a million; LBP-09-17, 70 NRC 369 n.349 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 353 (2002)

under NEPA the Commission looks to the reasonably foreseeable impacts of simply licensing the facility, not the reasonably foreseeable effects of a successful terrorist attack; LBP-09-26, 70 NRC 971 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 357 (2002)

NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews; LBP-09-26, 70 NRC 980 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-29, 56 NRC 390, 400 (2002)

rules of statutory construction must be employed to give each word Congress used a separate and distinct significance that is consistent with its ordinary meaning; LBP-09-30, 70 NRC 1049 n.11 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 135-36 (2004)

any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue can be dismissed; LBP-09-26, 70 NRC 968 n.147 (2009)

LEGAL CITATIONS INDEX

CASES

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004)
petitioner does not have to prove its contention at the admissibility stage; LBP-09-18, 70 NRC 404 (2009); LBP-09-26, 70 NRC 954 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 146 (2006)
in considering alternatives under NEPA, an agency must take into account the needs and goals of the parties involved in the application; LBP-09-10, 70 NRC 127 (2009); LBP-09-17, 70 NRC 379 (2009)

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-09-27, 70 NRC 1006 (2009)

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)
the subject matter of a contention must impact the grant or denial of a pending license application; LBP-09-27, 70 NRC 1006 (2009)
there must be some significant link between the deficiency claimed in a contention and the agency's ultimate determination whether the license applicant will adequately protect the health and safety of the public and the environment; LBP-09-27, 70 NRC 1006 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-01-3, 53 NRC 84, 99 (2001)
technical perfection is not an essential element of contention pleading; LBP-09-17, 70 NRC 326 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-02-20, 56 NRC 169, 173 (2002)
in applying collateral estoppel principles, the question is not whether the subsequent tribunal believes that the prior tribunal correctly decided the issue at hand, but rather, if all factors of the doctrine are met, collateral estoppel comes into play; LBP-09-24, 70 NRC 711-12 n.58 (2009)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-02-20, 56 NRC 169, 182 (2002)
an exception to the application of collateral estoppel occurs when broad public policy considerations or special public interest factors are involved such that an agency's need for flexibility outweighs the reasons underlying this repose doctrine so as to favor relitigation of a particular issue; LBP-09-24, 70 NRC 712 n.60 (2009)

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, that present unique problems, or that cause extraordinary costs; LBP-09-16, 70 NRC 298 (2009)

Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1 (2008)
a combined license applicant is authorized to reference an application for a design certification; LBP-09-10, 70 NRC 75-76 (2009)

Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1, 2-3 (2008)
challenges to the Commission regulations regarding the design certification process are inadmissible; LBP-09-18, 70 NRC 414 (2009)

Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 67 NRC 1, 3-4 (2008)
a license application will not be held in abeyance until the design certification rulemaking is completed; LBP-09-16, 70 NRC 269 (2009); LBP-09-18, 70 NRC 415 (2009)
applicant for a construction permit or a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted; LBP-09-17, 70 NRC 334 (2009)

Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-08-15, 68 NRC 1, 4 (2008)
a contention asserting omissions from the combined license application that is not admissible need not be referred to the Staff and held in abeyance; LBP-09-10, 70 NRC 78 n.19 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-09-8, 68 NRC 317, 322 (2009)
for a contention to be held in abeyance, it must otherwise be admissible; LBP-09-18, 70 NRC 407 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-09-8, 69 NRC 317, 324, 327 (2009)
a contention asserting omissions from the combined license application that is not admissible need not be referred to the Staff and held in abeyance; LBP-09-10, 70 NRC 78 n.19 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-09-8, 69 NRC 317, 327 (2009), *remanding* LBP-08-21, 68 NRC 554, 561-64 (2008)
the Commission directed the board to determine whether a contention concerning a certification application has been docketed but not granted was otherwise admissible under 10 C.F.R. 2.309(f)(1), in which case it might be held in abeyance and referred to the Staff; LBP-09-17, 70 NRC 334 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 566-69 (2008)
NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews outside the Ninth Circuit; LBP-09-26, 70 NRC 981 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 576 (2008)
accuracy of an applicant's cost estimate is not material to the findings the NRC must make under NEPA; LBP-09-16, 70 NRC 298 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 586-87 (2008)
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-17, 70 NRC 337 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 587 (2008)
challenges to the Waste Confidence Rule are prohibited; LBP-09-10, 70 NRC 114 (2009)
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 406 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-08-21, 68 NRC 554, 587 n.35 (2008)
licensing boards may not admit a contention that directly or indirectly challenges 10 C.F.R. 51.51, Table S-3; LBP-09-10, 70 NRC 114 (2009)
Progress Energy Carolinas, Inc. (Shearon Harris Nuclear Power Plant, Units 2 and 3), LBP-09-8, 69 NRC 736, 745 (2009)
until the reactor design is certified and the rulemaking proceeding concluded, the design continues to change, creating potentially new safety and environmental concerns; LBP-09-18, 70 NRC 414 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 71-72 (2009)
the six criteria that govern the admissibility of contentions are summarized; LBP-09-21, 70 NRC 592 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 86 (2009)
Staff and applicant must address matters such as the environmental impacts of unregulated seepage into adjacent groundwater in their environmental impact statement and environmental report; LBP-09-25, 70 NRC 889 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 87-88 (2009)
NEPA has only a limited role to play in interpreting Part 51's requirements for the environmental report; LBP-09-16, 70 NRC 259 n.103 (2009)

Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 88 (2009)
because the environmental report is the only environmental document available when NRC issues its notice of opportunity to request a hearing, initial contentions necessarily focus on the adequacy of the applicant's ER under Part 51; LBP-09-25, 70 NRC 890 (2009)
when NRC issues the environmental impact statement, petitioners have the opportunity to file a second wave of environmental contentions, which focus on the adequacy of the NRC Staff's EIS (or EA) under NEPA; LBP-09-25, 70 NRC 896 n.182 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 107-08 (2009)
NEPA implicitly requires agencies to consider measures to mitigate environmental impacts; LBP-09-19, 70 NRC 536 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 121 (2009)
boards have authority to narrow low-level radioactive waste contentions; LBP-09-16, 70 NRC 253 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 121-25 (2009)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 253 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 126-28 (2009)
although NRC does not consider Council on Environmental Quality pronouncements to be binding, they are entitled to substantial deference; LBP-09-17, 70 NRC 380 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 135 (2009)
a contention is not admissible if it is not plausibly explained or supported by alleged facts; LBP-09-21, 70 NRC 634 (2009)
because petitioners fail to create a genuine issue, the board need not resolve whether applicant's purpose is unreasonably narrow or whether a proposed alternative is so far beyond the realm of reason that it must be rejected out of hand; LBP-09-21, 70 NRC 625 (2009)
Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-09-10, 70 NRC 51, 145 (2009)
a party is entitled to conduct such cross-examination as may be required for a full and true disclosure of the facts; LBP-09-22, 70 NRC 656 n.34 (2009)
Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976)
scope of an adjudicatory proceeding is specified by the notice of hearing, and contentions that raise matters outside that defined scope must be rejected; LBP-09-18, 70 NRC 431 (2009); LBP-09-25, 70 NRC 889 (2009)
Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-942, 32 NRC 395, 428 (1990)
a contention must demonstrate that there has been sufficient foundation assigned for it to warrant further exploration; LBP-09-17, 70 NRC 329 (2009)
Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240-41 (1989)
petitioner may not simply incorporate massive documents by reference as the basis for or as a statement of his contentions; LBP-09-10, 70 NRC 130 (2009)
Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982)
a contention that attacks applicable statutory requirements or represents a challenge to the basic structure of the Commission's regulatory process must be rejected; LBP-09-26, 70 NRC 956 (2009)

LEGAL CITATIONS INDEX

CASES

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1654 (1982)
determining whether the contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-09-26, 70 NRC 954 (2009)

Pueblo of Tesuque v. Acting Southwest Regional Director, 40 IBIA 273, 2005 I.D. LEXIS 27, at *4 (Bureau of Indian Affairs, Dep't of Interior, Mar. 7, 2005)
the executive branch is not bound by the same constitutional constraints as Article III courts, but it has consistently followed the same principles of declining to consider moot cases, in the interest of administrative economy; LBP-09-14, 70 NRC 196 n.15 (2009)

Quivira Mining Co. (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998)
in determining whether intervention petitioner has established the necessary interest, licensing boards follow guidance found in judicial concepts of standing, as stated in federal court case law; LBP-09-13, 70 NRC 175 (2009); LBP-09-17, 70 NRC 321-22 n.30 (2009)

Quivira Mining Co. (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 (1998)
standing requires that a petitioner allege a particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-09-13, 70 NRC 176 (2009)

Quivira Mining Co. (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 n.2 (1998)
although the Commission commonly looks to Article III concepts for guidance, it is not required to automatically follow them in all respects because NRC proceedings are not subject to Article III; LBP-09-15, 70 NRC 210 (2009)

Radiation Technology, Inc. (Lake Denmark Road, Rockaway, New Jersey 07866), ALAB-567, 10 NRC 533, 536 (1979)
licensing boards review NRC Staff's enforcement order *de novo* to determine on the basis of the hearing record whether the charges are sustained and the sanction imposed is warranted; LBP-09-24, 70 NRC 706 (2009)

Radiation Technology, Inc. (Lake Denmark Road, Rockaway, New Jersey 07866), ALAB-567, 10 NRC 533, 536-37 (1979)
NRC Staff's role at a hearing in an enforcement proceeding is akin to that of a prosecutor, and it has the burden to prove its allegations by a preponderance of the reliable, probative, and substantial evidence; LBP-09-24, 70 NRC 706 (2009)

Radiology Center, S.C. v. Stifel, Nicolaus & Co., 919 F.2d 1216, 1222-23 (7th Cir. 1990)
district court erred in using constructive knowledge because the law required actual knowledge; LBP-09-24, 70 NRC 708 n.46 (2009)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 334, 350 (1989)
NEPA requires federal agencies to take a hard look at the environmental consequences of their actions; LBP-09-16, 70 NRC 287 (2009)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 334, 355-56 (1989)
Council on Environmental Quality regulations are entitled to substantial deference; LBP-09-16, 70 NRC 260 n.104 (2009)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989)
NEPA itself does not mandate particular results, but simply prescribes the necessary process; LBP-09-25, 70 NRC 895 (2009)

Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 351-52 (1989)
NEPA implicitly requires that the environmental impact statement disclose mitigation measures; LBP-09-16, 70 NRC 259 (2009)

Rochester Gas & Electric Corp. (R.E. Ginna Nuclear Plant, Unit 1), LBP-83-73, 18 NRC 1231, 1233 (1983)
licensing boards might have authority to order the renoticing of a licensing proceeding pending before it; LBP-09-23, 70 NRC 668 n.27 (2009)

Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined,* CLI-94-2, 39 NRC 91 (1994)
any contention that fails to controvert the application directly, or that mistakenly asserts the application fails to address an issue that the application does address, is defective; LBP-09-18, 70 NRC 404 (2009); LBP-09-26, 70 NRC 955, 968 n.147 (2009); LBP-09-27, 70 NRC 1016 (2009)

LEGAL CITATIONS INDEX

CASES

San Francisco Baykeeper v. Cargill Salt Division, 481 F.3d 700, 709 (9th Cir. 2009)
the Clean Water Act does not authorize regulation of discharges to groundwater even if such groundwater is adjacent to navigable water; LBP-09-25, 70 NRC 890 n.145 (2009)

San Luis Obispo Mothers for Peace v. NRC, 449 F.3d 1016 (9th Cir. 2005), *cert. denied,* 549 U.S. 1166 (2007)
the Commission has declined to require the agency to consider terrorist threats outside the Ninth Circuit as part of the NEPA review process; LBP-09-10, 70 NRC 116 (2009)
NRC and its licensees are required to address the environmental impacts of a successful terrorist attack on a nuclear plant; LBP-09-17, 70 NRC 381 (2009); LBP-09-18, 70 NRC 412 (2009)

San Luis Obispo Mothers for Peace v. NRC, 449 F.3d 1016, 1033 (9th Cir. 2006)
NEPA requires dealing with uncertainties by inclusion in an environmental impact statement of a summary of existing credible scientific evidence relevant to evaluating the reasonably foreseeable significant adverse impacts regarding those events with potential catastrophic consequences, even if their probability is low; LBP-09-26, 70 NRC 971 (2009)
the analysis of reasonably foreseeable significant adverse impacts regarding those events with potential catastrophic consequences must be supported by credible scientific evidence, must not be not based on pure conjecture, and must be within the rule of reason; LBP-09-26, 70 NRC 971 (2009)

San Luis Obispo Mothers for Peace v. NRC, 449 F.3d 1016, 1028 (9th Cir. 2006), *cert. denied,* 127 S. Ct. 1124 (2007)
NEPA analysis performed as a result of an NRC licensing decision should consider the potential environmental consequences of a terrorist attack on the facility under review; CLI-09-15, 70 NRC 5 (2009)

Save the Bay, Inc. v. U.S. Army Corps of Engineers, 610 F.2d 322, 326 (5th Cir. 1980)
the National Environmental Policy Act applies to agencies of the federal government, not to private parties such as applicants for NRC licenses; LBP-09-10, 70 NRC 87 (2009)

Seacoast Anti-Pollution League v. Costle, 572 F.2d 872, 880 (1st Cir. 1978)
there is no absolute right to cross-examination; LBP-09-10, 70 NRC 145 (2009)

Sequoyah Fuels Corp., CLI-95-2, 41 NRC 179, 190 (1995)
licensing board decisions have no precedential effect beyond the immediate proceeding in which they were issued; LBP-09-15, 70 NRC 212 (2009)

Sequoyah Fuels Corp. (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 13-14 (2001)
redressability requires petitioner to show that its alleged injury-in-fact could be cured or alleviated by some action of the tribunal; LBP-09-13, 70 NRC 177 (2009)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma, Site), CLI-94-9, 40 NRC 1, 7 (1994)
for a party seeking a stay, an overwhelming showing of likelihood of success on the merits can overcome a weak showing of irreparable harm; CLI-09-23, 70 NRC 937 (2009)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 72 (1994)
an organization seeking to establish representational standing must demonstrate that at least one of its members would be affected by the proposed action and identify that member by name and address and show that the member would have standing to intervene in its own right and that the identified member has authorized the organization to request a hearing on its behalf; LBP-09-16, 70 NRC 240 n.22 (2009); LBP-09-20, 70 NRC 574 (2009)
the requisite injury to establish standing may be either actual or threatened but must nonetheless be concrete and particularized, not conjectural or hypothetical; LBP-09-28, 70 NRC 1024 (2009)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 (1994)
a board's determination of standing does not depend on whether the cause of the injury flows directly from the challenged action, but whether the chain of causation is plausible; LBP-09-13, 70 NRC 177 (2009)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994)
persons who reside or frequent the area within a 50-mile radius of the reactor are presumed to have standing to participate in a proceeding involving that reactor; LBP-09-17, 70 NRC 322 (2009)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site), LBP-94-5, 39 NRC 54, 74, *aff'd,* CLI-94-12, 40 NRC 64 (1994)
even in the absence of constructive notice, the possibility remains that a petitioner had actual notice of the right to request a hearing; LBP-09-20, 70 NRC 572 (2009)

where petitioner lacked constructive notice of the opportunity to request a hearing, the board ruled that petitioner acted reasonably when it filed its hearing request within 10 days of its receipt of actual notice; LBP-09-20, 70 NRC 572 (2009)

Sequoyah Fuels Corp. and General Atomics (Gore, Oklahoma Site Decontamination and Decommissioning Funding), LBP-94-8, 39 NRC 116, 120 (1994)
the benefit of the doubt should be given to the potential intervenor in order to prevent the dismissal of a petition due to inarticulate draftsmanship or procedural or pleading defects; LBP-09-18, 70 NRC 396 (2009)

Shaw AREVA MOX Services (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 182 (2007)
judicial concepts of standing are applied in NRC proceedings; LBP-09-28, 70 NRC 1024 (2009)

Shaw AREVA MOX Services (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 183 (2007)
if 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 by name and address, show that the member would have standing to intervene in his/her own right, and show that the identified member has authorized the organization to request a hearing on his/her behalf; LBP-09-16, 70 NRC 240 (2009)
to demonstrate organizational standing, petitioner must show an injury in fact to the interests of the organization itself; LBP-09-16, 70 NRC 240 (2009); LBP-09-20, 70 NRC 574 (2009)

Shaw AREVA MOX Services (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 192-93 (2007)
the first step in assessing the admissibility of a new contention is to determine if it is timely under 10 C.F.R. 2.309(f)(2)(iii) or nontimely under section 2.309(c); LBP-09-10, 70 NRC 138 (2009)

Shaw AREVA MOX Services (Mixed Oxide Fuel Fabrication Facility), LBP-07-14, 66 NRC 169, 210 n.95 (2007)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-09-27, 70 NRC 998-99 (2009)
thirty days is a reasonable limit for fulfilling the timing requirement of 10 C.F.R. 2.309(f)(2)(iii) because of the significant effort involved in identifying new information, assembling the required expertise, and then drafting a contention that satisfies 10 C.F.R. 2.309(f)(1); LBP-09-27, 70 NRC 1003 (2009)

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-09-16, 70 NRC 256 (2009)

Shieldalloy Metallurgical Corp. (Cambridge, Ohio Facility), CLI-99-12, 49 NRC 347, 354-55 (1999)
a lack of specificity will be sufficient to reject a claim of standing; LBP-09-18, 70 NRC 402 n.85 (2009)

Shieldalloy Metallurgical Corp. (Newfield, New Jersey Facility), LBP-07-5, 65 NRC 341, 352 (2007), *appeal denied,* CLI-07-20, 65 NRC 499 (2007)
the issue that generally arises under 10 C.F.R. 2.309(f)(1)(i) is whether a contention is stated with sufficient specificity; LBP-09-17, 70 NRC 326 (2009)

Sierra Club v. Morton, 405 U.S. 727 (1972)
to establish organizational standing, an organization must demonstrate that the action at issue will cause an injury-in-fact to the organization's interests or the interests of its members and that the injury is within the zone of interests protected by the National Environmental Policy Act or the Atomic Energy Act; LBP-09-13, 70 NRC 178 (2009)

Sierra Club v. Morton, 405 U.S. 727, 734-35 (1972)
injury-in-fact to establish standing requires more than a general interest in preserving the environment; LBP-09-28, 70 NRC 1025 n.31 (2009)
to establish organizational standing, petitioner must allege more than an injury to a cognizable interest; LBP-09-13, 70 NRC 191 (2009)

Sierra Club v. Morton, 405 U.S. 727, 739 (1972)
a broadly stated interest in a problem is not sufficient by itself to render the organization adversely affected or aggrieved; LBP-09-13, 70 NRC 178 (2009)

the injury-in-fact necessary to establish organizational standing must be more than a mere interest in a problem, no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem; LBP-09-13, 70 NRC 178 (2009)

Sierra Club v. U.S. Environmental Protection Agency, 995 F.2d 1478, 1485 (9th Cir. 1993)
the National Environmental Policy Act applies to agencies of the federal government, not to private parties such as applicants for NRC licenses; LBP-09-10, 70 NRC 87 (2009)

Silverman v. Eastrich Multiple Investor Fund, 51 F.3d 28, 31 (3d Cir. 1995)
a text should be construed so that effect is given to all its provisions, so that no part will be inoperative or superfluous, void or insignificant, and so that one section will not destroy another unless the provision is the result of obvious mistake or error; LBP-09-16, 70 NRC 264 n.118 (2009)

Simmons v. U.S. Army Corps of Engineers, 120 F.3d 664, 669 (7th Cir. 1997)
blindly adopting applicant's goals is a losing proposition because it does not allow for the full range of alternatives required by NEPA; LBP-09-10, 70 NRC 128 (2009); LBP-09-17, 70 NRC 379 (2009)
NEPA requires an agency to exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals; LBP-09-10, 70 NRC 128 (2009); LBP-09-17, 70 NRC 379 (2009)

Simon v. Eastern Kentucky Welfare Rights Organization, 426 U.S. 26, 41-42 (1976)
petitioner must show that there is a causal connection between the injury and the conduct complained of; LBP-09-13, 70 NRC 176 (2009)

Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, 531 U.S. 159 (2001)
the reach of 33 U.S.C. § 1371(c)(2) is confined to navigable waters, which do not even encompass all surface waters; LBP-09-25, 70 NRC 890 n.145 (2009)

South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-2, 69 NRC 87, 100-05 (2009)
NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews outside the Ninth Circuit; LBP-09-26, 70 NRC 981 (2009)

South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-2, 69 NRC 87, 108-10 (2009)
the reasonableness of energy conservation as an alternative in light of the need for a large amount of baseload electric power is questioned; LBP-09-10, 70 NRC 132 (2009)

South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-2, 69 NRC 87, 110 (2009)
failure to provide facts or expert opinion sufficient to show that the environmental report disregarded a feasible alternative based on either wind power, solar power, or some combination of the two renders the contention inadmissible; LBP-09-16, 70 NRC 304 (2009)

South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-2, 69 NRC 87, 110-11 (2009)
applicant is not required to examine all possible alternatives, but only those that can reasonably accomplish the applicant's purpose; LBP-09-10, 70 NRC 129 (2009)

South Texas Project Nuclear Operating Co. (South Texas Project, Units 3 and 4), LBP-09-25, 70 NRC 867, 895 (2009)
section 2.309(f)(1)(vi) is not a second hurdle of materiality that an intervenor must meet, but rather requires that intervenor identify the specific parts of the combined license application that it disputes and show that resolution of those disputes is material to the licensing decision; LBP-09-27, 70 NRC 1011 (2009)

Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), CLI-07-24, 66 NRC 38, 38 & n.2 (2007)
a decision dismissing the contested adjudication relating to a combined license has no impact on the subsequent need to conduct a mandatory hearing relating to a combined license application, over which the Commission would preside; LBP-09-23, 70 NRC 671 n.38 (2009)

Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 253 (2007)
petitioner is obliged to present the factual and expert support for its contention, and failure to provide it requires that the contention be rejected; LBP-09-26, 70 NRC 954 (2009)
Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 254 (2007)
any contention that fails to directly controvert the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed; LBP-09-26, 70 NRC 955, 968 n.147 (2009)
Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 267-68 (2007)
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-10, 70 NRC 114 (2009); LBP-09-17, 70 NRC 337 (2009)
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 406 (2009)
licensing boards may not admit a contention that directly or indirectly challenges 10 C.F.R. 51.51, Table S-3; LBP-09-10, 70 NRC 114-15 (2009)
Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 269 & n.16 (2007)
NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews outside the Ninth Circuit; LBP-09-26, 70 NRC 981 (2009)
Southern Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 272 (2007)
the fact that an Integrated Resource Plan revision process has been instituted does not support a claim that the final supplemental environmental impact statement is inadequate because of its reliance on earlier studies; LBP-09-26, 70 NRC 973 (2009)
Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-13, 69 NRC 575, 577 (2009)
a contention asserting omissions from the combined license application that is not admissible need not be referred to the Staff and held in abeyance; LBP-09-10, 70 NRC 78 n.19 (2009)
Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 70 NRC 33 (2009)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 253 (2009)
Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 69 NRC 33, 36 (2009)
section 52.79(a)(3) sets no quantity or time restrictions relative to onsite storage of low-level radioactive waste; LBP-09-27, 70 NRC 1014 (2009)
Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 69 NRC 33, 37 (2009)
applicant must explain how it intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20, including, but not limited to, low-level radioactive waste handling and storage; LBP-09-27, 70 NRC 1001 (2009)
the information required in a combined license application by section 52.79(a)(3) is largely dependent on the individual applicant's plans; LBP-09-27, 70 NRC 1014 (2009)
Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-16, 69 NRC 33, 38 (2009)
the licensing board did not commit reversible error by admitting a contention based on low-level radioactive waste storage duration because the NRC Staff itself had issued a Request for Additional Information on this very issue and thus this conflicted with Staff's argument that the issue is immaterial to the findings that must be made on the application; LBP-09-27, 70 NRC 1015 n.123 (2009)

Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), LBP-09-3, 69 NRC 139, 149, *appeals denied,* CLI-09-16, 70 NRC 33 (2009)
in assessing intervention petitions, licensing boards must determine whether standing elements are met even though there are no objections to petitioner's standing; LBP-09-23, 70 NRC 669 n.32 (2009)
Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), LBP-09-3, 69 NRC 139, 159-64 (2009)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 253 (2009)
Southern Pacific Communication Co. v. American Telephone & Telegraph Co., 740 F.2d 1011, 1018 (D.C. Cir. 1984)
pendency of an appeal need not preclude reliance on the lower court's decision being appealed to estop relitigation of the same matter in another forum; LBP-09-24, 70 NRC 713 n.62 (2009)
Spirit of the Sage Council v. Norton, 411 F.3d 225, 230 (D.C. Cir. 2005) (citations omitted)
the doctrines of standing, ripeness, and mootness all derive from the case or controversy requirement of Article III; LBP-09-15, 70 NRC 210 n.29 (2009)
when a federal court dismisses a claim as moot and avoids any further consideration of the merits of that claim, it does so because the claim no longer satisfies the case or controversy requirement of Article III; LBP-09-15, 70 NRC 210 (2009)
SSIH Equipment S.A. v. U.S. International Trade Commission, 718 F.2d 365, 370 (Fed. Cir. 1983)
the pendency of an appeal has no effect on the finality or binding effect of a trial court's holding; LBP-09-24, 70 NRC 813 (2009)
Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18 (1998)
allowing discovery or an evidentiary hearing with respect to safety-related issues to proceed before the final SER is issued will serve to further the Commission's objective to ensure a fair, prompt, and efficient resolution of contested issues; CLI-09-15, 70 NRC 13 n.2 (2009)
the Commission expects that the licensing board, NRC Staff, the applicant, and other parties will follow the applicable guidance; CLI-09-15, 70 NRC 12 (2009)
this guidance is intended to improve the management and the timely completion of the proceeding and addresses hearing schedules, parties' obligations, contentions, and discovery management; CLI-09-15, 70 NRC 13 (2009)
Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 23 (1998)
a party is allowed to appeal a ruling on contentions only if the order wholly denies a petition for leave to intervene or a party other than the petitioner alleges that a petition for leave to intervene or a request for a hearing should have been wholly denied; CLI-09-18, 70 NRC 861 (2009)
Statement of Policy on Conduct of Licensing Proceedings, CLI-81-8, 13 NRC 452 (1981)
the licensing board is required to use the applicable techniques specified in this guidance to ensure prompt and efficient resolution of contested issues; CLI-09-15, 70 NRC 13 (2009)
Steel Co. v. Citizens for a Better Environment, 523 U.S. 83, 101 (1998)
the case or controversy requirement of Article III is rooted in the separation of powers; LBP-09-15, 70 NRC 210 n.30 (2009)
Steel Co. v. Citizens for a Better Environment, 523 U.S. 83, 101-02 (1998)
when a claim becomes moot in federal court, the court loses jurisdiction to decide the merits of that claim; LBP-09-15, 70 NRC 210 (2009)
Steel Co. v. Citizens for a Better Environment, 523 U.S. 83, 102-04 (1998)
under judicial concepts of standing, a board considers whether a petitioner has alleged a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-09-17, 70 NRC 321-22 n.30 (2009); LBP-09-20, 70 NRC 574 (2009); LBP-09-26, 70 NRC 947 (2009)
Strycker's Bay Neighborhood Council, Inc. v. Karlen, 444 U.S. 223, 227 (1980)
if the adverse environmental impacts of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs; LBP-09-16, 70 NRC 287 n.180 (2009)

LEGAL CITATIONS INDEX

CASES

Summers v. Earth Island Institute, 129 S. Ct. 1142, 1150 (2009)
organizations seeking to challenge regulations of a government agency failed to demonstrate standing where they did not demonstrate a concrete application of the regulations that threatened imminent harm to their interests; CLI-09-20, 70 NRC 917 n.27 (2009)

Sunderland v. United States, 266 U.S. 226, 233 (1924)
the Trust Responsibility requires federal agencies to take actions or refrain from taking actions in fulfillment of Congress's duty to protect the Indians; LBP-09-13, 70 NRC 189 (2009)

Sweezy v. New Hampshire, 354 U.S. 234, 245 (1957)
it is particularly important that the exercise of the power of compulsory process be carefully circumscribed when the investigative process tends to impinge upon such highly sensitive areas as freedom of speech or press, freedom of political association, and freedom of communication of ideas; LBP-09-24, 70 NRC 798 n.5 (2009)

System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), CLI-07-10, 65 NRC 144, 146 (2007)
outside the Ninth Circuit, NEPA does not require NRC to consider the environmental consequences of hypothetical terrorist attacks at NRC-licensed facilities; LBP-09-18, 70 NRC 412 (2009)

System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), CLI-07-10, 65 NRC 144, 146-47 (2007)
licensing boards are required apply the Commission's directive that outside the Ninth Circuit, NEPA does not require the evaluation of the impact of terrorist attacks by aircraft or other means; LBP-09-18, 70 NRC 413 (2009); LBP-09-26, 70 NRC 980, 981 (2009)

System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 292 (2004)
the adequacy of applicant's control room and equipment design radiological protections, in light of the fact that the reactor is proposed to be located within the EPZ of an existing reactor, is an issue that is appropriate in a COLA or Standard Design Certification proceeding; LBP-09-10, 70 NRC 110 (2009)

System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), LBP-04-19, 60 NRC 277, 296-97 (2004)
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-10, 70 NRC 114 (2009); LBP-09-17, 70 NRC 337 (2009)
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 406 (2009)
licensing boards may not admit a contention that directly or indirectly challenges 10 C.F.R. 51.51, Table S-3; LBP-09-10, 70 NRC 115 (2009)

System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), LBP-07-1, 65 NRC 27, 35, *permit issuance authorized,* CLI-07-14, 65 NRC 216 (2007)
early site permit applications, as partial construction permit applications, are subject to the Atomic Energy Act hearing requirement, as well as all procedural requirements in 10 C.F.R. Part 2; LBP-09-19, 70 NRC 456 (2009)

System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), LBP-07-1, 65 NRC 27, 88, *permit issuance authorized,* CLI-07-14, 65 NRC 216 (2007)
NRC provides detailed guidance for Staff personnel reviewing the safety aspects of early site permit applications; LBP-09-19, 70 NRC 541 (2009)

System Energy Resources, Inc. (Early Site Permit for Grand Gulf ESP Site), LBP-07-1, 65 NRC 27, 90, *permit issuance authorized,* CLI-07-14, 65 NRC 216 (2007)
items for which sufficient information is lacking at the early site permit stage of the licensing process may be subject to deferral for consideration at the combined license stage; LBP-09-19, 70 NRC 541 (2009)

Tennessee Gas Pipeline Co. v. Federal Power Commission, 606 F.2d 1373, 1380 (D.C. Cir. 1979)
the limitations imposed by article III on what matters federal courts may hear affect administrative agencies only indirectly; LBP-09-14, 70 NRC 195 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68 (2009)
absent a waiver, a contention that constitutes a collateral attack on NRC regulations is inadmissible; CLI-09-20, 70 NRC 923 (2009)

LEGAL CITATIONS INDEX

CASES

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 70 n.2 (2009)
the Commission may have more to offer regarding the need for a NEPA carbon footprint analysis in new reactor licensing proceedings; LBP-09-19, 70 NRC 495 n.17 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 72 (2009)
the Commission will review referred rulings only if the referral raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; CLI-09-21, 70 NRC 930 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 73 (2009)
Part 61 is inapplicable in a combined license proceeding because it applies only to land disposal facilities that receive waste from others, not to onsite facilities where licensee intends to store its own low-level radioactive waste; LBP-09-10, 70 NRC 121 (2009); LBP-09-27, 70 NRC 1002 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 73-74 n.24 (2009)
the Commission rejected a low-level radioactive waste contention challenging applicant's 2-year plan for storing Class B and Class C waste; LBP-09-27, 70 NRC 1014 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 74-75 (2009)
the extent to which a combined license application's environmental report must address the management of low-level wastes is discussed; LBP-09-10, 70 NRC 122 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 75 (2009)
contentions that challenge 10 C.F.R. 51.51, Table S-3, are inadmissible because no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-09-10, 70 NRC 115, 122 (2009)
licensing boards may not admit contentions that directly or indirectly challenges Table S-3; LBP-09-16, 70 NRC 255 (2009); LBP-09-18, 70 NRC 407 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 75 n.9 (2009)
Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and concludes that this kind of disposal will not result in the release of any significant effluent to the environment; LBP-09-16, 70 NRC 255 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 75 n.30 (2009)
Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and that this kind of disposal will not result in the release of any 'significant effluent to the environment; LBP-09-10, 70 NRC 122 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 76-77 (2009)
questions of the safety and environmental impacts of onsite low-level waste storage are largely site- and design-specific, and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions; LBP-09-10, 70 NRC 122 (2009); LBP-09-16, 70 NRC 256 (2009)
Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 77 (2009)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 253 (2009)
even if the Commission had chosen to promulgate a low-level waste confidence rule, such a rule would not, if it followed the pattern of the high-level waste confidence rule, alter any requirements to consider in the adjudicatory proceeding the environmental impacts of waste storage during the term of the license; LBP-09-10, 70 NRC 122 (2009); LBP-09-16, 70 NRC 256 (2009)

LEGAL CITATIONS INDEX

CASES

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-3, 69 NRC 68, 77 n.42 (2009)
- contentions on information a COL applicant should supply in order to satisfy NRC regulations regarding the safety of long-term storage of low-level radioactive waste are application-specific and thus would benefit from further development by the board and the parties; CLI-09-16, 70 NRC 38 n.27 (2009)
- in a future combined license proceeding, a petitioner could proffer an application-specific contention suitable for litigation on the subject of onsite storage of low-level radioactive waste; LBP-09-10, 70 NRC 122 (2009); LBP-09-16, 70 NRC 255 (2009)
- power reactor licensees have safely stored and managed low-level radioactive waste under NRC oversight for years without the development of immediate safety problems or concerns; LBP-09-16, 70 NRC 253 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 378 (2008)
- the proximity presumption applies to combined license proceedings; LBP-09-16, 70 NRC 240 (2009)
- under the proximity presumption, petitioner in an operating license proceeding who lives within 50 miles of a nuclear power reactor is presumed to have standing without the need specifically to plead injury, causation, and redressability; LBP-09-26, 70 NRC 947 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 378-80 (2008)
- under the proximity presumption, petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if petitioner lives within 50 miles of the proposed facility; LBP-09-18, 70 NRC 395 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 394 (2008)
- NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews outside the Ninth Circuit; LBP-09-26, 70 NRC 981 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 399-400, 404, 407, 429 (2008)
- a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-17, 70 NRC 323 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 404 (2008)
- failure to provide facts or expert opinion sufficient to show that the environmental report disregarded a feasible alternative based on either wind power, solar power, or some combination of the two renders the contention inadmissible; LBP-09-16, 70 NRC 304 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 413-15 (2008), *rev'd,* CLI-09-3, 69 NRC 68, 78 (2009)
- contention focusing exclusively on regulations governing waste disposal is inadmissible; CLI-09-16, 70 NRC 35 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 414 (2008)
- Part 61 does not apply to onsite facilities where the licensee intends to store its own low-level radioactive waste; LBP-09-10, 70 NRC 121 n.57 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 415-16 (2008)
- contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-17, 70 NRC 337 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 416 (2008)
- challenges to the Waste Confidence Rule are prohibited; LBP-09-10, 70 NRC 114 (2009)
- licensing boards may not admit a contention that directly or indirectly challenges 10 C.F.R. 51.51, Table S-3; LBP-09-10, 70 NRC 114 (2009)

LEGAL CITATIONS INDEX

CASES

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 418-20 (2008)
contentions involving possible errors in Table S-3 have been referred to the Commission; LBP-09-21, 70 NRC 617 (2009)

Tennessee Valley Authority (Bellefonte Nuclear Power Plant, Units 3 and 4), LBP-08-16, 68 NRC 361, 456-57 (2008); LBP-09-18, 70 NRC 406 (2009)
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 406 (2009)

Tennessee Valley Authority (Watts Bar Nuclear Plant, Unit 2), LBP-09-26, 70 NRC 939, 990 (2009)
although an expert may be misinterpreting data submitted by applicant, this is not considered at the contention admissibility stage; LBP-09-27, 70 NRC 1010 n.97 (2009)

Tennessee Valley Authority (Watts Bar Nuclear Plant, Unit 1; Sequoyah Nuclear Plant, Units 1 and 2; Browns Ferry Nuclear Plant, Units 1, 2, and 3), CLI-04-24, 60 NRC 160, 218 n.176 (2004)
sanction for deliberate misconduct by an unlicensed individual is determined by applying four factors to assess the safety significance of the misconduct and nine factors to assess mitigating or aggravating circumstances; LBP-09-24, 70 NRC 851 n.44 (2009)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Units 1 and 2), CLI-92-12, 36 NRC 62, 73-74 (1992)
absent good cause, a petitioner's demonstration on the other late-filing factors must be compelling; LBP-09-26, 70 NRC 949 (2009)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-4, 37 NRC 156, 162-63 (1993)
petitioner has an affirmative duty to demonstrate that it has standing in each proceeding in which it seeks to participate because a petitioner's status can change over time and the bases for its standing in an earlier proceeding may no longer apply; LBP-09-18, 70 NRC 401 (2009)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-10, 37 NRC 192, 200 (1993)
the mootness doctrine derives from the Constitution's limitation of federal courts' jurisdiction to cases or controversies; LBP-09-15, 70 NRC 209 (2009)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), CLI-93-10, 37 NRC 192, 204 (1993)
despite not being bound by the case or controversy requirement, common sense counsels against proceeding with an adjudication where no effective relief can be granted; LBP-09-14, 70 NRC 196 n.16 (2009)

Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992)
a contention should be dismissed if it does not directly controvert a position taken by the applicant in the license application; LBP-09-27, 70 NRC 1016 (2009)

Textron Lycoming Reciprocating Engine Division, Avco Corp. v. United Automobile, Aerospace, Agricultural Implement Workers of America, International Union, 523 U.S. 653, 657 (1998)
the most natural way to read a provision that sets forth a general obligation followed by a set of specific requirements is that the specific requirements provide the details necessary to fulfilling the general obligation; LBP-09-15, 70 NRC 217 n.57 (2009)

Tiger v. Western Investment Co., 221 U.S. 286 (1911)
the Trust Responsibility requires federal agencies to take actions or refrain from taking actions in fulfillment of Congress's duty to protect the Indians; LBP-09-13, 70 NRC 189 (2009)

Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2, and 3), ALAB-378, 5 NRC 557, 560-61 (1977)
if a tribunal were to render an adverse ruling against a party based exclusively on the collateral estoppel doctrine, which was subsequently reversed, the party against whom collateral estoppel had been applied would be entitled to file a timely motion with the tribunal seeking appropriate relief; LBP-09-24, 70 NRC 813 n.5 (2009)

LEGAL CITATIONS INDEX

CASES

Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2, and 3), ALAB-378, 5 NRC 557, 561 (1977)

collateral estoppel is a form of issue preclusion that prevents the relitigation of issues of law or fact that have been finally adjudicated by a tribunal of competent jurisdiction in a proceeding involving the same parties or their privies; LBP-09-24, 70 NRC 711, 809 (2009)

Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2, and 3), ALAB-378, 5 NRC 557, 562 (1977)

a tribunal, when considering the applicability of collateral estoppel, may not look behind the decision to determine whether its findings of fact and conclusions of law were well founded; LBP-09-24, 70 NRC 815 (2009)

tribunals are required to conclude that the jury understood the trial court's instructions and rendered well-founded findings of fact in compliance with those instructions; LBP-09-24, 70 NRC 820 (2009)

Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2, and 3), ALAB-378, 5 NRC 557, 562-63 (1977)

collateral estoppel may be applied in administrative adjudicatory proceedings; LBP-09-24, 70 NRC 711 (2009)

Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2, and 3), ALAB-378, 5 NRC 557, 563 (1977)

potentially duplicative and unnecessary litigation in the second forum does not take place while an appeal is pending, but if the appeal later proves successful, thus invalidating the original judgment upon which collateral estoppel had been based, then the litigation in the second forum is allowed to proceed; LBP-09-24, 70 NRC 713 (2009)

Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2, and 3), ALAB-378, 5 NRC 557, 563 n.7 (1977)

overriding competing policy considerations can provide discretion to withhold the application of collateral estoppel; LBP-09-24, 70 NRC 712 n.60 (2009)

where the four elements for applying collateral estoppel are satisfied, and no overriding public policy consideration dictates against its application, a board should not withhold the application of collateral estoppel as a discretionary matter; LBP-09-24, 70 NRC 813 n.5 (2009)

Toledo Edison Co. (Davis-Besse Nuclear Power Station, Units 1, 2, and 3), ALAB-378, 5 NRC 557, 563-64 & n.7 (1977)

in applying collateral estoppel principles, the question is not whether the subsequent tribunal believes that the prior tribunal correctly decided the issue at hand, but rather, if all factors of the doctrine are met, collateral estoppel comes into play; LBP-09-24, 70 NRC 711-12 n.58 (2009)

U.S. Department of Energy (High-Level Waste Repository), CLI-05-27, 62 NRC 715, 719 (2005)

for a party seeking a stay, an overwhelming showing of likelihood on the merits can overcome a weak showing of irreparable harm; CLI-09-23, 70 NRC 937 (2009)

U.S. Department of Energy (High-Level Waste Repository), CLI-08-12, 67 NRC 386, 392 (2008)

the initial mandatory disclosures in Subpart J only apply to extant documentary material; LBP-09-30, 70 NRC 1047 n.9 (2009)

U.S. Department of Energy (High-Level Waste Repository), CLI-09-14, 69 NRC 580, 588 (2009)

a generalized assertion, without specific ties to NRC regulatory requirements or to safety in general, does not provide adequate support demonstrating the existence of a genuine dispute of fact or law with respect to the construction authorization application; LBP-09-27, 70 NRC 111-12 (2009)

U.S. Department of Energy (High-Level Waste Repository), CLI-09-14, 69 NRC 580, 590 (2009)

NRC rules permit contentions that raise issues of law as well as contentions that raise issues of fact; LBP-09-10, 70 NRC 86 n.30 (2009)

the notice of hearing establishes that the permissible scope because the environmental report is the only environmental document available when NRC issues its notice of opportunity to request a hearing, initial contentions necessarily focus on the adequacy of the applicant's ER under Part 51; LBP-09-25, 70 NRC 889 n.139 (2009)

U.S. Department of Energy (Plutonium Export License), CLI-04-17, 59 NRC 357, 363 (2004)

in assessing whether petitioner has standing, NRC has long applied contemporaneous judicial concepts of standing; CLI-09-20, 70 NRC 915 (2009); LBP-09-28, 70 NRC 1024 (2009)

LEGAL CITATIONS INDEX

CASES

U.S. Enrichment Corp. (Paducah, Kentucky Gaseous Diffusion Plant), CLI-01-23, 54 NRC 267, 272-73 (2001)

to determine whether an interest is in the zone of interests of a statute, it is necessary first to discern the interests arguably to be protected by the statutory provision at issue, and then to inquire whether petitioner's interests affected by the agency action are among them; LBP-09-13, 70 NRC 176 (2009)

Union of Concerned Scientists v. NRC, 735 F.2d 1437, 1443 (D.C. Cir. 1984)

NRC shall grant a hearing upon the request of any person whose interests may be affected by the proceeding and must grant such a hearing on any material contention; LBP-09-10, 70 NRC 77, 139 n.79 (2009)

the hearing requirement of section 189(a) of the Atomic Energy Act has been interpreted to mean that the hearing must encompass all material factors bearing on the licensing decision; LBP-09-15, 70 NRC 221 (2009)

United States v. Alghazouli, 517 F.3d 1179, 1187 (9th Cir. 2008)

rules of statutory construction must be employed to give each word Congress used a separate and distinct significance that is consistent with its ordinary meaning; LBP-09-30, 70 NRC 1049 n.11 (2009)

United States v. Asubike, 564 F.3d 59 (1st Cir. 2009)

"deliberate ignorance" or "willful blindness" instruction has its place and sees frequent usage in drug possession cases where the defendant purports not to know, for example, what is in the package someone asked him to deliver in secretive fashion; LBP-09-24, 70 NRC 719 n.81 (2009)

United States v. Barnhart, 979 F.2d 647, 651 (8th Cir. 1992)

instruction to juries on deliberate ignorance or willful blindness can relieve the government of its constitutional obligation to prove the defendant's knowledge beyond a reasonable doubt; LBP-09-24, 70 NRC 720 n.85 (2009)

United States v. Barnhart, 979 F.2d 647, 652 (8th Cir. 1992)

despite the cautionary disclaimer with an instruction to juries on deliberate ignorance or willful blindness, there is a possibility that the jury will be led to employ a negligence standard and convict a defendant on an impermissible ground; LBP-09-24, 70 NRC 720 n.85 (2009)

there is no doubt that there was evidence of either actual knowledge or no knowledge on the defendant's part, but other evidentiary theories relating to deliberate ignorance were dismissed; LBP-09-24, 70 NRC 721 n.90 (2009)

United States v. Beaty, 245 F.3d 617 (6th Cir. 2001)

where the prosecution must rely on circumstantial evidence to establish a defendant's knowledge, the use of a deliberate ignorance instruction is unexceptional and entirely proper and is given in illegal gambling business cases; LBP-09-24, 70 NRC 820 (2009)

United States v. Carney, 387 F.3d 436, 449 (6th Cir. 2004)

courts generally refer to actual knowledge as knowledge derived from direct evidence, whereas knowledge based on the deliberate ignorance theory is derived from circumstantial evidence; LBP-09-24, 70 NRC 819 (2009)

the knowledge component of the deliberate ignorance theory is slightly less than knowledge to a 100% certainty where the prosecutor's case is based on circumstantial evidence that precludes establishing defendant's knowledge to a 100% certainty; LBP-09-24, 70 NRC 818 n.8, 821 n.10 (2009)

United States v. Dawkins, 562 F.2d 567, 569 (8th Cir. 1977)

with respect to a prosecutor's role, government lawyers should understand and follow the venerable maxim that the government wins when justice is done; LBP-09-24, 70 NRC 799 n.8 (2009)

United States v. Florida East Coast Railway Co., 410 U.S. 224, 243 (1973)

the right to a hearing embraces not only the right to present evidence, but also a reasonable opportunity to know the claims of the opposing party and to meet them; LBP-09-24, 70 NRC 792-93 n.176 (2009)

United States v. Guerrero, 114 F.3d 332, 344 n.12 (1st Cir. 1997)

deliberate ignorance is tantamount to knowledge; LBP-09-24, 70 NRC 817 (2009)

LEGAL CITATIONS INDEX

CASES

United States v. Heredia, 483 F.3d 913 (9th Cir. 2007) (en banc)
"deliberate ignorance" or "willful blindness" instruction has its place and sees frequent usage in drug possession cases where the defendant purports not to know, for example, what is in the package someone asked him to deliver in secretive fashion; LBP-09-24, 70 NRC 719 n.81 (2009)

United States v. Heredia, 483 F.3d 913, 918 n.4 (9th Cir. 2007) (*en banc*)
a deliberately ignorant defendant is one who was aware of the high probability of a critical fact, but deliberately ignored that probability; LBP-09-24, 70 NRC 819 (2009)
a negligent defendant is one who should have had similar suspicions but, in fact, did not; LBP-09-24, 70 NRC 819 (2009)
a reckless defendant is one who merely knew of a substantial and unjustifiable risk that his conduct was criminal; LBP-09-24, 70 NRC 819 (2009)
deliberate ignorance is categorically different from negligence or recklessness; LBP-09-24, 70 NRC 819 (2009)

United States v. Heredia, 483 F.3d 913, 919 n.6 (9th Cir. 2007) (*en banc*)
a finding of deliberate ignorance is equivalent to a finding of knowledge, because the deliberate ignorance theory focuses on defendant's actual beliefs and actions; LBP-09-24, 70 NRC 817 (2009)

United States v. Heredia, 483 F.3d 913, 920 (9th Cir. 2007) (*en banc*)
a conviction based on deliberate ignorance requires a finding that a defendant acted deliberately, and a deliberate action is one that is intentional, premeditated, and fully considered; LBP-09-24, 70 NRC 819 (2009)

United States v. Heredia, 483 F.3d 913, 920 n.10 (9th Cir. 2007) (*en banc*)
the deliberate ignorance instruction defines when an individual has sufficient information so that he can be deemed to know something; LBP-09-24, 70 NRC 818 n.8 (2009)
the knowledge component of the deliberate ignorance theory is slightly less than knowledge to a 100% certainty in that the defendant does not take the final step to confirm that knowledge; LBP-09-24, 70 NRC 818 n.8 (2009)

United States v. Heredia, 483 F.3d 913, 922 n.13 (9th Cir. 2007) (*en banc*)
deliberate ignorance is tantamount to knowledge; LBP-09-24, 70 NRC 817, 818 n.8, 819, 821 n.10, 822 n.11 (2009)

United States v. Heredia, 483 F.3d 913, 923 (9th Cir. 2007) (*en banc*)
a jury is presumed to follow the instructions given to it, and there is no reason to fear that juries will be less able to do so when trying to sort out a criminal defendant's state of mind than any other issue; LBP-09-24, 70 NRC 818 (2009)

United States v. Heredia, 483 F.3d 913, 923-24 (9th Cir. 2007) (*en banc*)
tribunals are required to conclude that the jury understood the trial court's instructions and rendered well-founded findings of fact in compliance with those instructions; LBP-09-24, 70 NRC 820 (2009)

United States v. Heredia, 483 F.3d 913, 924 (9th Cir. 2007) (*en banc*)
recklessness or negligence never comes into play in the deliberate ignorance instruction, and there is little reason to suspect that juries will import these concepts into their deliberations; LBP-09-24, 70 NRC 818-19 (2009)

United States v. Mari, 47 F.3d 782, 785 (6th Cir. 1995)
a fundamental tenet of the jury system assumes that the jury complies with the instructions provided by the trial court; LBP-09-24, 70 NRC 815, 818, 820 (2009)
the plain language of the Sixth Circuit Pattern Jury Instruction on deliberate ignorance forecloses the possibility that a jury will convict on the basis of negligence; LBP-09-24, 70 NRC 818 (2009)
the warning to jurors that the added instruction on deliberate ignorance or willful blindness is not intended to allow them to base guilt on negligence or carelessness is sufficient to legitimize the instruction; LBP-09-24, 70 NRC 719 (2009)

United States v. Monus, 128 F.3d 376 (6th Cir. 1998)
where the prosecution must rely on circumstantial evidence to establish a defendant's knowledge, the use of a deliberate ignorance instruction is unexceptional and entirely proper and is given in fraud, money laundering, and conspiracy cases; LBP-09-24, 70 NRC 820 (2009)

United States v. Navajo Nation, 537 U.S. 488, 515 (2003)
the Trust Responsibility requires federal agencies to take actions or refrain from taking actions in fulfillment of Congress's duty to protect the Indians; LBP-09-13, 70 NRC 189 (2009)

LEGAL CITATIONS INDEX

CASES

United States v. Olbres, 61 F.3d 967, 971 (1st Cir. 1995)
one who signs a contract is presumed to know its contents; LBP-09-24, 70 NRC 708 n.47 (2009)

United States v. Orji-Nwosu, 549 F.3d 1005 (5th Cir. 2008)
"deliberate ignorance" or "willful blindness" instruction has its place and sees frequent usage in drug possession cases where the defendant purports not to know, for example, what is in the package someone asked him to deliver in secretive fashion; LBP-09-24, 70 NRC 719 n.81 (2009)

United States v. Rayborn, 491 F.3d 513 (6th Cir. 2007)
where the prosecution must rely on circumstantial evidence to establish a defendant's knowledge, the use of a deliberate ignorance instruction is unexceptional and entirely proper and is given in mail fraud, wire fraud, and money laundering cases; LBP-09-24, 70 NRC 820 (2009)

United States v. Rayborn, 491 F.3d 513, 521 (2007)
the Sixth Circuit is increasingly focusing on the difference between deliberate ignorance and actual knowledge; LBP-09-24, 70 NRC 719 n.82 (2009)

United States v. Rivera, 926 F.2d 1564, 1571 (11th Cir. 1991)
the danger of instruction to juries on deliberate ignorance or willful blindness in an inappropriate case is that juries will convict on a basis akin to a standard of negligence; LBP-09-24, 70 NRC 720 n.85 (2009)

United States v. Ross, 502 F.3d 521 (6th Cir. 2007)
where the prosecution must rely on circumstantial evidence to establish a defendant's knowledge, the use of a deliberate ignorance instruction is unexceptional and entirely proper and is given in bank fraud cases; LBP-09-24, 70 NRC 820 (2009)

United States v. Ross, 502 F.3d 521, 528 (2007)
the Sixth Circuit is increasingly focusing on problems caused when the evidence does not support the use of the deliberate ignorance charge; LBP-09-24, 70 NRC 719 n.82 (2009)

United States v. Salerno, 481 U.S. 739, 751-52 (1987)
to succeed in imposing pretrial detention because the accused is a danger to the community, the government must, among other things, prove in an adversary hearing by clear and convincing evidence that no conditions of release can reasonably assure the community's safety; LBP-09-24, 70 NRC 806 (2009)

United States v. Sioux Nation of Indians, 448 U.S. 371 (1980)
given that the Oglala Lakota no longer own the land upon which ISL mines are located, it is plain that the mining operations are not occurring within the tribal boundaries; LBP-09-13, 70 NRC 184 (2009)

United States v. Sioux Nation of Indians, 448 U.S. 371, 382-83 (1980)
the United States is no longer bound by the terms of the 1868 Fort Laramie Treaty; LBP-09-13, 70 NRC 187 (2009)

United States v. Sioux Nation of Indians, 448 U.S. 371, 410-12 (1980)
Congress's plenary power with respect to Native Americans entitles it to abrogate treaties with Native American nations; LBP-09-13, 70 NRC 187 n.32 (2009)

United States v. Springer, 262 Fed. Appx. 703, 706 (6th Cir. 2008)
instruction to juries on deliberate ignorance or willful blindness should be used with caution to avoid the possibility that the jury will convict on the lesser standard that the defendant should have known his conduct was illegal; LBP-09-24, 70 NRC 720 n.85 (2009)

United States v. Tobeler, 311 F.3d 1201, 1206 (9th Cir. 2002)
rules of statutory construction must be employed to give each word Congress used a separate and distinct significance that is consistent with its ordinary meaning; LBP-09-30, 70 NRC 1049 n.11 (2009)

United States v. Wasserson, 418 F.3d 225, 237 (3rd Cir. 2005)
deliberate ignorance instruction to juries must be tailored to avoid the implication that a defendant may be convicted simply because he or she should have known of the facts of which he or she was unaware; LBP-09-24, 70 NRC 720 n.85 (2009)

United States v. Wilson, 503 F.3d 195 (2d Cir. 2007)
"deliberate ignorance" or "willful blindness" instruction has its place and sees frequent usage in drug possession cases where the defendant purports not to know, for example, what is in the package someone asked him to deliver in secretive fashion; LBP-09-24, 70 NRC 719 n.81 (2009)

LEGAL CITATIONS INDEX

CASES

United States v. Wofford, 560 F.3d 341, 352 (5th Cir. 2009)
where the *mens rea* required for conviction is that the defendant act knowingly or willfully, a deliberate ignorance instruction creates a risk that the jury might convict for negligence or stupidity, i.e., that the defendant should have been aware of the illegal conduct; LBP-09-24, 70 NRC 720 n.85 (2009)

Upton v. Tribilcock, 91 U.S. 45, 50 (1875)
one who signs a contract is presumed to know its contents; LBP-09-24, 70 NRC 708 n.47 (2009)

USEC Inc. (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311-12 (2005)
in source materials cases, petitioner has the burden to show a specific and plausible means of how proposed license activities may affect him or her; LBP-09-13, 70 NRC 177 (2009)
no proximity presumption applies in source materials cases; LBP-09-13, 70 NRC 177 (2009)

USEC Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006)
contention admissibility requirements are deliberately strict and any contention that does not satisfy the requirements of 10 C.F.R. 2.309(f)(1) will be rejected; CLI-09-20, 70 NRC 914 (2009)

USEC Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 439 n.32 (2006)
the Commission will affirm decisions on the admissibility of contentions where the appellant points to no error of law or abuse of discretion; CLI-09-20, 70 NRC 914 (2009)

USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006)
information, facts, and expert opinions provided by petitioner will be examined by the board to confirm that the petitioner does indeed supply adequate support for the contention; LBP-09-26, 70 NRC 955 (2009)

USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 462 (2006)
a contention should be dismissed if it does not directly controvert a position taken by the applicant in the license application; LBP-09-27, 70 NRC 1016 (2009)

USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006)
an expert opinion that merely states a conclusion (e.g., the application is deficient, inadequate, or wrong without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; LBP-09-16, 70 NRC 290 (2009)

USEC Inc. (American Centrifuge Plant), CLI-07-5, 65 NRC 109 (2007)
precedents for resolving issues concerning uranium enrichment licensing are provided; CLI-09-15, 70 NRC 17 (2009)

USEC Inc. (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 596-97 (2005)
in ruling on contention admissibility a board is not to look to the merits of the contention; LBP-09-17, 70 NRC 328 (2009)

USEC Inc. (American Centrifuge Plant), LBP-05-28, 62 NRC 585, 597 (2005), *aff'd,* CLI-06-10, 63 NRC 451 (2006)
a bare assertion without the requisite support for claims is inadequate to support the admission of a contention; LBP-09-16, 70 NRC 273 (2009)
mere mention of a document without providing its contents or an explanation of its significance cannot support admissibility of the contention; LBP-09-21, 70 NRC 602 n.94 (2009)
presentation of excerpts from combined license application without further explanation does not provide sufficient support for a contention; LBP-09-16, 70 NRC 284 (2009)

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 551 (1978)
not every conceivable alternative must be included in the environmental impact statement; LBP-09-17, 70 NRC 378 (2009)
the concept of alternatives must be bounded by some notion of feasibility; LBP-09-17, 70 NRC 378 (2009)
the detailed statement of alternatives cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man; LBP-09-10, 70 NRC 127 (2009)

LEGAL CITATIONS INDEX

CASES

Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 553-54 (1978)
the purpose of the contention admissibility rules is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-09-26, 70 NRC 952 (2009)

Vermont Yankee Nuclear Power Corp. v. NRC, 435 U.S. 519, 554 (1978)
petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-09-17, 70 NRC 329 (2009)

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)
information, facts, and expert opinions provided by petitioner will be examined by the board to confirm that the petitioner does indeed supply adequate support for the contention; LBP-09-26, 70 NRC 955 (2009)
the NEPA requirement to consider alternatives to a proposed action is governed by the rule of reason applicable to all NEPA-required alternatives analyses and does not extend to events that are remote and speculative; LBP-09-26, 70 NRC 970 (2009)

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), CLI-90-4, 31 NRC 333 (1990)
if the accident sought to be considered is sufficiently unlikely that it can be characterized fairly as remote and speculative, then consideration under NEPA is not required as a matter of law; LBP-09-26, 70 NRC 970 (2009)

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), CLI-90-7, 32 NRC 129 (1990)
low probability is the key to applying NEPA's rule-of-reason test to contentions that allege that a specified accident scenario presents a significant environmental impact that must be evaluated; LBP-09-26, 70 NRC 970 (2009)

Vermont Yankee Nuclear Power Corp. (Vermont Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163 (2000)
an organization asserting representational standing must demonstrate that the interest of at least one of its members will be harmed, demonstrate that the member would have standing in his or her own right, identify that member by name and address, and demonstrate that the organization is authorized to request a hearing on behalf of that member; LBP-09-10, 70 NRC 115 (2009); LBP-09-13, 70 NRC 178 (2009)
petitioner's residence within a 50-mile radius of the proposed facility has established standing in his own right, and, accordingly, representational standing has been established through him; LBP-09-18, 70 NRC 395 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294 (2008)
inconsistencies in Staff position of onsite storage of low-level radioactive waste are noted; CLI-09-16, 70 NRC 37 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 303 (2008)
under the proximity presumption, petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if petitioner lives within 50 miles of the proposed facility; LBP-09-18, 70 NRC 395 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 312-14 (2008)
applicant should explain its current plan for management of low-level radioactive waste, given the lack of an offsite disposal facility, and the potential environmental impact of retaining LLRW at the reactor site for an extended period; LBP-09-16, 70 NRC 257 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 313 n.86 (2008)
disposal of greater-than-Class-C waste is the responsibility of the federal government; LBP-09-16, 70 NRC 254 (2009)
only the management of Class B and Class C wastes is properly the subject of a contention in a combined license proceeding; LBP-09-16, 70 NRC 254 (2009)

LEGAL CITATIONS INDEX

CASES

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 313-21 (2008)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 253 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 314-15 (2008)
contentions of omission claim that the application fails to contain information on a relevant matter as required by law provides supporting reasons for the petitioner's belief; LBP-09-10, 70 NRC 123 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 315 (2008)
a contention is material if it shows that some significant link exists between the claimed deficiency and either the health and safety of the public, or the environment; LBP-09-26, 70 NRC 953 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 316-17 (2008)
contentions that challenge the legal sufficiency of applicant's environmental report and final safety analysis report are within the scope of a combined proceeding; LBP-09-10, 70 NRC 124 (2009)
Part 61 does not apply to onsite facilities where the licensee intends to store its own low-level radioactive waste; LBP-09-10, 70 NRC 121 n.57 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 317 (2008)
a contention of omission becomes moot if applicant cures the omission in its application; LBP-09-16, 70 NRC 245 (2009)
arguments premised on the prediction that someday a nuclear plant site will become a permanent storage or disposal facility for low-level radioactive waste are too speculative and therefore not material to the findings the NRC must make to support the action that is involved in the present proceeding; LBP-09-16, 70 NRC 255 (2009)
pleading requirements of 10 C.F.R. 2.309(f)(1)(v) call for a recitation of facts or expert opinion supporting the issue raised, but are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-09-16, 70 NRC 244 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 318 (2008)
low-level radioactive waste disposal contentions have been admitted when that issue was not sufficiently discussed in the applications and there was no mention of the closure of the Barnwell facility; LBP-09-18, 70 NRC 410-11 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 335 (2008)
petitioner does not have to prove its contention at the admissibility stage; LBP-09-26, 70 NRC 954 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 336-37 (2008)
the Waste Confidence Rule is applicable to all new reactor proceedings, and contentions challenging the rule or seeking its reconsideration are inadmissible; LBP-09-17, 70 NRC 337 (2009); LBP-09-18, 70 NRC 406 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 337 (2008)
challenges to the Waste Confidence Rule are prohibited; LBP-09-10, 70 NRC 114 (2009)
licensing boards may not admit a contention that directly or indirectly challenges 10 C.F.R. 51.51, Table S-3; LBP-09-10, 70 NRC 114 (2009)

Virginia Electric and Power Co. (North Anna Power Station, Units 1 and 2), ALAB-146, 6 AEC 631 (1973)
licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing; LBP-09-18, 70 NRC 396 (2009)

Wagner v. City of Cleveland, 574 N.E.2d 533, 536-37 (Ohio Ct. App. 1988)
lower court's decision on a moot issue was found to be a vain act and a nullity; LBP-09-14, 70 NRC 196 n.15 (2009)

LEGAL CITATIONS INDEX

CASES

Washington Public Power Supply System (WPPSS Nuclear Project No. 3), LBP-96-21, 44 NRC 134, 136 (1996)
- although NRC may require an applicant to submit certain information, the NRC cannot delegate its duty to comply with the National Environmental Policy Act to the applicant; LBP-09-10, 70 NRC 87 (2009)

Western Fuels-Utah, Inc., 900 F.2d 318, 320 (D.C. Cir. 1990)
- courts must construe regulations in light of the statutes they implement, keeping in mind that where there is an interpretation of an ambiguous regulation that is reasonable and consistent with the statute, that interpretation is to be preferred; LBP-09-16, 70 NRC 261 (2009)

Westinghouse Electric Corp. (Nuclear Fuel Export License for Czech Republic — Temelin Nuclear Power Plants), CLI-94-7, 39 NRC 322, 331 (1994)
- redressability requires petitioner to show that its alleged injury-in-fact could be cured or alleviated by some action of the tribunal; LBP-09-13, 70 NRC 177 (2009)

Westlands Water District v. U.S. Department of Interior, 376 F.3d 853, 868 (9th Cir. 2004)
- under the rule of reason, the environmental impact statement need not consider an infinite range of alternatives, only reasonable or feasible ones; LBP-09-10, 70 NRC 127 (2009); LBP-09-17, 70 NRC 379 (2009); LBP-09-21, 70 NRC 626 n.271 (2009)

Whitmore v. Arkansas, 495 U.S. 149, 158-59 (1990)
- standing generally has been denied when the threat of injury is not concrete and particularized; LBP-09-13, 70 NRC 176 (2009)

Wilderness Society v. Griles, 824 F.2d 4, 11 (D.C. Cir. 1987)
- the requisite injury to establish standing may be either actual or threatened; LBP-09-28, 70 NRC 1024 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-94-3, 39 NRC 95, 102 n.10 (1994)
- if the petitioner is an organization seeking to intervene in an NRC proceeding in its own right, it must allege that the challenged action will cause a cognizable injury to its interests or to the interests of its members; LBP-09-10, 70 NRC 115 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996)
- as long as either denial of a license or issuance of a decision mandating compliance with legal requirements would alleviate a petitioner's potential injury, then under longstanding NRC jurisprudence the petitioner may prosecute any admissible contention that could result in the denial or in the compliance decision; CLI-09-20, 70 NRC 918 n.28 (2009)
- judicial concepts of standing require that a petitioner establish that it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute, that the injury can fairly be traced to the challenged action and that the injury is likely to be redressed by a favorable decision; LBP-09-10, 70 NRC 69 (2009); LBP-09-18, 70 NRC 395 (2009); LBP-09-28, 70 NRC 1024 (2009)
- once parties demonstrate that they have standing, the parties will then be free to assert any contention, which, if proved, will afford them the relief they seek; LBP-09-10, 70 NRC 69 (2009); LBP-09-16, 70 NRC 242 (2009); LBP-09-21, 70 NRC 592 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 249 (1996)
- for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion, but must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-09-17, 70 NRC 328, 329 (2009); LBP-09-16, 70 NRC 290 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 194-95 (1998)
- to establish organizational standing, an organization must demonstrate that the action at issue will cause an injury-in-fact to the organization's interests or the interests of its members and that the injury is within the zone of interests protected by the National Environmental Policy Act or the Atomic Energy Act; LBP-09-13, 70 NRC 178 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998)
- NRC generally follows judicial concepts of standing, which require a petitioner to allege a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-09-26, 70 NRC 947 (2009)

the requisite injury to establish standing may be either actual or threatened; LBP-09-28, 70 NRC 1024 (2009)
to establish standing, petitioner must allege a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-09-16, 70 NRC 240 (2009); LBP-09-17, 70 NRC 321-22 n.30 (2009); LBP-09-20, 70 NRC 574 (2009)
when assessing whether petitioner has set forth a sufficient interest to intervene, licensing boards apply judicial concepts of standing; LBP-09-16, 70 NRC 240 (2009); LBP-09-17, 70 NRC 321-22 n.30 (2009); LBP-09-20, 70 NRC 574 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195-96 (1998)
to establish standing, petitioner's claimed injury must be arguably within the zone of interests protected by the governing statute in the proceeding; LBP-09-13, 70 NRC 176 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 203 (1998)
an entity wishing to participate as a governmental body must demonstrate that it goes beyond an advisory role and exercises executive or legislative responsibilities; LBP-09-13, 70 NRC 186 (2009)

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)
a contention is material if it shows that some significant link exists between the claimed deficiency and either the health and safety of the public, or the environment; LBP-09-26, 70 NRC 953 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 88-90 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996)
the NEPA requirement to consider alternatives to a proposed action is governed by the rule of reason applicable to all NEPA-required alternatives analyses and does not extend to events that are remote and speculative; LBP-09-26, 70 NRC 970 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90, *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996)
a document put forth by an intervenor as supporting the basis for a contention is subject to scrutiny, for both what it does and does not show; LBP-09-27, 70 NRC 1009 (2009)
petitioner's inaccurate reading and presentation of applicant's spent fuel storage plan cannot serve as a litigable basis for a contention; LBP-09-27, 70 NRC 1008 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 249 (1996)
although the contention admissibility rule imposes on a petitioner the burden of going forward with a sufficient factual basis, it does not shift the ultimate burden of proof from the applicant to the petitioner; LBP-09-27, 70 NRC 1006-07 (2009)
for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion; LBP-09-27, 70 NRC 1006-07 (2009)
petitioner must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-09-27, 70 NRC 1006-07, 1010 (2009)
the contention admissibility rule does not require a petitioner to prove its case at the contention stage; LBP-09-27, 70 NRC 1006-07 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds,* CLI-96-7, 43 NRC 235 (1996)
any material provided by petitioner in support of its contention, including those portions of the material that are not relied upon, is subject to board scrutiny; LBP-09-17, 70 NRC 328 (2009); LBP-09-21, 70 NRC 612 n.165 (2009); LBP-09-26, 70 NRC 954 (2009)

Yankee Atomic Electric Co. (Yankee Nuclear Power Station), LBP-96-15, 44 NRC 8, 26 (1996)
when information forming the foundation for a new or amended contention becomes available piecemeal over time, the admissibility decision turns on a determination about when, as a cumulative matter, the separate pieces of the information puzzle were sufficiently in place to make the particular concerns reasonably apparent; LBP-09-10, 70 NRC 143 n.82 (2009)

Ziegler v. Connecticut General Life Insurance Co., 916 F.2d 548, 553 (9th Cir. 1990)
inquiry into an individual's actual knowledge is entirely factual, requiring examination of the record; LBP-09-24, 70 NRC 708 (2009)

LEGAL CITATIONS INDEX
REGULATIONS

10 C.F.R. Part 2
parties are obligated to ensure that their arguments and assertions in their filings are supported by appropriate and accurate references to legal authority and factual basis, including, as appropriate, citation to the record; CLI-09-15, 70 NRC 16 (2009)
the Commission expects that the licensing board, NRC Staff, the applicant, and other parties will follow the applicable requirements; CLI-09-15, 70 NRC 12 (2009)
10 C.F.R. 2.4
a "potential party" is any person who intends or may intend to participate as a party by demonstrating standing and filing an admissible contention under section 2.309; CLI-09-15, 70 NRC 21-22 (2009)
10 C.F.R. 2.107(a)
when applicant decides it no longer wishes to have the agency evaluate its application, the usual approach is for applicant to request that the agency permit it to withdraw its licensing request; LBP-09-23, 70 NRC 667 (2009)
withdrawal of a license application is subject to such terms as the presiding officer may prescribe; LBP-09-23, 70 NRC 667 n.25 (2009)
10 C.F.R. 2.202(a)
twenty days in which to request a hearing is the minimum required by the agency's regulations for orders issued under this section; LBP-09-20, 70 NRC 571 (2009)
10 C.F.R. 2.202(a)(2)
in addition to having the burden on immediate effectiveness, the target is apparently expected to address the merits at that point as well, all in 20 days, unless extended; LBP-09-24, 70 NRC 801 n.12 (2009)
10 C.F.R. 2.202(a)(3)
when issuing an order modifying a license, the agency is required to inform the licensee or any other person adversely affected by the order of his or her right, within 20 days of the date of the order, or such other time as may be specified in the order, to demand a hearing; LBP-09-20, 70 NRC 571 n.27 (2009)
10 C.F.R. 2.202(c)(1)
a hearing challenging an immediately effective enforcement order will be conducted expeditiously, giving due consideration to the rights of the parties; LBP-09-24, 70 NRC 687 n.4 (2009)
10 C.F.R. 2.202(c)(2)(i)
a challenge to immediate effectiveness must state with particularity the reasons why the enforcement order is unsound; LBP-09-24, 70 NRC 804 n.16 (2009)
in addition to having the burden on immediate effectiveness, the target is apparently expected to address the merits at that point as well; LBP-09-24, 70 NRC 801 n.12 (2009)
the scope of early review of an enforcement order is severely limited and the order's immediate effectiveness depriving the accused of the freedom to work pending trial is presumptively valid, placing the burden on the accused to demonstrate its invalidity; LBP-09-24, 70 NRC 801 (2009)
the subject of an enforcement order has the right to challenge, on limited grounds, the immediate effectiveness of the order; LBP-09-24, 70 NRC 687 (2009)
to successfully challenge an enforcement order's target must show that the order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error; LBP-09-24, 70 NRC 801 (2009)

10 C.F.R. 2.203
settlement agreements become effective upon their execution by both parties, but agreements are contingent upon approval by the board; LBP-09-12, 70 NRC 166 (2009)
10 C.F.R. 2.206
petitioner's request that NRC issue a demand for information to licensee regarding vibration levels prior to restart is denied; DD-09-2, 70 NRC 900-909 (2009)
10 C.F.R. 2.304(d)
representations of a summary disposition movant are described; LBP-09-22, 70 NRC 652 (2009)
10 C.F.R. 2.309
intervention petitions shall set forth with particularity the interest of the petitioner in the proceeding and how that interest may be affected by the results of the proceeding; CLI-09-15, 70 NRC 8 (2009)
10 C.F.R. 2.309(a)
a petition for review and request for hearing must include a showing that the petitioner has standing; LBP-09-13, 70 NRC 175 (2009)
any person or organization seeking to intervene in a licensing proceeding must establish standing and proffer at least one admissible contention that meets the requirements of section 2.309(f)(1); LBP-09-10, 70 NRC 69, 71 (2009); LBP-09-16, 70 NRC 243 (2009); LBP-09-17, 70 NRC 318 (2009); LBP-09-18, 70 NRC 394 (2009); LBP-09-26, 70 NRC 946 (2009); LBP-09-28, 70 NRC 1023 (2009)
in ruling on a hearing request or intervention petition, licensing boards will determine whether petitioner has an interest affected by the proceeding; LBP-09-23, 70 NRC 669 (2009)
NRC is required to hold a hearing upon the request of any person whose interest may be affected by the proceeding and to allow that person to intervene; CLI-09-20, 70 NRC 915 (2009)
10 C.F.R. 2.309(c)
a motion and proposed contention filed later than 30 after the date when the new and material information on which it is based first becomes available shall be deemed nontimely; LBP-09-22, 70 NRC 647 (2009)
for untimely new or amended contentions, the pleading shall include a motion for leave to file the contention and the support for the proposed new or amended contention showing that it satisfies section 2.309(f)(1); LBP-09-22, 70 NRC 647 (2009)
petitions and contentions filed after the initial 60-day deadline are admissible only upon a balancing of eight factors; LBP-09-26, 70 NRC 948 (2009)
the filing of late contentions is permitted if sufficient justification is provided; LBP-09-15, 70 NRC 211 (2009)
the first step in assessing the admissibility of a new contention is to determine if it is timely or nontimely; LBP-09-10, 70 NRC 138 (2009)
the most important of the eight factors is the first factor, a showing of good cause, if any, for the failure to file on time; LBP-09-10, 70 NRC 140 (2009)
under current rules, contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register,* unless a longer period is therein specified, an extension is granted, or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time; LBP-09-17, 70 NRC 325 n.50 (2009)
10 C.F.R. 2.309(c)(1)
factors that must be addressed for nontimely intervention petitions, hearing requests, and contentions are set forth; LBP-09-20, 70 NRC 572-73 n.32 (2009)
the most important showing that petitioners must make for admission of a late-filed contention is good cause, if any, for the failure to file on time; LBP-09-10, 70 NRC 144 (2009); LBP-09-26, 70 NRC 949 (2009)
10 C.F.R. 2.309(c)(1)(i)-(viii)
nontimely petitions to intervene and contentions, amended petitions, and supplemental petitions will not be entertained absent a determination by the Commission, the licensing board, or a presiding officer that the petition should be granted and/or the contentions should be admitted based upon a balancing of eight factors; CLI-09-15, 70 NRC 9 (2009)
10 C.F.R. 2.309(c)(2)
the Commission dispensed with all but the good cause factor for late-filed contentions; LBP-09-29, 70 NRC 1031 n.17 (2009)

10 C.F.R. 2.309(d)
a clause in a settlement agreement regarding standing does not apply to NRC Staff, nor would it bind a future licensing board to make any particular determination regarding whether any of the petitioners has established its standing, either as of right or as a matter of discretion; LBP-09-23, 70 NRC 669 (2009)
intervention petitioner must be able to show how it would have personally suffered or will suffer a distinct and palpable harm that constitutes injury in fact; LBP-09-18, 70 NRC 400 (2009)
NRC is required to hold a hearing upon the request of any person whose interest may be affected by the proceeding and to allow that person to intervene; CLI-09-20, 70 NRC 915 (2009)
10 C.F.R. 2.309(d)(1)
a hearing request must state the name, address, and telephone number of the requestor, the nature of the requestor's right under the governing statutes to be made a party to the proceeding, the nature and extent of the requestor's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on the requestor's interest; LBP-09-28, 70 NRC 1023 (2009)
state and federally recognized Indian tribes do not need to address standing requirements if the facility is located within their boundaries; CLI-09-15, 70 NRC 9 (2009)
to demonstrate standing to intervene, petitioner must state, and boards must assess, the nature of petitioner's right under the governing statutes to be made a party, the nature and extent of petitioner's property, financial, or other interest, and the possible effect of the outcome of the proceeding on petitioner's interest; CLI-09-20, 70 NRC 915 (2009)
to establish organizational standing, an organization must demonstrate that the action at issue will cause an injury-in-fact to the organization's interests or the interests of its members and that the injury is within the zone of interests protected by the National Environmental Policy Act or the Atomic Energy Act; LBP-09-13, 70 NRC 178 (2009)
10 C.F.R. 2.309(d)(1)(ii)-(iv)
in ruling on a request for a hearing, boards should consider the nature of petitioner's right under the Atomic Energy Act or the National Environmental Policy Act to be made a party to the proceeding, the nature and extent of petitioner's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest; LBP-09-10, 70 NRC 69 (2009); LBP-09-13, 70 NRC 175 (2009); LBP-09-16, 70 NRC 239 (2009), 70 NRC 321-22 n.30 (2009); LBP-09-18, 70 NRC 394-95 (2009); LBP-09-20, 70 NRC 574 (2009); LBP-09-21, 70 NRC 590 (2009); LBP-09-26, 70 NRC 946-47 (2009)
10 C.F.R. 2.309(d)(2)
a state, county, municipality, federally recognized Indian tribe, or agencies thereof may submit a petition to the Commission to participate as a party in a materials license proceeding; CLI-09-15, 70 NRC 9 (2009)
10 C.F.R. 2.309(d)(2)(i)
an organization that is neither a federally recognized Indian tribe nor a local governmental body does not qualify for standing; LBP-09-13, 70 NRC 184 (2009)
certain governmental entities are exempted from the requirement to show standing concerning activities that occur within their borders; LBP-09-13, 70 NRC 184 (2009)
not all entities with governmental ties are entitled to participate in licensing proceedings as local governmental bodies; LBP-09-13, 70 NRC 186 (2009)
the phrase "federally recognized Indian Tribe" was added to the regulation in order to comply with Executive Order 13,084; LBP-09-13, 70 NRC 184-85 (2009)
10 C.F.R. 2.309(d)(3)
in ruling on hearing requests/intervention petitions, licensing boards will determine whether petitioner has an interest affected by the proceeding); LBP-09-23, 70 NRC 669 (2009)
10 C.F.R. 2.309(e)
a clause in a settlement agreement regarding standing does not apply to NRC Staff, nor would it bind a future licensing board to make any particular determination regarding whether any of the petitioners has established its standing, either as of right or as a matter of discretion; LBP-09-23, 70 NRC 669 (2009)
in ruling on discretionary intervention requests, licensing boards will consider and balance enumerated factors weighing in favor of and against allowing intervention; LBP-09-23, 70 NRC 669 (2009)

10 C.F.R. 2.309(f)(1)
a contention that fails to state an issue of law or fact and makes no attempt to comply with the contention pleading criteria is inadmissible; LBP-09-10, 70 NRC 78 (2009)
a legal issue contention need not satisfy all the contention admissibility criteria; LBP-09-29, 70 NRC 1032 (2009)
contention alleging that the threatened eastern fox snake inhabits the nuclear plant site and that construction activities for the new reactor will kill snakes, destroy their habitat, and might eliminate them from the area is within the scope of a combined license proceeding; LBP-09-16, 70 NRC 287 (2009)
contention asserting that DOE's description of its expert elicitation relating to a probabilistic volcanic hazard analysis update fails to comply with section 63.21(c)(19) or the NRC guidance document that DOE formally committed to follow, is admissible; LBP-09-29, 70 NRC 1034 (2009)
contention that the high-level waste application inadequately addresses generalized corrosion because it relies on flawed experimental data raises a genuine, material dispute with the application by pointing to specific sections that allegedly fail to comply with the NRC's requirements for conducting a post-closure performance assessment; LBP-09-29, 70 NRC 1036-37 (2009)
the determination of contention admissibility is not the time or place for broad policy arguments; LBP-09-10, 70 NRC 135 (2009)
the existence of a Staff request for additional information does not, by itself, constitute compliance with contention admissibility criteria, nor does it ensure the admission of a contention; LBP-09-10, 70 NRC 77 (2009)
the purpose of contention pleading requirements is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-09-10, 70 NRC 133 (2009)
the third step in determining the admissibility of any new contention is the requirement that it satisfy the six standards; LBP-09-10, 70 NRC 140 (2009)
to be admissible, contentions must satisfy six basic requirements; LBP-09-10, 70 NRC 71-72 (2009); LBP-09-21, 70 NRC 592 (2009)
to be admitted in a proceeding, a new contention must meet the new or amended contention requirements as well as the general contention admissibility requirements; LBP-09-9, 70 NRC 45 (2009)
to participate as a party in a combined license proceeding, intervention petitioner must not only establish standing, but must also proffer at least one admissible contention that meets the requirements of this section; LBP-09-16, 70 NRC 243 (2009)
with limited exceptions, no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-09-26, 70 NRC 955-56 (2009)
10 C.F.R. 2.309(f)(1)(i)
contentions of omission must describe the information that should have been included in the environmental report and provide the legal basis that requires the omitted information to be included; LBP-09-16, 70 NRC 244 (2009)
the basic allegation that the environmental report does not comply with 10 C.F.R. Part 51 because it does not adequately address all indirect and cumulative environmental impacts that result from certain specified aspects of the proposed project provides a specific statement of the issue of law or fact to be raised or controverted; LBP-09-10, 70 NRC 101 (2009)
the issue that generally arises under this paragraph is whether a contention is stated with sufficient specificity; LBP-09-17, 70 NRC 326 (2009)
10 C.F.R. 2.309(f)(1)(i)-(vi)
at the contention admissibility stage, a board merely decides whether the contentions meet the six pleading requirements; LBP-09-10, 70 NRC 86 (2009)
intervention petitioner for must establish standing and proffer at least one admissible contention that meets six requirements; LBP-09-18, 70 NRC 403 (2009); LBP-09-26, 70 NRC 951-52 (2009)
10 C.F.R. 2.309(f)(1)(ii)
a brief explanation of the basis for the contention is required as a prerequisite to its admissibility; LBP-09-26, 70 NRC 952 (2009)
a brief explanation of the basis is an explanation of the rationale or theory of the contention; LBP-09-10, 70 NRC 100 (2009)

contentions of omission must describe the information that should have been included in the environmental report and provide the legal basis that requires the omitted information to be included; LBP-09-16, 70 NRC 244 (2009)
petitioners' failure to explain or allege how or why a recirculation screen design is incomplete or the instrumentation and control design has a problem renders the contention inadmissible; LBP-09-10, 70 NRC 77 (2009)
10 C.F.R. 2.309(f)(1)(iii)
assertions that building two new nuclear reactors in a troubled economy is fiscally irresponsible is outside the scope of a combined license proceeding; LBP-09-10, 70 NRC 82 (2009)
by complying with the six contention requirements, an admissible contention must raise an issue that is both within the scope of the proceeding (normally defined by the hearing notice) and material to the findings the NRC must make to support the action involved; LBP-09-18, 70 NRC 403 (2009)
challenges to 10 C.F.R. 51.51, Table S-3 are outside the scope of a combined license proceeding; LBP-09-10, 70 NRC 115 (2009); LBP-09-18, 70 NRC 407 (2009)
claims related to the decommissioning of the facility are not currently ripe for review and are outside the scope of a combined license proceeding; LBP-09-16, 70 NRC 274 (2009)
contentions that challenge the legal sufficiency of applicant's environmental report and final safety analysis report are within the scope of a combined license proceeding; LBP-09-10, 70 NRC 124 (2009)
petitioner must demonstrate that the issue raised in the contention is within the scope of the proceeding; LBP-09-16, 70 NRC 244 (2009); LBP-09-17, 70 NRC 326 (2009); LBP-09-26, 70 NRC 953 (2009)
petitioners' concerns regarding the applicant's commitments to relax conservatisms in its laboratory testing and groundwater release analysis are in regard to the revised analysis to be submitted in response to the Staff RAI and therefore are dismissed as outside the scope of the proceeding; LBP-09-16, 70 NRC 274 (2009)
releases from the nuclear fuel cycle in general, incidences of childhood cancers near nuclear power plants, and a request for the NRC to address radioactive releases from burning of coal at fossil fuel plants are outside the scope of a combined license proceeding; LBP-09-16, 70 NRC 285 (2009)
revenue decoupling is a state regulatory matter that is outside of the scope of, and not material to, the NRC licensing process; LBP-09-10, 70 NRC 137 (2009)
10 C.F.R. 2.309(f)(1)(iv)
arguments premised on the prediction that someday a nuclear plant site will become a permanent storage or disposal facility for low-level radioactive waste are too speculative and therefore not material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-09-16, 70 NRC 255 (2009); LBP-09-27, 70 NRC 1002 (2009)
petitioners must show that any issue raised in a contention has significance regarding the findings the NRC must make to support the action that is involved in the proceeding; LBP-09-17, 70 NRC 326-27 (2009); LBP-09-18, 70 NRC 403 (2009)
releases from the nuclear fuel cycle in general, incidences of childhood cancers near nuclear power plants, and a request for the NRC to address radioactive releases from burning of coal at fossil fuel plants are outside the scope of a combined license proceeding; LBP-09-16, 70 NRC 285 (2009)
revenue decoupling is a state regulatory matter that is outside of the scope of, and not material to, the NRC licensing process; LBP-09-10, 70 NRC 137 (2009)
10 C.F.R. 2.309(f)(1)(v)
a bare assertion without the requisite support for claims is inadequate to support the admission of a contention; LBP-09-16, 70 NRC 273 (2009)
a general assessment of radioactivity within waters of the Great Lakes Basin does not address specific issues with regard to the proposed reactor, and it does not provide any support for the petitioners' assertions needed to advance an admissible contention; LBP-09-16, 70 NRC 248-49 (2009)
a legal issue contention is not required to provide facts or expert opinions; LBP-09-29, 70 NRC 1032 (2009)
at the admissibility stage, petitioners are not required to support contentions by expert opinion, substantive affidavits, or evidence; LBP-09-10, 70 NRC 100 (2009)
petitioner demonstrates a genuine dispute with the applicant on the adequacy of the water quality analysis; LBP-09-16, 70 NRC 278 (2009)

petitioner is required merely provide a simple nexus between the contention and the referenced factual or legal support; LBP-09-21, 70 NRC 602 n.94 (2009); LBP-09-25, 70 NRC 873 n.16, 881 (2009)
petitioner is required to support its contentions with documents, expert opinion, or at least a fact-based argument; LBP-09-17, 70 NRC 328-29 (2009)
petitioner must provide a concise statement of the alleged facts or expert opinion that support the contention, references to sources and documents on which the petitioner intends to rely, and sufficient information to show that a genuine dispute exists; LBP-09-10, 70 NRC 136 n.75 (2009); LBP-09-16, 70 NRC 244 (2009); LBP-09-26, 70 NRC 954 (2009); LBP-09-27, 70 NRC 1006 (2009)
petitioners question the underlying analysis of fish kills in the environmental report as being outdated, but they fail to provide any information to show that the results of the study are no longer representative; LBP-09-16, 70 NRC 281 (2009)
pleading requirements call for a recitation of facts or expert opinion supporting the issue raised, but are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-09-16, 70 NRC 244 (2009)
to be admissible, a contention must assert 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-09-26, 70 NRC 953 (2009)
10 C.F.R. 2.309(f)(1)(vi)
a contention must show that a genuine dispute exists on a material issue of law or fact with regard to the license application, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-09-26, 70 NRC 955 (2009)
a 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 the petitioner's belief; LBP-09-10, 70 NRC 76, 123 (2009); LBP-09-16, 70 NRC 244, 264 (2009); LBP-09-27, 70 NRC 995 (2009)
a legal issue contention raises a genuine dispute with the application because it challenges DOE's performance assessment for the post-10,000-year period; LBP-09-29, 70 NRC 1032 (2009)
a properly pleaded contention of omission must challenge a specific portion of the application and provide a basis for demonstrating the alleged deficiency; LBP-09-26, 70 NRC 968 (2009)
at the admissibility stage, petitioners are not required to submit expert affidavits or evidence; LBP-09-10, 70 NRC 100 (2009)
contentions must be based on documents or other information available at the time the petition is to be filed, and must point out specifically where or how the combined license application is inadequate; LBP-09-10, 70 NRC 77 (2009)
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; LBP-09-16, 70 NRC 245 (2009)
information that a petitioner must provide in support of a contention in order to have it admitted for adjudication is described; LBP-09-17, 70 NRC 327 (2009)
petitioner demonstrates a genuine dispute with the applicant on the adequacy of the water quality analysis; LBP-09-16, 70 NRC 278 (2009)
petitioner must provide a concise statement of the alleged facts or expert opinion that support the contention, references to sources and documents on which the petitioner intends to rely, and sufficient information to show that a genuine dispute exists; LBP-09-10, 70 NRC 136 n.75 (2009)
petitioners' assertion that applicant's environmental report fails to include an analysis of the impacts of a governmental entity managing long-term storage of high-level waste onsite and cost quantifications of such management fails to create a genuine dispute that would warrant admission of the contention; LBP-09-21, 70 NRC 606 (2009)
petitioners' assertion that no exposure levels are safe is an impermissible challenge to the exposure limits set forth in the NRC's regulations; LBP-09-16, 70 NRC 285 (2009)
petitioners' failure to explain or allege how or why a recirculation screen design is incomplete or the instrumentation and control design has a problem renders the contention inadmissible; LBP-09-10, 70 NRC 77 (2009)
petitioners must show that any issue raised in a contention has significance regarding the findings the NRC must make to support the action that is involved in the proceeding; LBP-09-17, 70 NRC 326-27 (2009)

10 C.F.R. 2.309(f)(2)
a challenge to the environmental report is different from a challenge to the environmental impact statement; LBP-09-10, 70 NRC 88 (2009)
a contention is timely to the extent it challenges the adequacy of the new low-level radioactive waste storage plan, but untimely as to those aspects of the contention that merely reargue issues already decided by the board, without identifying any new information relevant to those issues; LBP-09-27, 70 NRC 998 (2009)
a motion for leave to file a new contention, accompanied by the proposed contention, shall be deemed timely if filed within 30 days of the date when the new and material information on which it is based first became available; LBP-09-29, 70 NRC 1035 n.42 (2009)
a new contention may be filed after the initial docketing with leave of the presiding officer upon a showing that the information upon which it is based was not previously available, is materially different than information previously available, and has been submitted in a timely fashion based on the availability of the subsequent information; LBP-09-27, 70 NRC 998 (2009); LBP-09-29, 70 NRC 1035 (2009)
contentions can only be founded on information that is available at the time the contention is to be filed; LBP-09-10, 70 NRC 139 (2009)
contentions challenging the combined license application must focus on the combined license application as it exists at that moment in time; LBP-09-10, 70 NRC 77 (2009)
for timely new or amended contentions, the pleading shall include a motion for leave to file the contention showing that it satisfies section 2.309(f)(1); LBP-09-22, 70 NRC 647 (2009)
if a party files a new contention within 30 days of the availability of the new information to that party, the contention will generally be considered timely; LBP-09-17, 70 NRC 330 n.76 (2009)
if a proposed new contention is not timely, then a second step occurs and its admissibility is governed by the eight-factor balancing specified in section 2.309(c); LBP-09-10, 70 NRC 140 (2009)
if applicant amends its combined license application by referencing a proposed revision to the standard design, then petitioners will be entitled to file new or amended contentions; LBP-09-10, 70 NRC 77 (2009)
if genuinely new information becomes available as a result of the waste confidence rulemaking proceeding that contravenes the combined license application, then petitioners may file a motion seeking the admission of a new or amended contention; LBP-09-10, 70 NRC 115 (2009); LBP-09-18, 70 NRC 408 (2009)
new contentions may be filed after the initial docketing, with leave of the presiding officer, and are evaluated under a three-factor test; LBP-09-10, 70 NRC 138 (2009)
petitioners are required to file contentions based on the documents in existence when the petition is filed, including the applicant's environmental report; LBP-09-16, 70 NRC 263 (2009)
petitioners are required to raise their NEPA contentions in response to the environmental report, rather than awaiting publication of the environmental impact statement; LBP-09-16, 70 NRC 263 (2009)
the filing of new or amended contentions based on new information is permitted if sufficient justification is provided; LBP-09-15, 70 NRC 211 (2009)
to amend a contention, petitioner must demonstrate that the information upon which the amended contention is based was not previously available and is materially different from information previously available, and that the amended contention has been submitted in a timely fashion; LBP-09-26, 70 NRC 988 (2009)
to be admitted in a proceeding, a new contention must meet the new or amended contention requirements as well as the general contention admissibility requirements; LBP-09-9, 70 NRC 45 (2009)
under current rules, contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register,* unless a longer period is therein specified, an extension is granted, or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time; LBP-09-17, 70 NRC 325 n.50 (2009)
when information forming the foundation for a new or amended contention becomes available piecemeal over time, the admissibility decision turns on a determination about when, as a cumulative matter, the separate pieces of the information puzzle were sufficiently in place to make the particular concerns reasonably apparent; LBP-09-10, 70 NRC 142 n.82 (2009)

when NRC issues the environmental impact statement, petitioners have the opportunity to file a second wave of environmental contentions that focus on the adequacy of the NRC Staff's EIS environmental analysis under the National Environmental Policy Act; LBP-09-10, 70 NRC 88 (2009)
within 25 days after service of a motion and proposed contention, any other party may file an answer responding to all elements of the motion and contention, and within 7 days of service of the answer, the movant may file a reply; LBP-09-22, 70 NRC 647 (2009)
10 C.F.R. 2.309(f)(2)(i)
a proposed rulemaking and request for comments, do not, in and of themselves, constitute previously unavailable information that would entitle a party to file a new contention; LBP-09-10, 70 NRC 144 (2009)
information upon which a amended or new contention is based must not have been previously available; LBP-09-27, 70 NRC 1000 (2009)
10 C.F.R. 2.309(f)(2)(i)-(iii)
contentions may be filed after the initial 60-day deadline if the petitioner shows that the information on which the amended or new contention is based was not previously available and is materially different than information previously available; and the amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information; LBP-09-9, 70 NRC 45 (2009); LBP-09-26, 70 NRC 948 (2009)
by definition, and through no fault or negligence of the petitioner, contentions admitted under this section are founded on material new information that was not available at the time when the petition was initially due; LBP-09-10, 70 NRC 139 (2009)
10 C.F.R. 2.309(f)(2)(ii)
information upon which an amended or new contention is based must be materially different than information previously available; LBP-09-27, 70 NRC 1001 (2009)
10 C.F.R. 2.309(f)(2)(iii)
a motion and proposed new contention shall be deemed timely if it is filed within 30 days of the date when the new and material information on which it is based first becomes available; LBP-09-22, 70 NRC 647 (2009)
an amended or new contention must be submitted in a timely fashion based on the availability of the subsequent information; LBP-09-27, 70 NRC 1003 (2009)
the first step in assessing the admissibility of a new contention is to determine if it is timely or nontimely; LBP-09-10, 70 NRC 138 (2009)
thirty days is a reasonable limit for fulfilling the timing requirement of this section because of the significant effort involved in identifying new information, assembling the required expertise, and then drafting a contention that satisfies section 2.309(f)(1); LBP-09-27, 70 NRC 1003 (2009)
10 C.F.R. 2.309(g)
a motion and proposed new contention may address the selection of the appropriate hearing procedure for the proposed new contention; LBP-09-22, 70 NRC 648 (2009)
boards determine which hearing procedure to use on a contention-by-contention basis; LBP-09-10, 70 NRC 145 (2009)
if petitioner relies upon 10 C.F.R. 2.310(d) in requesting a Subpart G proceeding, then petitioner must demonstrate, by reference to the contention, that its resolution necessitates resolution of material issues of fact relating to the occurrence of a past activity where the credibility of an eyewitness may reasonably be expected to be at issue and/or there are issues of the motive or intent of the party or eyewitness material to the resolution of the contested matter; LBP-09-10, 70 NRC 146 (2009)
10 C.F.R. 2.309(h)
within 25 days after service of a motion and proposed contention, any other party may file an answer responding to all elements of the motion and contention, and within 7 days of service of the answer, the movant may file a reply; LBP-09-22, 70 NRC 647 n.21 (2009)
10 C.F.R. 2.309(h)(2)
although NRC's rules of practice regarding motions do not provide for reply pleadings, the board presume that for a reply to be timely it would have to be filed within 7 days of the date of service of the response it is intended to address; LBP-09-22, 70 NRC 648 n.23 (2009)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.310(a)
upon admission of a contention the board must identify the specific hearing procedures to be used; LBP-09-10, 70 NRC 144-45 (2009)
10 C.F.R. 2.310(b)-(h)
specific situations where a certain procedure is mandated or available are enumerated; LBP-09-10, 70 NRC 145-46 (2009)
10 C.F.R. 2.310(d)
a motion and proposed new contention may address the selection of the appropriate hearing procedure for the proposed new contention; LBP-09-22, 70 NRC 648 (2009)
boards determine which hearing procedure to use on a contention-by-contention basis; LBP-09-10, 70 NRC 145 (2009)
if petitioner relies on this section in requesting a Subpart G proceeding, then petitioner must demonstrate, by reference to the contention, that its resolution necessitates resolution of material issues of fact relating to the occurrence of a past activity where the credibility of an eyewitness may reasonably be expected to be at issue and/or there are issues of the motive or intent of the party or eyewitness material to the resolution of the contested matter; LBP-09-10, 70 NRC 146 (2009); LBP-09-22, 70 NRC 646-47 (2009)
10 C.F.R. 2.310(h)(1)
if the hearing on a contention is expected to take no more than 2 days to complete, the board can impose the Subpart N procedures for expedited proceedings with oral hearings; LBP-09-10, 70 NRC 145 n.85 (2009)
10 C.F.R. 2.311
appeals of adverse decisions with respect to access to safeguards information must be made pursuant to this section; CLI-09-15, 70 NRC 26, 27 (2009)
the right to interlocutory appeal of contention rulings allows applicant or NRC Staff to immediately appeal the admission of all of the contentions, but denies petitioners the right to immediately appeal the denial of any of the contentions; LBP-09-10, 70 NRC 147 n.89 (2009)
where intervenors have filed new contentions based on a supplement to the COL application, in advance of a full board ruling on the original contentions, no appeal lies until the board acts on all contentions, both the original and the newly filed ones; CLI-09-18, 70 NRC 862 (2009)
10 C.F.R. 2.311(d)(1)
an exception to the general policy limiting interlocutory review permits an appeal of a board's ruling on contention admissibility when a board grants a petition to intervene following consideration of the full petition; CLI-09-18, 70 NRC 861 (2009)
there is an automatic right to appeal a licensing board standing and contention admissibility decision on the issue of whether the request for hearing or petition to intervene should have been wholly denied; CLI-09-22, 70 NRC 933 (2009)
to be appealable, a disputed order must dispose of the entire petition so that a successful appeal by a nonpetitioner will terminate the proceeding as to the appellee petitioner; CLI-09-18, 70 NRC 861 (2009)
with respect to an applicant's appeal, applicant must contend that, after considering all pending contentions, the board has erroneously granted a hearing to the petitioner; CLI-09-18, 70 NRC 861-62 (2009)
10 C.F.R. 2.315(a)
any person who does not wish, or is not qualified, to become a party to the proceeding may request permission to make a limited appearance; CLI-09-15, 70 NRC 9 (2009)
10 C.F.R. 2.315(c)
a state, county, municipality, federally recognized Indian tribe, or agencies thereof, may seek to participate in a hearing as a nonparty; CLI-09-15, 70 NRC 9 (2009)
although interested governmental entities would not have a formal role in a proceeding absent the admission of parties and contentions, boards expect that such entities would be kept appropriately apprised of the other participants' settlement efforts; LBP-09-23, 70 NRC 670 n.33 (2009)
the phrase "federally recognized Indian Tribe" was added to the regulation in order to comply with Executive Order 13,084; LBP-09-13, 70 NRC 184-85 (2009)

10 C.F.R. 2.318(a)
dismissal of one contention on mootness grounds would not terminate a case where the board had expressly retained jurisdiction to decide whether to admit another contention; LBP-09-27, 70 NRC 997 (2009)
10 C.F.R. 2.319
boards have the duty to conduct a fair and impartial hearing according to law, to take appropriate action to control the prehearing and hearing process, to avoid delay, and to maintain order; LBP-09-22, 70 NRC 640 (2009)
cross-examination occurs virtually automatically in Subpart G hearings, subject to normal judicial management and the requirement to file a cross-examination plan; LBP-09-10, 70 NRC 145 (2009)
10 C.F.R. 2.319(e)
boards are authorized to restrict irrelevant, immaterial, unreliable, duplicative or cumulative evidence; LBP-09-30, 70 NRC 1046 (2009)
10 C.F.R. 2.319(*l*)
given participants' settlement agreement, a board sees no cause for it to attempt to obtain Commission avowal of the renoticing process contemplated by the participants, either by way of a Staff inquiry made at the Board's direction or via a certified question; LBP-09-23, 70 NRC 668 n.27 (2009)
licensing boards must promptly certify to the Commission all novel legal or policy issues that would benefit from early Commission consideration; CLI-09-15, 70 NRC 11 (2009)
10 C.F.R. 2.323
within 25 days after service of a motion and proposed contention, any other party may file an answer responding to all elements of the motion and contention, and within 7 days of service of the answer, the movant may file a reply; LBP-09-22, 70 NRC 647 (2009)
10 C.F.R. 2.323(a)
dispositive motions may be filed 20 days after the occurrence or circumstance from which the motion arises, rather than the 10-day time frame, provided that the moving party commences sincere efforts to contact and consult all other parties within 10 days of the occurrence or circumstance, and the accompanying certification so states; LBP-09-22, 70 NRC 652 (2009)
motions to compel or challenges regarding the adequacy of any mandatory disclosure or hearing file, redactions, or the validity of any claim that a document is privileged or protected shall be filed within 10 days after the occurrence or circumstance from which the motion arises; LBP-09-22, 70 NRC 644 (2009)
10 C.F.R. 2.323(b)
if the attorney or representative of a party is contacted pursuant to the consultation requirement, then that person (or his or her alternate) must make a sincere effort to make himself or herself available to listen and to respond to the moving party's explanation, and to resolve the factual and legal issues raised in the motion; LBP-09-22, 70 NRC 649-50 (2009)
it is inconsistent with the dispute avoidance/resolution purposes of this section, and thus insufficient, for the contacted attorney or representative to fail or refuse to consider the substance of the consultation attempt, or for the party to respond that it takes no position on the motion (or issues) and that it reserves the right to file a response to the motion when it is filed; LBP-09-22, 70 NRC 650 (2009)
motions will be rejected if they do not include certification by the attorney or representative of the moving party that they have made a sincere effort to contact the other parties in this proceeding, to explain to them the factual and legal issues raised in the motion, and to resolve those issues; LBP-09-22, 70 NRC 649 (2009)
10 C.F.R. 2.323(c)
except for a motion to file a new or amended contention, or where there are compelling circumstances, movant has no right to reply to an answer or respond to a motion; LBP-09-22, 70 NRC 648 (2009)
10 C.F.R. 2.323(f)
licensing boards must promptly certify to the Commission all novel legal or policy issues that would benefit from early Commission consideration; CLI-09-15, 70 NRC 11 (2009)
the presiding officer may refer a ruling to the Commission if, in the judgment of the presiding officer, prompt decision is necessary to prevent detriment to the public interest or unusual delay or expense, or if the presiding officer determines that the decision or ruling involves a novel issue that merits Commission review at the earliest opportunity; CLI-09-21, 70 NRC 930 n.15 (2009)

10 C.F.R. 2.323(f)(1)
a decision may be referred to the Commission if it raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; LBP-09-18, 70 NRC 407 (2009)
10 C.F.R. 2.325
applicant, as the proponent of the license, bears the burden of proof; LBP-09-10, 70 NRC 101 (2009)
10 C.F.R. 2.332
the licensing board is required to use the applicable techniques specified in this section to ensure prompt and efficient resolution of contested issues; CLI-09-15, 70 NRC 13 (2009)
10 C.F.R. 2.332(a)
boards have an obligation to establish a case scheduling order, and to advise the Commission of any significant delay in meeting major activities set forth in the hearing schedule; CLI-09-17, 70 NRC 309 (2009)
the initial scheduling order must be issued as soon as practicable after the request for hearing is granted; LBP-09-22, 70 NRC 640-41 (2009)
10 C.F.R. 2.332(c)(1)-(5)
an initial scheduling order is designed to ensure proper case management of this proceeding; LBP-09-22, 70 NRC 640 (2009)
10 C.F.R. 2.332(d)
commencement of evidentiary hearings on environmental issues is prohibited until after the final environmental impact statement is issued; LBP-09-22, 70 NRC 654 n.31 (2009)
10 C.F.R. 2.333
the licensing board is required to use the applicable techniques specified in this section to ensure prompt and efficient resolution of contested issues; CLI-09-15, 70 NRC 13 (2009)
10 C.F.R. 2.334
the licensing board is required to use the applicable techniques specified in this section to ensure prompt and efficient resolution of contested issues; CLI-09-15, 70 NRC 13 (2009)
10 C.F.R. 2.334(c)
boards have an obligation to establish a case scheduling order, and to advise the Commission of any significant delay in meeting major activities set forth in the hearing schedule; CLI-09-17, 70 NRC 309 (2009)
10 C.F.R. 2.335
absent an adequately supported request to waive the application of section 51.53(b), the board is bound by it; LBP-09-26, 70 NRC 977 (2009)
challenges to the Waste Confidence Rule are prohibited; LBP-09-10, 70 NRC 113 (2009)
contentions that attack a Commission rule, or seek to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, are inadmissible; LBP-09-18, 70 NRC 403 (2009)
in addressing a petition for a rule waiver, the board, in lieu of holding oral argument to obtain answers to its questions, poses questions for NRC Staff about the waiver petition; LBP-09-29, 70 NRC 1037 (2009)
10 C.F.R. 2.335(a)
a contention that seeks to impose new requirements on applicants and licensees is an impermissible challenge to the agency's regulations; LBP-09-26, 70 NRC 966 (2009)
a license application will not be held in abeyance until the design certification rulemaking is completed; LBP-09-16, 70 NRC 269 (2009); LBP-09-18, 70 NRC 415 (2009)
absent a waiver, contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications; CLI-09-20, 70 NRC 923 (2009); LBP-09-10, 70 NRC 72-73, 144 n.84 (2009); LBP-09-16, 70 NRC 244 (2009); LBP-09-17, 70 NRC 326, 339 (2009); LBP-09-21, 70 NRC 599 (2009); LBP-09-26, 70 NRC 955-56 (2009)
no rule or regulation of the Commission is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding subject to this part; LBP-09-10, 70 NRC 114 (2009)
petitioners' assertion that no exposure levels are safe is an impermissible challenge to the exposure limits set forth in the NRC's regulations; LBP-09-16, 70 NRC 284-85 (2009)

petitioners' claim that applicant must pursue the prepayment method for decommissioning conflicts with the NRC guidance and rules and so is outside the permissible scope of the COL proceeding; LBP-09-21, 70 NRC 630 (2009)
the contention that applicant cannot pass a financial test because the parent company is already committed to providing funding for the decommissioning of another site is an impermissible challenge to NRC regulations; LBP-09-18, 70 NRC 419 (2009)
10 C.F.R. 2.335(b)
absent a waiver, a contention that constitutes a collateral attack on NRC regulations is inadmissible; CLI-09-20, 70 NRC 923 (2009)
to challenge a regulation, petitioner must submit a supporting affidavit setting forth with particularity the special circumstances that justify the waiver or exception requested; LBP-09-18, 70 NRC 407 (2009)
10 C.F.R. 2.336
documents and information exchanged in the mandatory disclosures enter the adjudicatory record only if and when a party proffers the document or information as evidence for the evidentiary hearing; LBP-09-30, 70 NRC 1046 (2009)
if and when testimony or a document is proffered as evidence, a party may object thereto, and the board will rule on the objection; LBP-09-30, 70 NRC 1046 (2009)
it is not a ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence; LBP-09-30, 70 NRC 1046 (2009)
mandatory disclosures required by this section consist of an exchange of prescribed information and documents between the litigants, and do not need to be submitted to the board; LBP-09-30, 70 NRC 1046 (2009)
mandatory disclosures, like all discovery exchanges, cover a vast array of information, and documents that are not evidence need not meet the requirements of admissible evidence; LBP-09-30, 70 NRC 1046 (2009)
the mandatory disclosure requirements are not an opportunity to relitigate the admissibility of a contention; LBP-09-30, 70 NRC 1046 (2009)
unless and until a document or information is proffered into evidence, there is no basis for a party to object that the information it received in a mandatory disclosure was unreliable or otherwise not admissible as evidence; LBP-09-30, 70 NRC 1046 (2009)
10 C.F.R. 2.336(a)
within 30 days of the board's ruling admitting contentions, the parties must automatically make certain mandatory disclosures; LBP-09-22, 70 NRC 642 (2009)
10 C.F.R. 2.336(a)(1)
after the initial disclosure, if a party subsequently develops or obtains additional information or documents that meet the requirements of this section, then that party must promptly file a supplemental mandatory disclosure; LBP-09-30, 70 NRC 1045 (2009)
disclosure of a nonwitness (e.g., an expert that the party consulted, but does not intend to use as a witness) is not required; LBP-09-30, 70 NRC 1045 (2009)
disclosure of all witnesses is required, not just expert witnesses, upon whose opinion the party bases its claims and contentions and may rely upon as a witness; LBP-09-30, 70 NRC 1045 (2009)
disclosure of information and documentation about the witness or his or her analysis or other authority if it is not then reasonably available is not required; LBP-09-30, 70 NRC 1045 (2009)
disclosure of the name and telephone number of an expert witness, if this information is not known to the party, is not required; LBP-09-30, 70 NRC 1045 (2009)
each witness is not required to generate an analysis, but rather must disclose the analysis or other authority upon which the witness bases his or her opinion; LBP-09-30, 70 NRC 1045 (2009)
even if the term "contention," as used in this section must be read as pertaining only to formal contentions admitted under section 2.309(f)(1), the term "claim," is not so constrained, and can only be read in its normal sense; LBP-09-30, 70 NRC 1049 (2009)
if the duty to make disclosures applied only to parties who have claims and contentions, it would create an unintended and invidious asymmetry in mandatory disclosures, which are the only form of discovery available in Subpart L proceedings; LBP-09-30, 70 NRC 1041 (2009)

initial disclosures must be made within 30 days of the order granting a request for hearing, which is typically at least 18-24 months before the evidentiary hearing begins; LBP-09-30, 70 NRC 1045 (2009)
intervenors' expert is not required to create a written analysis, but only disclose the written analysis or other documentary authority, if any, that exists and is reasonably available at the time of the disclosure; LBP-09-30, 70 NRC 1040-41, 1044-45, 1046 (2009)
mandatory disclosures by parties include the disclosure of the name of any person, including any expert, upon whose opinion the party bases its claims and contentions and may rely upon as a witness, and a copy of the analysis or other authority upon which that person bases his or her opinion; LBP-09-22, 70 NRC 646 n.20 (2009); LBP-09-30, 70 NRC 1048 n.10 (2009)
the mandatory disclosure requirement of this section is contrasted with the mandatory disclosure provision of 10 C.F.R. 2.704(b)(2); LBP-09-30, 70 NRC 1043 (2009)
the phrase "claims and contentions" includes any assertion, statement, or argument, positive or negative, in support of an intervenor's position or an applicant's position, that is advanced by any party, and it is not limited to the formal "contentions" that meet the strict criteria of, and are admitted under, section 2.309(f)(1); LBP-09-30, 70 NRC 1049 (2009)
the plain language of this regulation makes it clear that it applies to all parties; LBP-09-30, 70 NRC 1045 (2009)
the term "contention" means simply a point or argument asserted or advanced by any party; LBP-09-30, 70 NRC 1049 (2009)
there is no substantive standard that the analysis or other authority must meet; LBP-09-30, 70 NRC 1045 (2009)
10 C.F.R. 2.336(a)(3)
parties and NRC Staff must provide a list of documents otherwise required to be disclosed for which a claim of privilege or protected status is being made, together with sufficient information for assessing the claim of privilege or protected status of the documents; LBP-09-22, 70 NRC 643 (2009)
10 C.F.R. 2.336(b)
discovery against NRC Staff is governed by this section; CLI-09-15, 70 NRC 12 (2009)
NRC Staff shall comply with discovery requests no later than 30 days after the licensing board order admitting contentions and shall update the information at the same time as the issuance of the safety evaluation report or final environmental impact statement, and, subsequent to the publication of the SER and FEIS, as otherwise required by the Commission's regulations; CLI-09-15, 70 NRC 12 (2009)
within 30 days of the board's ruling admitting contentions, NRC Staff must automatically make certain mandatory disclosures; LBP-09-22, 70 NRC 642 (2009)
10 C.F.R. 2.336(b)(5)
parties and NRC Staff must provide a list of documents otherwise required to be disclosed for which a claim of privilege or protected status is being made, together with sufficient information for assessing the claim of privilege or protected status of the documents; LBP-09-22, 70 NRC 643 (2009)
10 C.F.R. 2.336(d)
if an expert witness is subsequently selected, or any analysis or other authority is subsequently amended or newly developed, then this information must be promptly disclosed; LBP-09-30, 70 NRC 1048 n.10 (2009)
parties and the NRC Staff have a continuing duty to update their mandatory disclosures; LBP-09-22, 70 NRC 643 (2009)
10 C.F.R. 2.336(e)(1)
a board may impose sanctions including dismissal of the specific contentions, dismissal of the adjudication, or dismissal of the application for any continuing unexcused failure to make the required mandatory disclosures; LBP-09-30, 70 NRC 1050 (2009)
10 C.F.R. 2.336(e)(2)
if any party attempts to include exhibits that were not disclosed in the mandatory disclosures, thus making it impossible for the other parties to examine the reliability of that information, then the board may prohibit the admission of this new evidence into the record; LBP-09-30, 70 NRC 1043 (2009)
sanctions are available against any party that fails to provide any document or witness name; LBP-09-30, 70 NRC 1050 (2009)

10 C.F.R. 2.336(g)
if the duty to make disclosures applied only to parties who have claims and contentions, it would create an unintended and invidious asymmetry in mandatory disclosures, which are the only form of discovery available in Subpart L proceedings; LBP-09-30, 70 NRC 1041 (2009)
10 C.F.R. 2.337(f)
for purposes of the mandatory/uncontested portion of an ESP proceeding, the board takes official notice of these publicly available documents associated with the Staff's safety and environmental reviews; LBP-09-19, 70 NRC 454 n.5 (2009)
10 C.F.R. 2.338(e)
given participants' settlement agreement, a board sees no cause for it to attempt to obtain Commission avowal of the renoticing process contemplated by the participants, either by way of a Staff inquiry made at the board's direction or via a certified question; LBP-09-23, 70 NRC 668 n.27 (2009)
10 C.F.R. 2.338(g)-(h)
finding that a settlement agreement is consistent with the content and form requirements and is in the public interest, the board approves the agreement and terminates this contested hearing; LBP-09-23, 70 NRC 663 (2009)
10 C.F.R. 2.338(h)
content of a settlement agreement in a contested proceeding is discussed; LBP-09-23, 70 NRC 670 (2009)
10 C.F.R. 2.338(i)
a notice of hearing having been issued by the Commission in a COL proceeding, the board has jurisdiction to approve a settlement agreement; LBP-09-23, 70 NRC 670 n.34 (2009)
finding that a settlement agreement is consistent with the content and form requirements and is in the public interest, the board approves the agreement and terminates this contested hearing; LBP-09-23, 70 NRC 663 (2009)
10 C.F.R. 2.340(f)
an initial decision directing the issuance or amendment of a limited work authorization or an early site permit is immediately effective upon issuance unless the presiding officer finds that good cause has been shown by a party why the initial decision should not become immediately effective; LBP-09-19, 70 NRC 460 (2009)
10 C.F.R. 2.341(a)(2)
the *sua sponte* review process applies to a board's determinations on settlement agreements, and affords the Commission the opportunity to correct any participant or board misapprehensions regarding the renoticing process or any other items contemplated in the settlement agreement; LBP-09-23, 70 NRC 668 n.27 (2009)
10 C.F.R. 2.341(b)
given that the board recently issued an Initial Decision resolving all of the contentions in the case, the Commission can discern no compelling reason to take the extraordinary action of stepping in at this late stage to take up the case, but parties will have the opportunity to petition for review of the board's rulings; CLI-09-19, 70 NRC 864 (2009)
10 C.F.R. 2.341(b)(1)
filing of a petition for review is mandatory for a party to exhaust its administrative remedies before seeking judicial review; LBP-09-9, 70 NRC 49 (2009)
10 C.F.R. 2.341(f)
challenges to board rulings on late-filed contentions normally fall under the rules for interlocutory review; CLI-09-18, 70 NRC 862 (2009)
10 C.F.R. 2.341(f)(1)
rulings may be referred to the Commission if they raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding; CLI-09-21, 70 NRC 930 (2009); LBP-09-16, 70 NRC 251 (2009); LBP-09-18, 70 NRC 407 (2009); LBP-09-26, 70 NRC 979 (2009)
10 C.F.R. 2.341(f)(2)
petitioners may request, and the Commission, in its discretion, may grant interlocutory review if it is shown that the issue threatens petitioners with immediate and serious irreparable impacts or affects the basic structure of the proceeding in a pervasive manner; LBP-09-10, 70 NRC 147 n.89 (2009)

10 C.F.R. 2.342(e)
in deciding whether to grant a stay, the Commission considers whether the moving party has made a strong showing that it is likely to prevail on the merits, whether the party will be irreparably injured unless a stay is granted, whether the granting of a stay would harm the other parties, and where the public interest lies; CLI-09-23, 70 NRC 936 (2009)
10 C.F.R. 2.390(a)(1), (3), and (4)
parties and NRC Staff must produce, as part of their mandatory disclosures, privilege logs covering documents claimed to qualify for protected status as security-related information or as proprietary documents; LBP-09-22, 70 NRC 643 (2009)
10 C.F.R. Part 2, Subpart G
a completed Form SF-85, "Questionnaire for Non-Sensitive Positions" is required for each individual who would have access to safeguards information; CLI-09-15, 70 NRC 23 (2009)
under these procedures, parties are permitted to propound interrogatories, take depositions, and cross-examine witnesses without leave of the board; LBP-09-10, 70 NRC 145 (2009)
10 C.F.R. 2.704(a) & (b)
all parties, except NRC Staff, shall make the mandatory disclosures required within 45 days of the issuance of the licensing board order admitting contentions; CLI-09-15, 70 NRC 12 (2009)
10 C.F.R. 2.704(b)(2)
for Subpart G proceedings, each expert witness is required to create, sign, and submit a written expert report; LBP-09-30, 70 NRC 1043 (2009)
10 C.F.R. 2.704(c)
no later than 30 days before the commencement of the hearing at which an issue is to be presented, all parties other than the NRC Staff shall make the required pretrial disclosures; CLI-09-15, 70 NRC 12 (2009)
10 C.F.R. 2.705(b)(1)
it is not a ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence; LBP-09-30, 70 NRC 1046 (2009)
10 C.F.R. 2.705(c)(3)(iii)
before the Office of Administration makes an adverse determination regarding a proposed recipient's trustworthiness and reliability for access to safeguards information, it must provide the proposed recipient with any records that were considered in the trustworthiness and reliability determination to provide an opportunity for the individual to correct or explain information; CLI-09-15, 70 NRC 26 (2009)
10 C.F.R. 2.705(c)(3)(iv)
a requester may challenge an adverse determination with respect to access to safeguards information by filing a request for review; CLI-09-15, 70 NRC 26 (2009)
10 C.F.R. 2.709
discovery against NRC Staff is governed by this section; CLI-09-15, 70 NRC 12 (2009)
discovery against NRC Staff shall not commence until the issuance of the particular document, i.e., SER or EIS, unless the licensing board, in its discretion, finds that commencing discovery prior to issuance of those documents will expedite the hearing without adversely affecting the Staff's ability to complete its evaluation in a timely manner; CLI-09-15, 70 NRC 12 (2009)
10 C.F.R. 2.710
the licensing board shall not entertain motions for summary disposition unless the board finds that such motions, if granted, are likely to expedite the proceeding; CLI-09-15, 70 NRC 16 (2009); LBP-09-22, 70 NRC 652 (2009)
10 C.F.R. 2.710(c)
if it appears from the affidavits of a party opposing a motion for summary disposition or other dispositive motion that the opposing party cannot, for reasons stated, present by affidavit facts essential to justify the party's opposition, the board may refuse the application for summary disposition or may order a continuance as may be necessary or just; LBP-09-22, 70 NRC 653 (2009)
10 C.F.R. 2.710(d)(2)
a motion for summary disposition must be granted if the filings in the proceeding together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any

material fact and that the moving party is entitled to a decision as a matter of law; LBP-09-15, 70 NRC 212 n.36 (2009)
applicant may challenge an expert opinion in the disclosure stage, via a motion for summary disposition, if it can show that there is no genuine issue as to any material fact and that it is entitled to a decision as a matter of law; LBP-09-30, 70 NRC 1048 (2009)
in an evidentiary hearing, the board may weigh competing evidence and expert opinion and may resolve/decide factual disputes, whereas this is not possible when ruling on motions for summary disposition, which are restricted to situations where there is no genuine issue as to any material fact; LBP-09-22, 70 NRC 651 (2009)
the contention admissibility threshold is less than is required at the summary disposition stage; LBP-09-26, 70 NRC 955 n.62 (2009)
10 C.F.R. 2.711(c)
cross-examination occurs virtually automatically in Subpart G hearings, subject to normal judicial management and the requirement to file a cross-examination plan; LBP-09-10, 70 NRC 145 (2009)
10 C.F.R. 2.715(c)
nonparty interested state status has been granted to state utility commissions; LBP-09-16, 70 NRC 291 n.190 (2009)
10 C.F.R. 2.802
the appropriate procedure to raise a challenge to NRC rules is to file a petition for rulemaking; LBP-09-17, 70 NRC 345-46 (2009)
10 C.F.R. Part 2, Subpart L
under these informal procedures, discovery is prohibited except for specified mandatory disclosures under 10 C.F.R. 2.336(f), (a), and (b) and the mandatory production of the hearing file under section 2.1203(a); LBP-09-10, 70 NRC 145 (2009)
10 C.F.R. 2.1203(a)
in Subpart L proceedings, NRC Staff must produce a hearing file and make it available to all parties; LBP-09-22, 70 NRC 642 (2009)
10 C.F.R. 2.1203(c)
NRC Staff has a continuing duty to update the hearing file; LBP-09-22, 70 NRC 643 (2009)
10 C.F.R. 2.1203(d)
if the duty to make disclosures applied only to parties who have claims and contentions, it would create an unintended and invidious asymmetry in mandatory disclosures, which are the only form of discovery available in Subpart L proceedings; LBP-09-30, 70 NRC 1041 (2009)
under Subpart L procedures, discovery is prohibited except for specified mandatory disclosures under 10 C.F.R. 2.336(f), (a), and (b) and the mandatory production of the hearing file; LBP-09-10, 70 NRC 145 (2009)
10 C.F.R. 2.1204(b)
no later than 30 days after service of materials, all parties shall file any motions or requests to permit that party to conduct cross-examination of a specified witness or witnesses, together with the associated cross-examination plans; LBP-09-22, 70 NRC 656 (2009)
under Subpart L, a party seeking to conduct cross-examination must file a written motion and obtain leave of the board; LBP-09-10, 70 NRC 145 (2009)
10 C.F.R. 2.1204(b)(3)
boards may allow parties to conduct cross-examination in Subpart L proceedings; LBP-09-22, 70 NRC 651 (2009)
10 C.F.R. 2.1205
in an evidentiary hearing, the board may weigh competing evidence and expert opinion and may resolve/decide factual disputes, whereas this is not possible when ruling on motions for summary disposition, which are restricted to situations where there is no genuine issue as to any material fact; LBP-09-22, 70 NRC 651 (2009)
10 C.F.R. 2.1205(b)
an answer supporting or opposing a motion for summary disposition or other dispositive motion shall be filed within 20 days after service of the motion; LBP-09-22, 70 NRC 653 (2009)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 2.1205(c)
to decide summary disposition motions in Subpart L proceedings, licensing boards apply the standards of Subpart G, which are set forth in 10 C.F.R. 2.710(d)(2); LBP-09-15, 70 NRC 211-12 n.36 (2009)
10 C.F.R. 2.1207(a)(1)
documents and information exchanged in the mandatory disclosures enter the adjudicatory record only if and when a party proffers the document or information as evidence for the evidentiary hearing; LBP-09-30, 70 NRC 1046 (2009)
10 C.F.R. 2.1207(a)(2)
no later than 20 days after service of materials, the parties and the NRC Staff shall file their written responses, rebuttal testimony with supporting affidavits, and rebuttal exhibits, on a contention-by-contention basis; LBP-09-22, 70 NRC 655 (2009)
10 C.F.R. 2.1207(a)(3)(i) and (ii)
no later than 30 days after service of materials, all parties and NRC Staff shall file proposed questions for the board to consider propounding to the direct or rebuttal witnesses; LBP-09-22, 70 NRC 655 (2009)
10 C.F.R. 2.1207(b)(2)
written testimony shall be under oath or by an affidavit so that it is suitable for being received into evidence directly, in exhibit form; LBP-09-22, 70 NRC 654-55 (2009)
10 C.F.R. 2.1207(b)(6)
in a Subpart L evidentiary hearing, the board may ask witnesses to appear in person and answer questions; LBP-09-22, 70 NRC 651 (2009)
under Subpart L, the board has the principal responsibility to question the witnesses; LBP-09-10, 70 NRC 145 (2009)
10 C.F.R. 2.1208
if the board concludes that it has no questions for any witness concerning a particular contention, it will so advise the parties and will resolve that contention; LBP-09-22, 70 NRC 656 n.35 (2009)
10 C.F.R. 2.1400-.1407
if the hearing on a contention is expected to take no more than 2 days to complete, the Board can impose the Subpart N procedures for expedited proceedings with oral hearings; LBP-09-10, 70 NRC 145 n.85 (2009)
10 C.F.R. 2.1402(b)
the availability of Subpart G procedures under section 2.310(d) depends critically on whether the credibility of eyewitnesses is important in resolving a contention, and witnesses relevant to each contention are not identified, under section 2.336(a)(1), until after contentions are admitted; LBP-09-10, 70 NRC 147 n.88 (2009)
10 C.F.R. Part 2, Appendix B
late-filed contentions based on the Safety Evaluation Report and any necessary National Environmental Policy Act document should be filed within 30 days of the issuance of those documents; LBP-09-27, 70 NRC 1003 (2009)
10 C.F.R. Part 2, Appendix B, § II
initial scheduling order is to be issued within 55 days of board decision granting intervention and admitting contentions; LBP-09-22, 70 NRC 641 (2009)
10 C.F.R. 20.1003
EPA has established radiation exposure standards under 40 C.F.R. Part 190, the applicability of which the Commission has acknowledged; LBP-09-19, 70 NRC 473 (2009)
10 C.F.R. 20.1101(b)
licensee must use procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable; CLI-09-16, 70 NRC 37 (2009)
10 C.F.R. 20.1201
dose limits are established for safe levels of exposure from normal operation of a nuclear power plant to both workers and members of the public; LBP-09-16, 70 NRC 284 (2009)
10 C.F.R. 20.1201-.1208
upper limitations on occupational doses are specified; CLI-09-16, 70 NRC 37 (2009)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 20.1201-.1302
numerical limits for radiation exposure, including occupational dose limits and radiation dose limits for members of the public, are provided; LBP-09-19, 70 NRC 473 (2009)

10 C.F.R. 20.1301
dose limits are established for safe levels of exposure from normal operation of a nuclear power plant to both workers and members of the public; LBP-09-16, 70 NRC 284 (2009)

10 C.F.R. 20.1301(e)
licensees subject to the provisions of EPA's generally applicable environmental radiation standards in 40 C.F.R. Part 190 shall comply with those standards; LBP-09-19, 70 NRC 474 (2009)

10 C.F.R. 20.1301-.1302
dose limits for individual members of the public are specified; CLI-09-16, 70 NRC 37 (2009)

10 C.F.R. 20.1801
licensee's onsite low-level radioactive waste storage facility must comply with requirements for security, occupational and public dose limits, and survey and monitoring, labeling, and reports and record retention; CLI-09-16, 70 NRC 37 n.20 (2009)

10 C.F.R. 20.2002
applicant seeks an exemption from the disposal site requirements of 10 C.F.R. 30.3 and 70.3 to allow disposal of low-activity radioactive waste from the Hematite facility at a site near Grand View, Idaho, that is not licensed by the NRC; LBP-09-28, 70 NRC 1022 (2009)

10 C.F.R. Part 20, Appendix B, tbl. 2
if chelating agents are to be comingled in radioactive waste liquids or used to mitigate an accidental release, then they have to be specifically accounted for in the dose analyses; LBP-09-19, 70 NRC 545 (2009)

10 C.F.R. 30.9
information submitted to an NRC inspector that is not complete and accurate in all material respects is a violation; LBP-09-12, 70 NRC 162-63 (2009)

10 C.F.R. 30.10
information submitted to an NRC inspector that is not complete and accurate in all material respects is a violation; LBP-09-12, 70 NRC 163 (2009)

10 C.F.R. Part 30, Appendix A
neither market capitalization nor share price are variables to be used in the financial test for decommissioning funding assurance; LBP-09-15, 70 NRC 207 (2009)

10 C.F.R. 40.32
an affirmative finding by the Commission that issuance of a license for a uranium enrichment facility will not be inimical to the common defense and security is required; CLI-09-15, 70 NRC 19 (2009)

10 C.F.R. 40.42(a)(1)
when a renewal application is timely filed, the license is automatically extended by operation of law until final agency action is taken on the renewal request; LBP-09-13, 70 NRC 174 (2009)

10 C.F.R. 50.2
"decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license or release of the property under restricted conditions and termination of the license; LBP-09-15, 70 NRC 206 n.9 (2009)

10 C.F.R. 50.5
engaging in deliberate misconduct that caused inaccurate and incomplete information to be provided to the NRC concerning conditions at a reactor resulted in debarment from licensed activities for 5 years; LBP-09-11, 70 NRC 156 (2009)

10 C.F.R. 50.5(a)(2)
an employee of a licensee may not deliberately submit to the NRC information that he knows to be incomplete or inaccurate in some respect material to the NRC; LBP-09-24, 70 NRC 687, 707, 810 (2009)
careless disregard in the execution of one's duties does not amount to deliberate misconduct or a violation; LBP-09-24, 70 NRC 707 (2009)

to prevail in establishing that the accused's actions constituted a violation, Staff must demonstrate by a preponderance of the evidence that the accused had actual knowledge of the information associated with his actions and that he deliberately acted contrary to that knowledge; LBP-09-24, 70 NRC 706 (2009)

10 C.F.R. 50.5(c)(1)

deliberate misconduct refers to an intentional act or omission that the person knows would cause a licensee to be in violation of any rule; LBP-09-24, 70 NRC 707 (2009)

10 C.F.R. 50.9(a)

a licensee employee who contributes to submission of information to the NRC that the employee knows is not complete or accurate in some material respect places the licensee in violation; LBP-09-24, 70 NRC 687, 707 (2009)

10 C.F.R. 50.10

an early site permit applicant may request that a limited work authorization be issued in conjunction with the ESP; LBP-09-19, 70 NRC 456 (2009)

10 C.F.R. 50.10(a)(1)

construction activities allowed under a limited work authorization are discussed; LBP-09-19, 70 NRC 498 (2009)

10 C.F.R. 50.10(a)(2)

preconstruction activities that do not require NRC approval are discussed; LBP-09-19, 70 NRC 498 (2009)

10 C.F.R. 50.10(d)-(g)

applicant is authorized to perform certain site preparation activities that would otherwise only be permitted following the issuance of a Part 50 construction permit or a Part 52 combined license; LBP-09-19, 70 NRC 498 (2009)

10 C.F.R. 50.10(d)(1)

the holder of a limited work authorization is permitted to drive pilings, conduct subsurface preparations, place backfill, concrete, or permanent retaining walls within an excavation, and install the foundation; LBP-09-16, 70 NRC 292 (2009)

10 C.F.R. 50.10(d)(3)(i)

a limited work authorization applicant must submit, as part of the safety analysis report for the LWA, design information related to activities within the scope of the requested LWA; LBP-09-19, 70 NRC 549 (2009)

10 C.F.R. 50.10(d)(3)(iii)

a limited work authorization authorizes activities for which either a construction permit or combined license is otherwise required, but the LWA application must include a plan for site redress that provides for restoration if the project is cancelled, the LWA is revoked, or a construction permit or combined license is denied; LBP-09-19, 70 NRC 499 (2009)

10 C.F.R. 50.10(e)(1)(ii)

boards are to determine whether the site redress plan will adequately redress the activities performed under a limited work authorization should the activities be terminated by either the holder of the LWA or by Commission denial of any corresponding early site permit or combined license; LBP-09-19, 70 NRC 459 (2009)

10 C.F.R. 50.10(e)(1)(iii)

board authority to make findings on limited work authorizations is discussed; LBP-09-19, 70 NRC 459 (2009)

10 C.F.R. 50.10(f)

any activities undertaken under a limited work authorization are entirely at the risk of the applicant; LBP-09-19, 70 NRC 557 n.33 (2009)

10 C.F.R. 50.33(f)

applicant for a combined license is exempt from the obligation to provide an estimate of O&M costs; LBP-09-10, 70 NRC 82 (2009)

the purpose of financial qualification requirements is to ensure the protection of public health and safety and the common defense and security and not to evaluate the financial wisdom of the proposed project; LBP-09-10, 70 NRC 83 (2009)

10 C.F.R. 50.33(f)(3)
to demonstrate financial qualification, applicant for a combined license must show that it possesses funds or has reasonable assurance of obtaining funds necessary to cover estimated construction and fuel cycle costs; LBP-09-10, 70 NRC 82 (2009)
10 C.F.R. 50.33(g)
a combined license application must include emergency planning information for the emergency planning zone, generally consisting of an area within a 10-mile radius from the proposed reactor; LBP-09-10, 70 NRC 107 (2009)
the adequacy of applicant's control room and equipment design radiological protections, in light of the fact that the reactor is proposed to be located within the EPZ of an existing reactor, is an issue that is appropriate in a COLA or standard design certification proceeding; LBP-09-10, 70 NRC 112 (2009)
the emergency planning zone is established based on safety considerations and is not intended for use as a boundary for assessing environmental impacts; LBP-09-16, 70 NRC 247 n.51 (2009)
the nontrivial increased risk of living within 50 miles of a proposed reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; CLI-09-20, 70 NRC 917 (2009)
10 C.F.R. 50.33(k)(1)
an application for a COL must include a report that indicates how reasonable assurance will be provided that funds will be available to decommission the facility; LBP-09-18, 70 NRC 417 (2009)
applicant's decommissioning report must explain how reasonable assurance will be provided; LBP-09-15, 70 NRC 218 (2009)
the combined license application must include information in the form of a report, as described in section 50.75, indicating how reasonable assurance will be provided that funds will be available to decommission the facility; LBP-09-15, 70 NRC 214 (2009)
10 C.F.R. 50.34
a combined license application must include a safety analysis report that covers the design features that will mitigate the radiological consequences of accidents; LBP-09-10, 70 NRC 107 (2009)
10 C.F.R. 50.34a
applicant is to describe equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences; LBP-09-19, 70 NRC 473 (2009)
10 C.F.R. 50.34a(a)
a combined license application must include a description of equipment and measures taken to ensure that any exposures to radioactive materials such as low-level radioactive waste are kept as low as reasonably achievable, including a description of the provisions for storage of solid waste containing radioactive materials; LBP-09-10, 70 NRC 124 (2009)
for applications filed after January 2, 1971, applicant must identify design objectives and means to maintain levels of radioactive effluents as low as is reasonably achievable; LBP-09-19, 70 NRC 473 (2009)
10 C.F.R. 50.34a(b)(3)
a combined license application must include a description of equipment and measures taken to ensure that any exposures to radioactive materials such as low-level radioactive waste are kept as low as reasonably achievable, including a description of the provisions for storage of solid waste containing radioactive materials; LBP-09-10, 70 NRC 124 (2009)
10 C.F.R. 50.40(a)
applications for nuclear power plants show that the issuance of the license would not be inimical to, and will provide adequate protection to, the health and safety of the public; LBP-09-10, 70 NRC 124 (2009)
10 C.F.R. 50.47(a)(1)(iii)
if applicant submits a complete and integrated emergency plan in conjunction with an early site permit application, NRC Staff must find that the emergency plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency; LBP-09-19, 70 NRC 510 (2009)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 50.47(a)(2)
FEMA's finding on emergency plans constitutes a rebuttable presumption on questions of adequacy and implementation capability in NRC licensing proceedings; LBP-09-19, 70 NRC 511 (2009)
in its review of emergency plans, NRC Staff must take into account FEMA's findings; LBP-09-19, 70 NRC 511 (2009)
10 C.F.R. 50.47(b)
NRC Staff's review of an integrated emergency plan focuses primarily on the applicant-prepared onsite provisions of the plans, which include the evacuation time estimate provided by applicant, and the inspections, tests, analyses, and acceptance criteria; LBP-09-19, 70 NRC 510 (2009)
10 C.F.R. 50.47(b)(5)
procedures must be established to provide for early notification and clear instructions to the populace within the plume exposure pathway EPZ; LBP-09-16, 70 NRC 296 (2009)
10 C.F.R. 50.47(b)(10)
potassium iodide distribution beyond the 10-mile EPZ Is not necessary; LBP-09-16, 70 NRC 295 n.203 (2009)
10 C.F.R. 50.47(c)(2)
the emergency planning zone is established based on safety considerations and is not intended for use as a boundary for assessing environmental impacts; LBP-09-16, 70 NRC 247 n.51 (2009)
the plume exposure pathway emergency planning zone shall generally consist of an area covering a radius of about 10 miles; LBP-09-16, 70 NRC 296 (2009)
10 C.F.R. 50.47(d)
NRC Staff's review of an integrated emergency plan focuses primarily on the applicant-prepared onsite provisions of the plans, which include the evacuation time estimate provided by applicant, and the inspections, tests, analyses, and acceptance criteria; LBP-09-19, 70 NRC 510 (2009)
10 C.F.R. 50.49(b)(1)(ii)
"design basis events" are defined as those conditions of normal operation, including anticipated operational occurrences, design basis accidents, external events, and natural phenomena for which the plant must be designed; LBP-09-26, 70 NRC 971 n.165 (2009)
10 C.F.R. 50.54(hh)
although analysis of aircraft impact is required, reactors whose construction permits were issued prior to July 13, 2009, are excluded and the rule is not NEPA-based; LBP-09-26, 70 NRC 981 n.233 (2009)
to the extent that petitioners argue that the provisions of this section should be applied to dry cask storage, they may file a rulemaking petition with the Commission; LBP-09-17, 70 NRC 343 n.176 (2009)
10 C.F.R. 50.73
licensee's report to NRC of a manual reactor trip due to main turbine high vibrations included the details of the event, provided an analysis of the event, including estimated change in conditional core damage probability, and provided a list of corrective actions; DD-09-2, 70 NRC 904 (2009)
10 C.F.R. 50.75
the requirements of this section are intended to ensure that entities who construct and operate a nuclear power plant will have sufficient funds at the end of the operational life of the plant to complete the decommissioning of the plant; LBP-09-15, 70 NRC 219 (2009)
10 C.F.R. 50.75(a)
decommissioning funding assurance is the process through which a combined license applicant assures the NRC that funds will be available to decommission a site or facility; LBP-09-15, 70 NRC 206 n.9 (2009)
10 C.F.R. 50.75(b)
contents of the required report describing how reasonable assurance will be provided that funds will be available to decommission the facility are discussed; LBP-09-15, 70 NRC 214 (2009)
10 C.F.R. 50.75(b)(1)
combined license applicants must submit a decommissioning report containing a certification that the funding assurance will be provided no later than 30 days after the NRC publishes notice in the *Federal Register* of its scheduled date for initial fuel loading; LBP-09-15, 70 NRC 215 (2009); LBP-09-18, 70 NRC 417 (2009); LBP-09-21, 70 NRC 630 (2009)

not only must the decommissioning report state the amount of financial assurance to be provided, but also that the amount of financial assurance will be covered by one or more of the funding methods identified in section 50.75(e) as acceptable to the NRC; LBP-09-15, 70 NRC 217 (2009)
the decommissioning report must contain a certification that financial assurance for decommissioning will be provided in an amount not less than that calculated using the table found in section 50.75(c)(1), adjusted as required by section 50.75(c)(2); LBP-09-15, 70 NRC 215 (2009)
10 C.F.R. 50.75(b)(2)
the amount of financial assurance must be adjusted annually, using a rate calculated pursuant to section 50.75(c)(2); LBP-09-15, 70 NRC 215 (2009)
10 C.F.R. 50.75(b)(3)
applicant may choose one or more of the funding methods provided in section 50.75(e); LBP-09-18, 70 NRC 422 (2009)
not only must the decommissioning report state the amount of financial assurance to be provided, but also an explanation of how that requirement will be fulfilled; LBP-09-15, 70 NRC 217 (2009)
the amount of financial assurance must be covered by one or more of the funding methods identified in section 50.75(e) as acceptable to the NRC; LBP-09-15, 70 NRC 215 (2009)
the fact that the Commission included language deferring the obligation that would otherwise apply to combined license applicants in section 50.75(b)(4), but included no equivalent provision in this section, confirms that the Commission did not intend to defer the requirement of this section until after the license is issued; LBP-09-15, 70 NRC 218 (2009)
the requirement imposed upon combined license applicants by this section, which on its face applies concurrently with the duty to submit a decommissioning report, may not be deferred until after the COL is issued; LBP-09-15, 70 NRC 218 (2009)
10 C.F.R. 50.75(b)(4)
a combined license applicant must obtain the financial instrument and submit a copy to the Commission as provided in section 50.75(e)(3); LBP-09-15, 70 NRC 215 (2009)
the fact that the Commission included language deferring the obligation that would otherwise apply to combined license applicants in this section, but included no equivalent provision in section 50.75(b)(3), confirms that the Commission did not intend to defer the requirement of section 50.75(b)(3) until after the license is issued; LBP-09-15, 70 NRC 218 (2009)
10 C.F.R. 50.75(c)
contention disputing the cost estimate for decommissioning is an indirect challenge to this regulation and therefore inadmissible; LBP-09-16, 70 NRC 255 (2009)
10 C.F.R. 50.75(e)
a parent company guarantee, standing alone, is not a funding method identified in this section as acceptable to the NRC; LBP-09-15, 70 NRC 218 (2009)
applicant may choose one or more of the funding methods provided in this section; LBP-09-18, 70 NRC 422 (2009)
10 C.F.R. 50.75(e)(1)
funding for financial assurance for decommissioning must be covered by prepayment, an external sinking fund, or a surety method, insurance, or other guarantee including a parent company guarantee; LBP-09-15, 70 NRC 215 (2009); LBP-09-18, 70 NRC 417 (2009)
10 C.F.R. 50.75(e)(1)(ii)
NRC will defer to state economic regulators where decommissioning funding is assured by the fact that any shortfall in decommissioning funds will be provided by ratepayers pursuant to state law; LBP-09-21, 70 NRC 629 (2009)
10 C.F.R. 50.75(e)(1)(iii)(B)
a combined license application must provide reasonable assurance of adequate decommissioning funding, and this assurance must identify the method or methods of funding the applicant plans to use, and the assurance must provide the information required by this section if applicant plans to use a parent company guarantee; LBP-09-15, 70 NRC 213 (2009)
a parent company guarantee is only an acceptable method of providing financial assurance if the guarantee and test are as contained in Appendix A to 10 C.F.R. Part 30; LBP-09-15, 70 NRC 215, 219 (2009); LBP-09-18, 70 NRC 418 (2009)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 50.75(e)(3)
applicant, 2 years before and 1 year before the scheduled date for the initial fuel loading, shall submit a report to NRC containing a certification updating the financial information, including a copy of the financial instrument to be used; LBP-09-15, 70 NRC 215 (2009); LBP-09-18, 70 NRC 418 (2009)
final decommissioning financial assurance documents must be submitted to the NRC 30 days after the notification in the *Federal Register* pursuant to section 52.103(a) that licensee has set a date to load fuel; LBP-09-15, 70 NRC 216 (2009)
with its final decommissioning financial assurance documents, licensee must submit a report containing a certification that financial assurance for decommissioning is being provided in an amount specified in the licensee's most recent updated certification, including a copy of the financial instrument obtained to satisfy the requirements of section 52.75(e); LBP-09-15, 70 NRC 216 (2009)
10 C.F.R. 50.75(f)(1)
holder of a combined license must begin filing biannual reports on the status of decommissioning funding once the Commission has made a finding that all acceptance criteria in the license have been met; LBP-09-15, 70 NRC 219 (2009)
10 C.F.R. 50.80
if, at some point in the future, applicant were to decide to change the ownership structure and to enter into a joint venture with another entity, its license would have to be amended to reflect this change; LBP-09-18, 70 NRC 428 (2009)
10 C.F.R. 50.81
creditor interests are created in equipment, devices, or important parts thereof, capable of separating the isotopes of uranium or enriching uranium in the isotope U-235; CLI-09-15, 70 NRC 19 (2009)
creditor regulations may be augmented by license conditions as necessary to allow ownership arrangements, such as sale and leaseback, not covered by this section, provided it can be found that such arrangements are not inimical to the common defense and security of the United States; CLI-09-15, 70 NRC 19 (2009)
10 C.F.R. 50.82(a)(4)
decommissioning plans are not required until the applicant files a post-shutdown decommissioning activities report, which is not due until 2 years before permanent cessation of operation; LBP-09-21, 70 NRC 621 (2009)
decommissioning plans are provided in the post-shutdown phase of a plant; LBP-09-17, 70 NRC 372 (2009)
10 C.F.R. 50.150(a)(3)
although analysis of aircraft impact is required, reactors whose construction permits were issued prior to July 13, 2009, are excluded and the rule is not NEPA-based; LBP-09-26, 70 NRC 981 (2009)
10 C.F.R. Part 50, Appendix A, Criterion 2
the design basis flood is the magnitude of the flood event that is used to evaluate safety structures, systems, and components important to safety during facility design; LBP-09-25, 70 NRC 878 n.53 (2009)
10 C.F.R. Part 50, Appendix E, § IV.B
emergency action levels are the criteria used to determine the notifications that need to be made to federal, state, and local authorities and to determine the appropriate protective responses to a particular set of emergency conditions; LBP-09-19, 70 NRC 510 (2009)
10 C.F.R. Part 50, Appendix E, § IV.D.2
potassium iodide distribution beyond the 10-mile EPZ Is not necessary; LBP-09-16, 70 NRC 295 n.203 (2009)
10 C.F.R. Part 50, Appendix I
a combined license application must include a description of equipment and measures taken to ensure that any exposures to radioactive materials such as low-level radioactive waste are kept as low as reasonably achievable, including a description of the provisions for storage of solid waste containing radioactive materials; LBP-09-10, 70 NRC 124 (2009)
10 C.F.R. Part 50, Appendix I, § II.D
the nontrivial increased risk of living within 50 miles of a proposed reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either

denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; CLI-09-20, 70 NRC 917 (2009)
10 C.F.R. Part 51
an environmental report and an environmental impact statement for a materials license must include a statement on the alternatives to the proposed action, including a discussion of the no-action alternative; CLI-09-15, 70 NRC 17-18 (2009)
in promulgating these regulations, the Commission's intention was to implement section 102(2) of NEPA; LBP-09-26, 70 NRC 976 (2009)
the requirement that the environmental report cover all significant environmental impacts associated with a project is not limited to onsite environmental impacts; LBP-09-10, 70 NRC 88 (2009)
10 C.F.R. 51.1
the regulations in Part 51 implement section 102(2) of the National Environmental Policy Act of 1969, as amended; LBP-09-16, 70 NRC 261 (2009)
10 C.F.R. 51.1(a)
in promulgating Part 51, the Commission's intention was to implement section 102(2) of the National Environmental Policy Act; LBP-09-26, 70 NRC 976 (2009)
10 C.F.R. 51.14(b)
in implementing NEPA, the NRC uses certain of the definitions provided in Council on Environmental Quality regulations; LBP-09-19, 70 NRC 463 (2009)
10 C.F.R. 51.20(b)(1)
NRC Staff is required to prepare an environmental impact statement in connection with issuance of an early site permit; LBP-09-19, 70 NRC 463 (2009)
10 C.F.R. 51.23
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-10, 70 NRC 144 n.84 (2009)
mere statements of government officials are insufficient to overturn this rule; LBP-09-21, 70 NRC 602 n.94 (2009)
the Waste Confidence Rule applies to new or proposed reactors as well as existing reactors; LBP-09-10, 70 NRC 114 (2009)
10 C.F.R. 51.23(a)
spent fuel can be stored safely onsite for at least 30 years beyond a plant's licensed life for operation; LBP-09-17, 70 NRC 343 (2009)
the phrase "any reactor" includes new reactors; LBP-09-17, 70 NRC 340 (2009); LBP-09-21, 70 NRC 599 (2009)
there is reasonable assurance that a geologic repository will be available by 2025 and that sufficient repository capacity will be available within 30 years beyond the licensed life to dispose of high-level waste and spent fuel generated by any reactor up to that time; LBP-09-10, 70 NRC 113 (2009); LBP-09-18, 70 NRC 406 (2009)
10 C.F.R. 51.23(b)
applicant need not consider the environmental impacts of spent fuel storage in reactor facility storage pools or independent spent fuel storage installations for the period following the term of the reactor combined license; LBP-09-21, 70 NRC 602 (2009)
environmental reports and environmental impact statements for nuclear reactors are not required to discuss the environmental impacts of the spent nuclear fuel and high-level waste that they inevitably generate; LBP-09-10, 70 NRC 113, 114 (2009); LBP-09-17, 70 NRC 343 (2009); LBP-09-18, 70 NRC 406 (2009)
10 C.F.R. 51.30(d)
design certification applicants are required to address severe accident mitigation design alternatives; LBP-09-19, 70 NRC 536 (2009)
10 C.F.R. 51.41
applicant must address potentially adverse environmental effects in its environmental report; LBP-09-25, 70 NRC 889 (2009)

10 C.F.R. 51.45
indirect and cumulative impacts of the proposed project have been sufficiently alleged and supported to fairly raise the issue as to whether, under the rule of reason, they are significant enough to have been included in the environmental report; LBP-09-10, 70 NRC 104 (2009)
the environmental report must cover all significant environmental impacts associated with the proposed project; LBP-09-10, 70 NRC 102 (2009)
10 C.F.R. 51.45(a)
each application must be accompanied by an environmental report; LBP-09-10, 70 NRC 87 (2009)
10 C.F.R. 51.45(b)
environmental reports must contain a description of the environment affected and discuss the impact of the proposed action on the environment; LBP-09-17, 70 NRC 368 (2009)
the environmental report shall discuss the impacts of the proposed action on the environment in proportion to their significance; LBP-09-25, 70 NRC 877 n.49 (2009)
10 C.F.R. 51.45(b)(1)
an environmental impact statement must provide a detailed statement concerning the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided should the proposal be implemented, and any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented; LBP-09-10, 70 NRC 124 (2009); LBP-09-16, 70 NRC 258 (2009)
the environmental report must discuss environmental impacts in proportion to their significance; LBP-09-10, 70 NRC 88 (2009)
10 C.F.R. 51.45(b)(1)-(3)
the environmental report must contain a description of the proposed action, a statement of its purposes, and a discussion of the impacts, adverse environmental effects, and alternatives to the proposed action; LBP-09-10, 70 NRC 87-88 (2009)
10 C.F.R. 51.45(b)(1)-(5)
the environmental report is required to address a list of environmental considerations that correspond to the environmental considerations that NEPA § 102(2)(C)(i)-(v) requires the agency to address in the environmental impact statement; LBP-09-16, 70 NRC 261-62 (2009)
the environmental report must discuss each of the five subelements covered by NEPA § 102(2)(C); LBP-09-16, 70 NRC 263 (2009)
10 C.F.R. 51.45(b)(2)
an environmental impact statement must provide a detailed statement concerning the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided should the proposal be implemented, and any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented; LBP-09-10, 70 NRC 124 (2009); LBP-09-16, 70 NRC 258 (2009)
the environmental report must discuss any adverse environmental effects that cannot be avoided should the proposal be implemented; LBP-09-16, 70 NRC 259 (2009); LBP-09-25, 70 NRC 889 (2009)
10 C.F.R. 51.45(b)(3)
applicant must address potentially adverse environmental effects in its environmental report; LBP-09-25, 70 NRC 889 (2009)
if the proposed siting of a plant slated for an early site permit involves unresolved conflicts concerning alternative uses of available resources, then this discussion must be sufficiently complete to allow the Staff to develop and to explore appropriate alternatives to the ESP pursuant to NEPA § 102(2)(E); LBP-09-19, 70 NRC 487 (2009)
presentation of alternatives in an applicant's environmental report and in an NRC environment impact statement must be in comparative form; LBP-09-19, 70 NRC 487-88 (2009)
the discussion of alternatives in the environmental report must be sufficiently complete to aid the Commission in developing and exploring appropriate alternatives pursuant to section 102(2)(E) of National Environmental Policy Act; LBP-09-10, 70 NRC 88, 131 (2009)
10 C.F.R. 51.45(b)(5)
an environmental impact statement must provide a detailed statement concerning the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided should the proposal be implemented, and any irreversible and irretrievable commitments of resources that would be involved in

the proposed action should it be implemented; LBP-09-10, 70 NRC 124 (2009); LBP-09-16, 70 NRC 258 (2009)
10 C.F.R. 51.45(c)
although the SAMA methodology is available to provide the required analysis, neither NEPA nor NRC regulations require that the analysis under this section be performed using the SAMA methodology; LBP-09-26, 70 NRC 956 (2009)
the environmental report must include an analysis that considers and balances the effects of the proposed action and its alternatives, and the alternatives available for reducing or avoiding adverse environmental effects; LBP-09-10, 70 NRC 88, 108 (2009); LBP-09-19, 70 NRC 536 (2009); LBP-09-26, 70 NRC 963 (2009)
10 C.F.R. 51.45(d)
in its application, applicant must list all federal permits, licenses, approvals, and other entitlements that must be obtained in connection with the issuance of an operating license for a second nuclear reactor and adequately discuss the status of its compliance with them; LBP-09-26, 70 NRC 956 (2009)
the environmental report must enumerate the status of applicant's compliance with all other applicable regulatory requirements, licenses, and permits; LBP-09-10, 70 NRC 105 (2009)
10 C.F.R. 51.45(e)
information submitted in the environmental report should not be confined to information supporting the proposed action but should also include adverse information; LBP-09-16, 70 NRC 258 (2009)
10 C.F.R. 51.50(b)
applicant for an early site permit must to file an environmental report addressing the five factors of section 51.45(b)(1)-(5); LBP-09-19, 70 NRC 487 (2009)
10 C.F.R. 51.50(b)(1)
applicant's environmental report must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-09-19, 70 NRC 487 (2009)
10 C.F.R. 51.50(b)(2)
the environmental report for an early site permit application may evaluate the environmental impacts of a reactor or reactors falling within the site characteristics and design parameters for the ESP application; LBP-09-19, 70 NRC 549 (2009)
10 C.F.R. 51.50(c)
environmental reports are required for combined license applications, including those that reference a standard design certification; LBP-09-10, 70 NRC 88 (2009)
10 C.F.R. 51.50(c)(1)(i)
if the application references an early site permit, applicant must demonstrate that the chosen design falls within the parameters specified in the ESP or, on the safety side, request a variance; LBP-09-19, 70 NRC 549 (2009)
10 C.F.R. 51.50(c)(2)
environmental reports are required for combined license applications, including those that reference a standard design certification; LBP-09-10, 70 NRC 88 (2009)
10 C.F.R. 51.51
applicant is required to take Table S-3 as the basis for evaluating the contribution of the environmental effects of management of high-level wastes related to uranium fuel cycle activities; LBP-09-21, 70 NRC 601 (2009)
10 C.F.R. 51.51(a)
each environmental report prepared for the combined license stage must take Table S-3 as the basis for evaluating the contribution of the environmental effects of the fuel cycle to the environmental costs of licensing the reactor; CLI-09-21, 70 NRC 929 n.6 (2009)
10 C.F.R. 51.51, Table S-3
both temporary and permanently committed land resources are specified as part of the uranium fuel cycle; LBP-09-21, 70 NRC 613 (2009)
carbon dioxide emissions from the uranium fuel cycle are to be listed as zero; LBP-09-21, 70 NRC 616 (2009)
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-10, 70 NRC 144 n.84 (2009)

high-level and transuranic wastes are to be buried at a repository and no release to the environment is expected; LBP-09-10, 70 NRC 112 (2009)
NRC regulations and the National Environmental Policy Act require consideration of all significant environmental impacts without distinguishing between onsite and offsite impacts; LBP-09-10, 70 NRC 103 (2009)
10 C.F.R. 51.51(b), Table S-3 n.1
the table does not include health effects from the effluents described in the table, and that issue, as well as others specifically noted, may be the subject of litigation in individual licensing proceedings; LBP-09-16, 70 NRC 256 (2009)
10 C.F.R. 51.53(b)
absent an adequately supported request to waive the application of this rule, the board is bound by it, even in light of the unusual circumstances of this case, this contention cannot be admitted; LBP-09-26, 70 NRC 977 (2009)
applicant must submit a supplement to its environmental report at the operating license stage that discusses the same matters described in sections 51.45, 51.51, and 51.52, which would have been initially discussed in the environmental report at the construction permit stage, but only to the extent that they differ from those discussed or reflect new information; LBP-09-26, 70 NRC 976 (2009)
no discussion of need for power or alternative energy sources is required in a supplemental environmental report at the operating license stage; LBP-09-26, 70 NRC 974 (2009)
the clear intent of this section is to avoid duplication and to highlight new information; LBP-09-26, 70 NRC 976-77 (2009)
10 C.F.R. 51.53(d)
decommissioning plans are provided in the post-shutdown phase of a plant; LBP-09-17, 70 NRC 372 (2009)
10 C.F.R. 51.55
environmental reports are required for each application for a standard design certification; LBP-09-10, 70 NRC 88 (2009)
10 C.F.R. 51.55(a)
design certification applicants are required to address severe accident mitigation design alternatives; LBP-09-19, 70 NRC 536 (2009)
the environmental report associated with each application for a standard design certification must address the costs and benefits of severe accident design mitigation alternatives; LBP-09-10, 70 NRC 108 (2009)
10 C.F.R. 51.70(b)
although the draft environmental impact statement may rely in part on the applicant's environmental report, Staff must independently evaluate and be responsible for the reliability of all information used in the DEIS; LBP-09-19, 70 NRC 463 (2009)
10 C.F.R. 51.71(d)
NRC Staff's environmental impact statement prepared during review of an early site permit application must consider and weigh the environmental impacts of alternatives to the proposed action and alternatives available for reducing or avoiding adverse environmental effects; LBP-09-19, 70 NRC 488 (2009)
10 C.F.R. 51.71(d) n.3
in the context of NEPA, NRC is obligated to study matters that may be far afield of its primary mission, including the environmental impacts related to the permits and licenses issued by other governmental agencies; LBP-09-21, 70 NRC 594 n.36 (2009)
Staff and applicant must address matters such as the environmental impacts of unregulated seepage into adjacent groundwater in their environmental impact statement and environmental report; LBP-09-25, 70 NRC 889 (2009)
the fact that an agency other than NRC has jurisdiction to issue a permit concerning a certain environmental impact of the project does not mean that the subject may be excluded from the environmental report or environmental impact statement; LBP-09-10, 70 NRC 100 (2009); LBP-09-16, 70 NRC 278 (2009)

10 C.F.R. 51.73
the draft environmental impact statement is distributed for public comment and, based on the comments received, a review of information provided by the applicant, and supplemental independent information and analysis, the Staff prepares and issues a final EIS; LBP-09-19, 70 NRC 463 (2009)
10 C.F.R. 51.75(b)
content of Staff's draft environmental impact statement is discussed; LBP-09-19, 70 NRC 463 (2009)
NRC Staff's environmental impact statement prepared during review of an early site permit application must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-09-19, 70 NRC 488 (2009)
10 C.F.R. 51.75(c)(2)
if a combined license application references a design certification, then the presiding officer shall not admit contentions concerning severe accident design mitigation alternatives unless the contention demonstrates that the site characteristics fall outside of the site parameters in the standard design certification; LBP-09-10, 70 NRC 108 (2009)
10 C.F.R. 51.91
the draft environmental impact statement is distributed for public comment and, based on the comments received, a review of information provided by the applicant, and supplemental independent information and analysis, the Staff prepares and issues a final EIS; LBP-09-19, 70 NRC 463 (2009)
10 C.F.R. 51.95
decommissioning plans are provided in the post-shutdown phase of a plant; LBP-09-17, 70 NRC 372 (2009)
10 C.F.R. 51.95(b)
no discussion of need for power or alternative energy sources is required in a final supplemental environmental impact statement at the operating license stage; LBP-09-26, 70 NRC 974 (2009)
10 C.F.R. 51.105(a)(1)-(4)
environmental findings that a board must make to authorize issuance of an early site permit are described; LBP-09-19, 70 NRC 458 (2009)
10 C.F.R. 51.105(c)
boards are to determine whether the site redress plan will adequately redress the activities performed under a limited work authorization should the activities be terminated by either the holder of the LWA or by Commission denial of any corresponding early site permit or combined license; LBP-09-19, 70 NRC 459 (2009)
10 C.F.R. 51.105(c)(3)
although a presiding officer should issue a separate partial initial decision regarding a limited work authorization request, the board finds no practical or logical basis for separating its consideration of the adequacy of the LWA request from its determination regarding the early site permit with which it is associated; LBP-09-19, 70 NRC 504-05 n.32 (2009)
10 C.F.R. 51.107(a)
the board recommends that the location of a new reactor within the emergency planning zone of an existing reactor be considered by the Commission or board when it conducts the mandatory review and hearing that must be held; LBP-09-10, 70 NRC 112 (2009)
10 C.F.R. 51.107(a)(3)
NRC must analyze the need for additional power when it relies upon a benefit in performing the balancing of benefits and costs; LBP-09-16, 70 NRC 301-02 (2009)
10 C.F.R. 51.107(c)
if a combined license application references a design certification, then the presiding officer shall not admit contentions concerning severe accident design mitigation alternatives unless the contention demonstrates that the site characteristics fall outside of the site parameters in the standard design certification; LBP-09-10, 70 NRC 108 (2009)
10 C.F.R. Part 51, Subpart A, Appendix A, § 1(a)(5)
an otherwise reasonable alternative will not be excluded from discussion solely on the ground that it is not within the jurisdiction of the NRC; LBP-09-10, 70 NRC 127 (2009); LBP-09-17, 70 NRC 379 (2009)
environmental reports and environmental impact statements are required to consider all significant environmental impacts of a proposed project, even if the regulation of such impacts falls outside of

NRC's jurisdiction and lies with another agency; LBP-09-10, 70 NRC 100, 105 (2009); LBP-09-16, 70 NRC 278 (2009); LBP-09-21, 70 NRC 594 n.36 (2009)
presentation of alternatives in an applicant's environmental report and in an NRC environment impact statement must be in comparative form; LBP-09-19, 70 NRC 487-88 (2009)
Staff and applicant must address matters such as the environmental impacts of unregulated seepage into adjacent groundwater in their environmental impact statement and environmental report; LBP-09-25, 70 NRC 889 (2009)
the environmental impact statement must identify and discuss all reasonable alternatives; LBP-09-17, 70 NRC 378 (2009)
the NEPA alternatives analysis is the heart of the environmental impact statement; LBP-09-10, 70 NRC 126 (2009); LBP-09-16, 70 NRC 263 (2009); LBP-09-17, 70 NRC 378 (2009)
10 C.F.R. Part 51, Subpart A, Appendix A, § 7
applicants' assertion that low-level radioactive waste could be transferred to another licensee or that some other arrangement might be established in the future is not sufficient to erase the requirement that reasonably foreseeable environmental impacts be assessed in an environmental report; CLI-09-20, 70 NRC 924 (2009)
10 C.F.R. 52.1
an early site permit is an approval for a nuclear plant site; LBP-09-19, 70 NRC 549 (2009)
10 C.F.R. 52.1(a)
early site permit applications, as partial construction permit applications, are subject to the AEA hearing requirement, as well as all procedural requirements in 10 C.F.R. Part 2; LBP-09-19, 70 NRC 456 (2009)
if granted, an early site permit evidences Commission approval of a site for one or more nuclear power facilities; LBP-09-19, 70 NRC 456 (2009)
10 C.F.R. 52.17(a)(1)(vi)
applicant's site safety analysis report must include seismic and geologic characteristics of the proposed site with appropriate consideration of the most severe historical natural phenomena that have been reported for the site; LBP-09-19, 70 NRC 524 (2009)
the site safety analysis report submitted with an early site permit application must contain the seismic, meteorological, hydrologic, and geologic characteristics of the proposed site; LBP-09-19, 70 NRC 482 (2009)
10 C.F.R. 52.17(a)(1)(ix)
early site permit applicants must perform an evaluation and analysis of the postulated fission product release to evaluate the offsite radiological consequences; LBP-09-19, 70 NRC 473 (2009)
early site permit applicants must submit a safety assessment that includes an analysis of a fission product release from an accident, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-19, 70 NRC 535 (2009)
early site permit applications must contain a description and safety assessment of the site that includes an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under radiological consequence evaluation factors; LBP-09-19, 70 NRC 473 (2009)
the site safety analysis report submitted with an early site permit application must contain a description and safety assessment of the site on which a facility is to be located; LBP-09-19, 70 NRC 482 (2009)
10 C.F.R. 52.17(a)(1)(ix) n.1
in applicant's safety assessment, the fission product releases in question are associated with accidents that have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-19, 70 NRC 535 (2009)
10 C.F.R. 52.17(a)(1)(ix)(A)-(B)
individuals located at the boundary of the exclusion area cannot be exposed to more than 25 rem total effective dose equivalent in any 2-hour period, and any individual located at the outer boundary of the low population zone cannot be exposed to more than 25 rem TEDE during the entire period of any radioactive release; LBP-09-19, 70 NRC 473 (2009)

LEGAL CITATIONS INDEX

REGULATIONS

10 C.F.R. 52.17(b)(1)
the site safety analysis report filed with an early site permit application must include information that identifies physical characteristics of the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans; LBP-09-19, 70 NRC 507-08 (2009)
10 C.F.R. 52.17(b)(2)(i), (ii)
an early site permit applicant has the option of either proposing a complete and integrated emergency plan or proposing major features of the emergency plan for review and approval by NRC, in consultation with the Department of Homeland Security; LBP-09-19, 70 NRC 508 (2009)
10 C.F.R. 52.17(b)(3)
if applicant submits a complete and integrated emergency plan under section 52.17(b)(2)(ii), it must include in the early site permit application the proposed inspections, tests, and analyses that will be performed, and the acceptance criteria that are necessary and sufficient for the Commission's required findings for issuance of the ESP; LBP-09-19, 70 NRC 508, 554 (2009)
10 C.F.R. 52.17(b)(4)
if applicant chooses to submit a complete and integrated emergency plan at the early site permit stage, applicant also is required to make a good-faith effort to obtain a certification from federal, state, and local governmental agencies with emergency planning responsibilities; LBP-09-19, 70 NRC 509 (2009)
10 C.F.R. 52.17(c)
an early site permit applicant may request that a limited work authorization be issued in conjunction with the ESP; LBP-09-19, 70 NRC 456, 459 (2009)
10 C.F.R. 52.18
NRC Staff must prepare an environmental impact statement during review of an early site permit application; LBP-09-19, 70 NRC 488 (2009)
Staff is to review early site permit applications according to the applicable standards set out in 10 C.F.R. Part 50 and its appendices and 10 C.F.R. Part 100; LBP-09-19, 70 NRC 473 (2009)
10 C.F.R. 52.21
early site permit applications, as partial construction permit applications, are subject to the AEA hearing requirement, as well as all procedural requirements in 10 C.F.R. Part 2; LBP-09-19, 70 NRC 456 (2009)
10 C.F.R. 52.24(a)
prior to issuance of an early site permit, the findings required by 10 C.F.R. Part 51, Subpart A must be made; LBP-09-19, 70 NRC 458-59 (2009)
10 C.F.R. 52.24(a)(1)-(6)
findings that a board must make for issuance of an early site permit are clarified; LBP-09-19, 70 NRC 457-58 (2009)
10 C.F.R. 52.24(a)(5)
to grant an early site permit, the Commission must find that the proposed inspections, tests, analyses, and acceptance criteria, including any on emergency planning, are necessary and sufficient, within the scope of the ESP, to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the Act, and the Commission's regulations; LBP-09-19, 70 NRC 554 (2009)
10 C.F.R. 52.24(a)(7)
when an early site permit is issued with an associated limited work authorization, the board must find relative to the LWA that any significant adverse environmental impact resulting from activities requested under section 52.17(c) can be redressed; LBP-09-19, 70 NRC 459 n.8 (2009)
10 C.F.R. 52.24(a)(8)
prior to issuance of an early site permit, the findings required by 10 C.F.R. Part 51, Subpart A must be made; LBP-09-19, 70 NRC 459 (2009)
10 C.F.R. 52.24(b)
an early site permit specifies design parameters for the site; LBP-09-19, 70 NRC 549 (2009)
any permit conditions imposed that are not met before a combined license referencing the early site permit is issued will attach to the COL; LBP-09-19, 70 NRC 547 (2009)

if the Commission decides to authorize issuance of an early site permit, the issued ESP must specify the site characteristics, design parameters, and terms and conditions of the ESP that the Commission deems appropriate; LBP-09-19, 70 NRC 458 (2009)

10 C.F.R. 52.24(c)

if limited work authorization activities are approved by NRC in conjunction with an early site permit, the ESP as issued shall specify those authorized activities; LBP-09-19, 70 NRC 459-60 (2009)

10 C.F.R. 52.25

a site redress plan remains in effect for an early site permit applicant even if the ESP with which the LWA is issued is not referenced in a construction permit or COL application during the period that the ESP remains valid; LBP-09-19, 70 NRC 499 (2009)

10 C.F.R. Part 52, Subpart B

a combined license applicant may reference a certified reactor design for the facility it proposes to construct and operate; LBP-09-16, 70 NRC 238 (2009)

10 C.F.R. 52.47(a)(2)

the safety analysis report component of an application for a standard design certification must analyze and address the problem of extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products; LBP-09-10, 70 NRC 107 n.43 (2009)

10 C.F.R. 52.47(a)(2)(iv) & n.3

the safety analysis report must provide special attention to design features intended to mitigate the radiological consequences of accidents if there is a substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-10, 70 NRC 107 n.43 (2009)

10 C.F.R. 52.55(c)

a design certification application may be referenced in the combined license application; LBP-09-10, 70 NRC 76 (2009); LBP-09-17, 70 NRC 332 (2009)

a license application will not be held in abeyance until the design certification rulemaking is completed; LBP-09-16, 70 NRC 269 (2009); LBP-09-18, 70 NRC 415 (2009)

applicant for a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted; LBP-09-10, 70 NRC 76 (2009); LBP-09-16, 70 NRC 268 (2009); LBP-09-17, 70 NRC 334 (2009); LBP-09-18, 70 NRC 413, 414 (2009)

10 C.F.R. 52.73(a)

at the COL stage, an applicant may reference both an early site permit and a standard design certification in its application; LBP-09-10, 70 NRC 76 (2009); LBP-09-19, 70 NRC 549 (2009)

10 C.F.R. 52.79(a)

a combined license application must contain a final safety analysis report; LBP-09-10, 70 NRC 117 (2009)

10 C.F.R. 52.79(a)(1)(vi)

the final safety analysis report of a combined license application must contain analysis of a severe accident involving a fission product release from the core into the containment including any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-10, 70 NRC 107 (2009)

10 C.F.R. 52.79(a)(1)(vi) n.5

the fission product release assumed for the final safety analysis report is based on a major accident assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-10, 70 NRC 107 (2009)

10 C.F.R. 52.79(a)(3)

a combined license application must describe the kinds and qualities of radioactive materials expected to be produced in the operation and the means for controlling and limiting the radioactive effluents and radiation exposures within the limits set forth in 10 C.F.R. Part 20; CLI-09-16, 70 NRC 36-37 (2009); LBP-09-10, 70 NRC 124 (2009); LBP-09-27, 70 NRC 1001, 1005, 1012, 1014 (2009)

although applicant's plan reduces the storage capacity for Class A waste, substantial storage capacity remains, and petitioner has not alleged that this change will prevent applicant from controlling and limiting radioactive effluents and radiation exposures from Class A waste within the limits set forth in 10 C.F.R. Part 20; LBP-09-27, 70 NRC 1011 (2009)

applicant must explain how it intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20, including, but not limited to, low-level radioactive waste handling and storage; LBP-09-27, 70 NRC 1001 (2009)
applicant's explanation of the kinds and quantities of radioactive materials expected to be produced in the operation must be accurate; LBP-09-27, 70 NRC 1012 (2009)
COL applicants are to consider long-term onsite low-level radioactive waste storage, but the regulation sets no quantity or time restrictions relative to onsite storage of such waste; CLI-09-16, 70 NRC 36 (2009)
information to be included in the final safety analysis report is described; CLI-09-16, 70 NRC 35 (2009)
this regulation sets no quantity or time restrictions relative to onsite storage of low level radioactive waste; LBP-09-27, 70 NRC 1014 (2009)
10 C.F.R. 52.79(b)(1)
a combined license application referencing an early site permit must include a safety analysis report that either includes or incorporates by reference the ESP site safety analysis report and that contains additional information and analyses sufficient to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the ESP; LBP-09-19, 70 NRC 551 n.32 (2009)
10 C.F.R. 52.79(b)(1)-(2)
if the application references an early site permit, the applicant must demonstrate that the chosen design falls within the parameters specified in the ESP or, on the safety side, request a variance; LBP-09-19, 70 NRC 549 (2009)
10 C.F.R. 52.80(a)
a combined license application must include the proposed inspections, tests, and analyses, including those applicable to emergency planning, to be performed and the acceptance criteria that are necessary and sufficient to support the Commission's finding that a COL can be granted; LBP-09-19, 70 NRC 554 (2009)
10 C.F.R. 52.80(a)(3)
if a combined license application references an early site permit with inspections, tests, analyses, and acceptance criteria or a standard design certification or both, the application may include a notification that a required inspection, test, or analysis in the ITAAC has been successfully completed and that the corresponding acceptance criterion has been met; LBP-09-19, 70 NRC 554 (2009)
if applicant requests a Commission finding on the completion of inspections, tests, analyses, and acceptance criteria needed for issuance of a COL, the Commission is required to identify these ITAAC in the notice of hearing published in the *Federal Register* for the COL proceeding; LBP-09-19, 70 NRC 554 (2009)
10 C.F.R. 52.81
applications for nuclear power plants show that the issuance of the license would not be inimical to, and will provide adequate protection to, the health and safety of the public; LBP-09-10, 70 NRC 124 (2009)
10 C.F.R. 52.85
if applicant requests a Commission finding on the completion of inspections, tests, analyses, and acceptance criteria needed for issuance of a combined license, the Commission is required to identify these ITAAC in the notice of hearing published in the *Federal Register* for the COL proceeding; LBP-09-19, 70 NRC 554 (2009)
10 C.F.R. 52.97(a)(2)
if the Commission finds that early site permit or design certification inspections, tests, analyses, and acceptance criteria have been met, those acceptance criteria will be deemed to be excluded from the combined license and from findings under section 52.103(g); LBP-09-19, 70 NRC 554 (2009)
10 C.F.R. 52.97(b)
on issuance of a combined license, the Commission must identify any inspections, tests, analyses, and acceptance criteria that have not yet been met; LBP-09-19, 70 NRC 554 (2009)

10 C.F.R. 52.99(a)
no later than 1 year after issuance of the combined license or at the start of construction, whichever is later, the COL licensee must submit its schedule for completing the inspections, tests, or analyses and provide schedule updates; LBP-09-19, 70 NRC 554-55 (2009)
10 C.F.R. 52.99(e)(1)
at appropriate intervals during the time between issuance of a combined license and the last date for submission of requests for hearing under section 52.103(a), NRC shall publish notices in the *Federal Register* of NRC Staff's determination of the successful completion of inspections, tests, and analyses; LBP-09-19, 70 NRC 555 (2009)
10 C.F.R. 52.99(e)(2)
NRC must make publicly available any notifications from the COL licensee indicating that the licensee believes certain inspections, tests, analyses, and acceptance criteria have been met as well as any notifications that any uncompleted ITAAC will be met prior to operation; LBP-09-19, 70 NRC 555 (2009)
10 C.F.R. 52.103(a)
an opportunity for hearing will be provided in the *Federal Register* notice of fuel loading, regarding whether inspections, tests, or analyses that have not been found to have been met under section 52.97(a)(2) prior to issuance of the COL; LBP-09-19, 70 NRC 555 (2009)
COL applicants must submit a decommissioning report containing a certification that the funding assurance will be provided no later than 30 days after the NRC publishes notice in the *Federal Register* of its scheduled date for initial fuel loading; LBP-09-21, 70 NRC 630 (2009)
prior to operation under a COL, a notice of intended operation will be published in the *Federal Register* not less than 180 days before the date scheduled for initial loading of fuel; LBP-09-19, 70 NRC 555 (2009)
10 C.F.R. 52.103(b)
an opportunity for hearing will be provided in the *Federal Register* notice of fuel loading, regarding whether inspections, tests, or analyses that have not been found to have been met under section 52.97(a)(2) prior to issuance of the COL; LBP-09-19, 70 NRC 555 (2009)
10 C.F.R. 52.103(g)
holder of a combined license must begin filing biannual reports on the status of decommissioning funding once the Commission has made a finding that all acceptance criteria in the license have been met; LBP-09-15, 70 NRC 219 (2009)
10 C.F.R. 52.104
a combined license is issued for a period of 40 years; LBP-09-16, 70 NRC 265 (2009)
10 C.F.R. 52.109
licensee remains authorized to own and possess the facility even after the operating license expires; LBP-09-17, 70 NRC 349 (2009)
10 C.F.R. 52.110(a)(1)
if after public notice and review the NRC approves the decommissioning plan, licensee has 60 years to complete decommissioning; LBP-09-17, 70 NRC 373 (2009)
10 C.F.R. 52.110(b)
licensee remains authorized to own and possess the facility even after the operating license expires; LBP-09-17, 70 NRC 349 (2009)
10 C.F.R. 52.110(c)
if after public notice and review the NRC approves the decommissioning plan, licensee has 60 years to complete decommissioning; LBP-09-17, 70 NRC 373 (2009)
10 C.F.R. 52.110(d)
decommissioning plans are not required until the applicant files a post-shutdown decommissioning activities report, which is not due until 2 years before permanent cessation of operation; LBP-09-17, 70 NRC 372 (2009); LBP-09-21, 70 NRC 621 (2009)
10 C.F.R. 52.110(d)(1)
if after public notice and review the NRC approves the decommissioning plan, licensee has 60 years to complete decommissioning; LBP-09-17, 70 NRC 373 (2009)

10 C.F.R. 52.110(i)
when a nuclear power plant ceases operations, the owner must apply for a license to terminate, which cannot be granted until the NRC is satisfied that the plant has been properly dismantled and decommissioned so that residual radiation meets established rules, and that no spent fuel or high-level wastes would be onsite; LBP-09-21, 70 NRC 606 n.124 (2009)
10 C.F.R. 52.110(k)
decommissioning is not complete, and an operating license cannot be terminated, in effect, until all spent fuel and high-level waste have been removed from the site; LBP-09-17, 70 NRC 348 (2009)
10 C.F.R. Part 52, Appendix D, § VI.B.7
all environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's environmental assessment for a certified design are considered resolved; LBP-09-19, 70 NRC 536, 538 (2009)
10 C.F.R. 55.53(b)
any senior reactor operator license is limited to the facility for which it is issued; LBP-09-14, 70 NRC 194-95, 196 (2009)
10 C.F.R. 55.53(e)
no senior reactor operator license that petitioner might be awarded could be active, because (not having been at the facility for more than 6 months) petitioner could not have performed the functions of an operator or senior operator for the necessary minimum number of hours during each calendar quarter; LBP-09-14, 70 NRC 196 (2009)
10 C.F.R. 55.55(a)
any senior reactor operator license automatically expires upon termination of employment with the facility licensee; LBP-09-14, 70 NRC 195, 196 (2009)
10 C.F.R. 61.1
Part 61 only applies to the land disposal of radioactive waste received from others; LBP-09-10, 70 NRC 121 (2009)
10 C.F.R. 63.21(c)(19)
contention asserting that DOE's description of its expert elicitation relating to a probabilistic volcanic hazard analysis update fails to comply with this section or the NRC guidance document that DOE formally committed to follow is admissible; LBP-09-29, 70 NRC 1032-33 (2009)
10 C.F.R. 70.22(a)(8), 70.23(a)(5)
the 10 C.F.R. Part 70 financial criteria can be met by conditioning the materials license to require funding commitments to be in place prior to construction and operation; CLI-09-15, 70 NRC 18 (2009)
10 C.F.R. 70.23a
a materials license hearing will be conducted for a fuel enrichment facility according to the rules of practice in 10 C.F.R. Part 2, Subparts A, C, G, and to the extent that classified information becomes involved, Subpart I; CLI-09-15, 70 NRC 7 (2009)
10 C.F.R. 70.31
an affirmative finding by the Commission that issuance of a license for a uranium enrichment facility will not be inimical to the common defense and security is required; CLI-09-15, 70 NRC 19 (2009)
10 C.F.R. 70.32(k)
prior to commencement of operations of a fuel enrichment facility, NRC will verify through inspection that the facility has been constructed in accordance with the requirements of the license for such construction and operation; CLI-09-15, 70 NRC 6-7 (2009)
10 C.F.R. 70.44
creditor interests may be created in special nuclear material; CLI-09-15, 70 NRC 19 (2009)
10 C.F.R. 72.210
issuance of a combined license could be accompanied by a Part 72 general license, subject to certain conditions; LBP-09-21, 70 NRC 604 n.111 (2009)
the assertion that the applicant might need to obtain a Part 72 license is irrelevant at the combined license stage, because a grant of the COL could be accompanied by grant of a Part 72 general license if applicant complies with certain conditions; LBP-09-21, 70 NRC 594 (2009)
the Commission has issued a general license for the storage of spent fuel at an onsite independent spent fuel storage installation to all persons authorized to possess or operate nuclear power reactors under 10 C.F.R. Part 50 or Part 52; LBP-09-20, 70 NRC 567 (2009)

10 C.F.R. 72.212(a)(2)
issuance of a combined license could be accompanied by a Part 72 general license, subject to certain conditions; LBP-09-21, 70 NRC 604 n.111 (2009)
the assertion that the applicant might need to obtain a Part 72 license is irrelevant at the combined license stage, because a grant of the COL could be accompanied by grant of a Part 72 general license if applicant complies with certain conditions; LBP-09-21, 70 NRC 594 (2009)
10 C.F.R. 73.2
content of a statement that explains an individual's "need to know" safeguards information is described; CLI-09-15, 70 NRC 22-23 (2009)
10 C.F.R. 73.22
prior to providing safeguards information to a requestor, the NRC Staff will conduct an inspection to confirm that the recipient's information protection system is sufficient to satisfy the requirements of this section; CLI-09-15, 70 NRC 25 (2009)
10 C.F.R. 73.22(b)
for requests for access to safeguards information, if the NRC Staff determines that the requestor has satisfied its requirements, the Office of Administration will then determine, based upon completion of the background check, whether the proposed recipient is trustworthy and reliable; CLI-09-15, 70 NRC 25 (2009)
10 C.F.R. 73.22(b)(1)
a completed Form FD-258 (fingerprint card), signed in original ink, and submitted in accordance with 10 C.F.R. 73.57(d) is required for access to safeguards information; CLI-09-15, 70 NRC 23 (2009)
content of a statement that explains an individual's "need to know" safeguards information is described; CLI-09-15, 70 NRC 22-23 (2009)
10 C.F.R. 73.22(b)(2)
a completed Form SF-85, "Questionnaire for Non-Sensitive Positions" is required for each individual who would have access to safeguards information; CLI-09-15, 70 NRC 23 (2009)
10 C.F.R. 73.59
individuals requesting access to safeguards information who believe they belong to one or more of the categories of individuals that are exempt from the criminal history records check and background check requirements should specifically state which exemption the requestor is invoking and explain the requestor's basis for believing that the exemption is applicable; CLI-09-15, 70 NRC 24 (2009)
10 C.F.R. 100.20(c)
the Commission, in determining the acceptability of a site for a stationary power reactor, will consider the physical characteristics of the site, including seismology, meteorology, geology, and hydrology; LBP-09-19, 70 NRC 482 (2009)
10 C.F.R. 100.20(c)(3)
a properly pleaded contention of omission contends that the combined license application does not present site-specific measurements of adsorption and retention coefficients; LBP-09-16, 70 NRC 272 (2009)
in its review of early site permit applications, Staff must consider physical characteristics of the site, specifically noting that factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 473 (2009)
10 C.F.R. 100.23
in providing information on seismic and geologic characteristics of a proposed site, applicants must conform to the requirements of this section; LBP-09-19, 70 NRC 524 (2009)
10 C.F.R. 150.20
upon submitting for approval to work under a reciprocity agreement licensee will send a copy of the board order confirming the settlement agreement to the regulator processing the reciprocity application at least 2 weeks prior to engaging in activity authorized by the reciprocity agreement; LBP-09-12, 70 NRC 164-65 (2009)
25 C.F.R. 83.1
the Bureau of Indian Affairs is required to publish its list of federally recognized Indian Tribes in the *Federal Register*; LBP-09-13, 70 NRC 185 (2009)
25 C.F.R. 83.7
to qualify for recognition on the Bureau of Indian Affairs' list as an indian tribe, a petitioning group must establish that it has historically been recognized as an American Indian entity since 1900, that it is

composed of a cohesive group of individuals that share a distinct community and an autonomous government, and that its members are descended from a historic Indian tribe or tribes; LBP-09-13, 70 NRC 185 (2009)
25 C.F.R. 83.7(f)
membership of a petitioning Indian group must be composed principally of persons who are not members of any other acknowledged North American Indian tribe; LBP-09-13, 70 NRC 185 (2009)
36 C.F.R. 800.16(m)
only Indian tribes that appear on the Department of the Interior's list of recognized tribes have consultation rights under the National Historic Preservation Act; LBP-09-13, 70 NRC 188 (2009)
40 C.F.R. 1502.14
the environmental impact statement must identify and discuss all reasonable alternatives; LBP-09-17, 70 NRC 378 (2009)
the NEPA alternatives analysis is the heart of the environmental impact statement; LBP-09-10, 70 NRC 126 (2009); LBP-09-16, 70 NRC 263 (2009); LBP-09-17, 70 NRC 378 (2009)
40 C.F.R. 1502.14(a)
the reasonableness of energy conservation as an alternative in light of the need for a large amount of baseload electric power is questioned; LBP-09-10, 70 NRC 132 (2009)
40 C.F.R. 1502.14(c)
the fact that an environmental impact is regulated by another federal agency or by a state does not justify the exclusion of the analysis in the applicant's environmental report or the NRC's environmental impact statement; LBP-09-10, 70 NRC 100 (2009); LBP-09-16, 70 NRC 278 (2009)
40 C.F.R. 1502.14(f), 1502.16(h), 1508.20
Council on Environmental Quality regulations define the term "mitigation," and require that the environmental impact statement include appropriate mitigation measures; LBP-09-10, 70 NRC 108 (2009)
40 C.F.R. 1508.7
Council on Environmental Quality regulations indeed define "direct and indirect" impacts and "cumulative" impacts and require that they be considered in the environmental impact statement; LBP-09-10, 70 NRC 84 n.27 (2009)
"cumulative impact" is defined as the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions; LBP-09-16, 70 NRC 248 (2009)
cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time; LBP-09-19, 70 NRC 463 (2009)
direct environmental impacts are those caused by the federal action and occurring at the same time and place as that action; LBP-09-19, 70 NRC 463 (2009)
experience with and information about past direct and indirect effects of individual past actions may be useful in illuminating or predicting the direct and indirect effects of a proposed action; LBP-09-16, 70 NRC 248 (2009)
indirect environmental impacts are caused by the action at a later time or more distant place, yet are still reasonably foreseeable; LBP-09-19, 70 NRC 463 (2009)
40 C.F.R. 1508.8
Council on Environmental Quality regulations indeed define "direct and indirect" impacts and "cumulative" impacts and require that they be considered in the environmental impact statement; LBP-09-10, 70 NRC 84 n.27 (2009)
40 C.F.R. 1508.25
an agency environmental impact statement must consider direct, indirect, and cumulative impacts of an action; LBP-09-19, 70 NRC 463 (2009)

LEGAL CITATIONS INDEX
STATUTES

18 U.S.C. § 3142(c), (f)
to succeed in imposing pretrial detention because the accused is a danger to the community, the government must, among other things, prove in an adversary hearing by clear and convincing evidence that no conditions of release can reasonably ensure the community's safety; LBP-09-24, 70 NRC 806 (2009)

Administrative Procedure Act, 5 U.S.C. § 556(d)
a party is entitled to conduct such cross-examination as may be required for a full and true disclosure of the facts; LBP-09-10, 70 NRC 145 (2009); LBP-09-22, 70 NRC 656 n.34 (2009)
NRC Staff's role at a hearing in an enforcement proceeding is akin to that of a prosecutor, and it has the burden to prove its allegations by a preponderance of the reliable, probative, and substantial evidence; LBP-09-24, 70 NRC 706 (2009)
the standard for allowing the parties to conduct cross-examination is the same under Subparts G and L; LBP-09-10, 70 NRC 145 (2009)
there is no absolute right to cross-examination; LBP-09-10, 70 NRC 145 (2009)

Atomic Energy Act, 53
issues of foreign involvement of a uranium enrichment facility applicant shall be determined pursuant to sections 57 and 69, not sections 103, 104, or 193(f); CLI-09-15, 70 NRC 19 (2009)

Atomic Energy Act, 57
an affirmative finding by the Commission that issuance of a license for a uranium enrichment facility will not be inimical to the common defense and security is required; CLI-09-15, 70 NRC 19 (2009)

Atomic Energy Act, 63
issues of foreign involvement of a uranium enrichment facility applicant shall be determined pursuant to sections 57 and 69, not sections 103, 104, or 193(f); CLI-09-15, 70 NRC 19 (2009)

Atomic Energy Act, 69
an affirmative finding by the Commission that issuance of a license for a uranium enrichment facility will not be inimical to the common defense and security is required; CLI-09-15, 70 NRC 19 (2009)

Atomic Energy Act, 103(d), 42 U.S.C. § 2133(d)
applications for nuclear power plants show that the issuance of the license would not be inimical to, and will provide adequate protection to, the health and safety of the public; LBP-09-10, 70 NRC 124 (2009)
no license may be issued to an 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-09-20, 70 NRC 919 (2009)

Atomic Energy Act, 105
an enrichment facility is not a production or utilization facility and, therefore, NRC does not have antitrust responsibilities for it; CLI-09-15, 70 NRC 19 (2009)

Atomic Energy Act, 149
a completed Form FD-258 (fingerprint card), signed in original ink, and submitted in accordance with 10 C.F.R. 73.57(d) is required for access to safeguards information; CLI-09-15, 70 NRC 23-24 (2009)

Atomic Energy Act, 161b, 42 U.S.C. § 2201(b)
NRC's performance of its regulatory function to protect health and minimize danger to life or property is largely dependent on accurate self-reporting by licensed entities and their employees; LBP-09-24, 70 NRC 853 (2009)

LEGAL CITATIONS INDEX

STATUTES

Atomic Energy Act, 182(a)
applications for nuclear power plants show that the issuance of the license would not be inimical to, and will provide adequate protection to, the health and safety of the public; LBP-09-10, 70 NRC 124 (2009)
Atomic Energy Act, 184
creditor regulations in 10 C.F.R. 50.81 shall apply to the creation of creditor interests in equipment, devices, or important parts thereof, capable of separating the isotopes of uranium or enriching uranium in the isotope U-235; CLI-09-15, 70 NRC 19 (2009)
Atomic Energy Act, 189a, 42 U.S.C. § 2239(a)
a hearing must be granted in any licensing proceeding to any person whose interest may be affected by the proceeding; LBP-09-15, 70 NRC 221 (2009)
intervention petitioner must be able to show how it would have personally suffered or will suffer a distinct and palpable harm that constitutes injury in fact; LBP-09-18, 70 NRC 400 (2009)
Atomic Energy Act, 189a(1)(A), 42 U.S.C. § 2239(a)(1)(A)
if and when a combined license application is amended, petitioners must be given a fair opportunity to file new or amended contentions challenging these changes; LBP-09-10, 70 NRC 77 (2009)
in determining whether a petitioner is an "interested person" for the purposes of a standing determination, NRC is not strictly bound by judicial standing doctrines; CLI-09-20, 70 NRC 915 (2009)
NRC shall grant a hearing upon the request of any person whose interests may be affected by the proceeding; CLI-09-20, 70 NRC 915 (2009); LBP-09-10, 70 NRC 139 n.79 (2009); LBP-09-13, 70 NRC 175 (2009); LBP-09-16, 70 NRC 239 (2009); LBP-09-17, 70 NRC 321 (2009); LBP-09-20, 70 NRC 574 n.37 (2009); LBP-09-21, 70 NRC 590 (2009)
NRC shall hold a hearing on each application under section 2133 or 2134(b) of this title for a construction permit for a facility; LBP-09-19, 70 NRC 456 (2009)
Atomic Energy Act, 193
a materials license hearing will be conducted for a fuel enrichment facility according to the rules of practice in 10 C.F.R. Part 2, Subparts A, C, G, and to the extent that classified information becomes involved, Subpart I; CLI-09-15, 70 NRC 7 (2009)
Atomic Energy Act, 193(c)
prior to commencement of operations of a fuel enrichment facility, NRC will verify through inspection that the facility has been constructed in accordance with the requirements of the license for such construction and operation; CLI-09-15, 70 NRC 6-7 (2009)
Atomic Energy Act, 274 c(b)(1)(D), 42 U.S.C. § 2021c(b)(1)(D)
disposal of greater-than-Class-C waste is the responsibility of the federal government; LBP-09-16, 70 NRC 254 (2009)
Clean Water Act, 33 U.S.C. § 1371(c)(2)
nothing in the National Environmental Policy Act shall be deemed to authorize any federal agency to review any effluent limitation or other requirement established pursuant to the Clean Water Act or to authorize any such agency to impose any effluent limitation other than those set by EPA or a state agency that has been delegated such authority; LBP-09-25, 70 NRC 885, 890 (2009)
the permissible reach of the NRC's NEPA obligations with respect to discharges to groundwater are not affected by this section; LBP-09-25, 70 NRC 890 (2009)
Exec. Order No. 13,084, 63 Fed. Reg. 27,655 (May 14, 1998)
"Indian tribe" is defined as an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994; LBP-09-13, 70 NRC 185 (2009)
Federal Register Act, 44 U.S.C. § 1508
agency notices must provide at least 15 days before the opportunity for a hearing is forfeited unless a shorter period is reasonable; LBP-09-20, 70 NRC 570 (2009)
Federally Recognized Indian Tribe List Act of 1994, 25 U.S.C. § 479(a)
"Indian tribe" is defined as an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe; LBP-09-13, 70 NRC 185 (2009)
the Bureau of Indian Affairs is required to publish its list of federally recognized Indian tribes in the *Federal Register*; LBP-09-13, 70 NRC 185 (2009)

LEGAL CITATIONS INDEX

STATUTES

National Environmental Policy Act, § 102(2)(C)
agencies are required to consider measures to mitigate environmental impacts; LBP-09-10, 70 NRC 107-08 (2009); LBP-09-19, 70 NRC 535-36 (2009)
an environmental impact statement must address alternatives to the proposed action; LBP-09-19, 70 NRC 487 (2009)

National Environmental Policy Act, 42 U.S.C. § 4332(C)(i), (ii), (v)
an environmental impact statement must provide a detailed statement concerning the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided should the proposal be implemented, and any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented; LBP-09-16, 70 NRC 258 (2009)

National Environmental Policy Act, 42 U.S.C. § 4332(C)(i)-(v)
the environmental report is required to address a list of environmental considerations that correspond to the environmental considerations that NEPA requires the agency to address in the environmental impact statement; LBP-09-16, 70 NRC 262 n.109 (2009)

National Environmental Policy Act, 42 U.S.C. § 4322(2)(C)(iii)
although the applicant's goals are given substantial weight, NEPA does not allow the applicant to define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered under this section; LBP-09-17, 70 NRC 379 (2009)
the requirement to discuss alternatives in the environmental report parallels NEPA's requirement that an environmental impact statement provide a detailed statement of reasonable alternatives to a proposed action; LBP-09-10, 70 NRC 126 (2009); LBP-09-16, 70 298 (2009)

National Environmental Policy Act, 42 U.S.C. § 4322(2)(E)
agencies must study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources; LBP-09-10, 70 NRC 126 (2009)
although the applicant's goals are given substantial weight, NEPA does not allow the applicant to define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered under this section; LBP-09-17, 70 NRC 379 (2009)

Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990, Pub. L. No. 101-575, § 5, 104 Stat. 2834, 2835-36 (codified as amended at 42 U.S.C. § 2243)
a materials license hearing will be conducted for a fuel enrichment facility according to the rules of practice in 10 C.F.R. Part 2, Subparts A, C, G, and to the extent that classified information becomes involved, Subpart I; CLI-09-15, 70 NRC 7 (2009)

U.S. Const. amend. VI
as to criminal matters, an accused person is to be informed of the nature and cause of the accusation; LBP-09-24, 70 NRC 792-93 n.176 (2009)

U.S. Const. art. III
federal courts are constitutionally limited by the case or controversy requirement of Article III; LBP-09-14, 70 NRC 195 (2009)

LEGAL CITATIONS INDEX
OTHERS

Black's Law Dictionary 459 (8th ed. 2004)
a conviction based on deliberate ignorance requires a finding that a defendant acted deliberately, and a deliberate action is one that is intentional, premeditated, and fully considered; LBP-09-24, 70 NRC 819 (2009)

13A Charles Alan Wright et al., Federal Practice and Procedure § 3533.2 (2d ed. 1984)
when a claim becomes moot, a decision on the merits may be appropriate if the same basic dispute is likely to recur in the future, unless it seems sufficient to await the event or better to defer to another court; LBP-09-15, 70 NRC 210 (2009)

18 Charles Alan Wright et al., Federal Practice and Procedure § 4403 (2d ed. 1987)
the collateral estoppel doctrine promotes the compelling public interest in preserving the acceptability of judicial dispute resolution against the corrosive disrespect that would follow if the same matter were twice litigated to inconsistent results; LBP-09-24, 70 NRC 809-10, 822 (2009)

18A Charles A. Wright et al., Federal Practice and Procedure: Jurisdiction 2d § 4433 (1981)
a court inclined to apply collateral estoppel based on a judgment that is subject to appeal may want to avoid the question by staying the case pending the appeal; LBP-09-24, 70 NRC 713 (2009)

Cohen's Handbook of Federal Indian Law § 3.02[3], at 138 (2005 ed.)
federal recognition by the Bureau of Indian Affairs is a formal political act confirming a tribe's existence as a distinct political society, and institutionalizing the government-to-government relationship between the tribe and the federal government; LBP-09-13, 70 NRC 185 (2009)

Daniel R. Mendelker, NEPA Law and Litigation §§ 1.1, 8.18 (2d ed. 2008)
the National Environmental Policy Act applies to agencies of the federal government, not apply to private parties such as applicants for NRC licenses; LBP-09-10, 70 NRC 87 (2009)

Fed. R. Civ. P. 11(b)
representations of a summary disposition movant are described; LBP-09-22, 70 NRC 652 (2009)

Fed. R. Civ. P. 16(b)(5)
scheduling orders are to include provisions for disclosure of electronically stored information; LBP-09-22, 70 NRC 644 n.16 (2009)

Fed. R. Civ. P. 26(a)(2)
each expert witness is required to create, sign, and submit a written expert report; LBP-09-30, 70 NRC 1047 (2009)

Fed. R. Civ. P. 26(b)(2)(B)
parties need not provide discovery of electronically stored information from sources that the party identifies as not reasonably accessible because of undue burden or cost; LBP-09-22, 70 NRC 644 n.16 (2009)

Fed. R. Civ. P. 49
a special verdict is one where the jury answers specific questions submitted to it, thus enabling the court to determine the theory underlying the conviction; LBP-09-24, 70 NRC 722, 811 n.2 (2009)

Fed. R. Civ. P. 56(f)
if it appears from the affidavits of a party opposing a motion for summary disposition or other dispositive motion that the opposing party cannot, for reasons stated, present by affidavit facts essential to justify the party's opposition, the board may refuse the application for summary disposition or may order a continuance as may be necessary or just; LBP-09-22, 70 NRC 653 (2009)

LEGAL CITATIONS INDEX

OTHERS

Jonathan L. Marcus, *Model Penal Code Section 2.02(7) and Willful Blindness,* 102 Yale L.J. 2231, 2239 (1993)

deliberate ignorance is materially different from negligence and recklessness, because the latter two theories require a consciousness of something far less than probability; LBP-09-24, 70 NRC 819 (2009)

Jonathan L. Marcus, *Model Penal Code Section 2.02(7) and Willful Blindness,* 102 Yale L.J. 2231, 2239 n.40 (1993)

courts generally refer to actual knowledge as knowledge derived from direct evidence, whereas knowledge based on the deliberate ignorance theory is derived from circumstantial evidence; LBP-09-24, 70 NRC 819-20 (2009)

Model Penal Code § 2.02(7) (1962)

when knowledge of the existence of a particular fact is an element of an offense, such knowledge is established if a person is aware of a high probability of its existence, unless he actually believes that it does not exist; LBP-09-24, 70 NRC 817, 818 (2009)

Model Rules of Prof'l Conduct R. 3.3 (2009)

ethics rules in most jurisdictions require, and the board expects, that counsel will promptly correct statements of material fact that are no longer true; LBP-09-28, 70 NRC 1023 n.19 (2009)

Oliver Wendell Holmes, Jr., *The Common Law* 1 (1881)

the life of the law has not been logic, it has been experience; LBP-09-24, 70 NRC 719 (2009)

1A Sutherland, Statutory Construction § 31.06 (4th ed. 1984)

interpretation of any regulation must begin with the language and structure of the provision itself; LBP-09-15, 70 NRC 215 (2009)

2A Sutherland, Statutory Construction § 46.06 (4th ed. 1984)

in interpreting any regulation, the entirety of the provision must be given effect; LBP-09-15, 70 NRC 215 (2009)

Webster's Third New International Dictionary (Unabridged) (1993)

a "claim" is an assertion, statement, or implication; LBP-09-30, 70 NRC 1048 (2009)

SUBJECT INDEX

ABEYANCE OF CONTENTION
a contention asserting omissions from the combined license application that is not admissible need not be referred to the Staff and held in abeyance; LBP-09-10, 70 NRC 51 (2009)
for a contention to be held in abeyance, it must otherwise be admissible; LBP-09-18, 70 NRC 385 (2009)
ABEYANCE OF PROCEEDING
request that a combined license application be held in abeyance until the design certification is completed must be denied; LBP-09-18, 70 NRC 385 (2009)
ACCIDENTS
if chelating agents are to be comingled in radioactive waste liquids or used to mitigate an accidental release, then they have to be specifically accounted for in the dose analyses; LBP-09-19, 70 NRC 433 (2009)
low probability is the key to applying NEPA's rule-of-reason test to contentions that allege that a specified accident scenario presents a significant environmental impact that must be evaluated; LBP-09-26, 70 NRC 939 (2009)
See also Design Basis Accident
ACCIDENTS, LOSS-OF-COOLANT
in applicant's safety assessment, the fission product releases in question are associated with accidents that have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-19, 70 NRC 433 (2009)
ACCIDENTS, SEVERE
a contention challenging the absence in the environmental report of consideration of impacts from a severe radiological accident at one unit on other colocated units is admitted; LBP-09-17, 70 NRC 311 (2009)
analysis of the postulated fission product release must be performed to evaluate the offsite radiological consequences of an accident; LBP-09-19, 70 NRC 433 (2009)
early site permit applicants must submit a safety assessment that includes an analysis of a fission product release from an accident, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-19, 70 NRC 433 (2009)
in applicant's safety assessment, the fission product releases in question are associated with accidents that have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-19, 70 NRC 433 (2009)
individuals located at the boundary of the exclusion area cannot be exposed to more than 25 rem total effective dose equivalent in any 2-hour period, and any individual located at the outer boundary of the low population zone cannot be exposed to more than 25 rem TEDE during the entire period of any radioactive release; LBP-09-19, 70 NRC 433 (2009)
NRC safety regulations require that the combined license application address the mitigation and potential consequences of a beyond-design-basis accident; LBP-09-10, 70 NRC 51 (2009)
substantial damage is done to the reactor core whether or not there are serious offsite consequences; LBP-09-19, 70 NRC 433 (2009)
the final safety analysis report of a combined license application must contain analysis of a severe accident involving a fission product release from the core into the containment including any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-10, 70 NRC 51 (2009)

the fission product release assumed for the final safety analysis report is based on a major accident assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-10, 70 NRC 51 (2009)
the safety analysis report component of an application for a Standard Design Certification must analyze and address the problem of extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products; LBP-09-10, 70 NRC 51 (2009)
this type of reactor accident is more severe than a design basis accident and results in substantial damage to the reactor core, whether or not there are serious offsite consequences; LBP-09-10, 70 NRC 51 (2009)
ADJUDICATORY PROCEEDINGS
collateral estoppel may be applied in administrative adjudicatory proceedings; LBP-09-24, 70 NRC 676 (2009)
if petitioners are dissatisfied with NRC's generic approach to a problem, their remedy lies in the rulemaking process, not in adjudication; LBP-09-18, 70 NRC 385 (2009)
NRC shall conduct a single hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment facility; CLI-09-15, 70 NRC 1 (2009)
the scope of proceedings is specified by the Notice of Hearing; LBP-09-25, 70 NRC 867 (2009)
with respect to a prosecutor's role, government lawyers should understand and follow the venerable maxim that the government wins when justice is done; LBP-09-24, 70 NRC 676 (2009)
See also Abeyance of Proceeding; Combined License Proceedings; Delay of Proceeding; Early Site Permit Proceedings; Enforcement Proceedings; Materials License Proceedings; Materials License Renewal Proceedings; Uranium Enrichment Facility Proceedings
ADVISORY OPINIONS
because NRC is not subject to the jurisdictional limitations placed on federal courts by the case or controversy provision in Article III of the Constitution, there is no insuperable barrier to its rendition of an advisory opinion on issues that have been indisputably mooted by events occurring subsequent to a licensing board decision; LBP-09-15, 70 NRC 198 (2009)
AFFIDAVITS
authorization for organizational representation is to be filed with specific reference to the proceeding in which standing is sought and petitioners given the opportunity to cure such defects in their affidavits; LBP-09-13, 70 NRC 168 (2009)
for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion, but must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-27, 70 NRC 992 (2009)
if it appears from the affidavits of a party opposing a motion for summary disposition or other dispositive motion that the opposing party cannot, for reasons stated, present by affidavit, facts essential to justify the party's opposition, the board may refuse the application for summary disposition or may order a continuance as may be necessary or just; LBP-09-22, 70 NRC 640 (2009)
representational standing will not be granted where petitioner has provided no supporting affidavits or other evidence that any member has authorized it to represent their interests in the proceeding; LBP-09-28, 70 NRC 1019 (2009)
written testimony shall be under oath or by an affidavit so that it is suitable for being received into evidence directly, in exhibit form; LBP-09-22, 70 NRC 640 (2009)
AGING MANAGEMENT
if the cumulative usage factor environmental metal fatigue analysis produces a value of greater than unity, then the analysis indicates that the component would be likely to develop metal fatigue cracks that might affect their function during the 20-year license renewal period of extended operation, and thus requires an aging management program; LBP-09-9, 70 NRC 41 (2009)
AIRCRAFT CRASHES
although analysis of aircraft impact is required, reactors whose construction permits were issued prior to July 13, 2009, are excluded, and the rule is not NEPA-based; LBP-09-26, 70 NRC 939 (2009)
ALARA
a combined license application must include a description of equipment and measures taken to ensure that any exposures to radioactive materials such as low-level radioactive waste are kept as low as reasonably

achievable, including a description of the provisions for storage of solid waste containing radioactive materials; LBP-09-10, 70 NRC 51 (2009)
for applications filed after January 2, 1971, applicant must identify design objectives and means to maintain levels of radioactive effluents as low as is reasonably achievable; LBP-09-19, 70 NRC 433 (2009)
licensee must use procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable; CLI-09-16, 70 NRC 33 (2009)
AMENDMENT
See License Amendments
AMENDMENT OF CONTENTIONS
an amended or new contention must be submitted in a timely fashion based on the availability of the subsequent information; LBP-09-27, 70 NRC 992 (2009)
by definition, contentions admitted under 10 C.F.R. 2.309(f)(2)(i)-(iii) are timely because they are founded on material new information that was not available at the time when the petition was initially due; LBP-09-10, 70 NRC 51 (2009)
contentions may be filed after the initial 60-day deadline if petitioner shows that the information on which the amended or new contention is based was not previously available and is materially different than information previously available; and the amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information; LBP-09-26, 70 NRC 939 (2009)
for timely new or amended contentions, the pleading shall include a motion for leave to file the contention showing that it satisfies 10 C.F.R. 2.309(f)(1); LBP-09-22, 70 NRC 640 (2009)
if a combined license application is amended or material new information subsequently becomes available, petitioners must be given a fair opportunity to file new or amended contentions challenging these changes; LBP-09-10, 70 NRC 51 (2009)
if new information becomes available in the course of waste confidence rulemaking proceedings that contravenes the combined license application, petitioner may file a motion to admit a new or amended contention; LBP-09-18, 70 NRC 385 (2009)
petitioner must demonstrate that the information upon which the amended contention is based was not previously available and is materially different from information previously available, and that the amended contention has been submitted in a timely fashion; LBP-09-26, 70 NRC 939 (2009); LBP-09-27, 70 NRC 992 (2009)
petitions and contentions filed after the initial 60-day deadline are admissible only upon a balancing of eight factors of 10 C.F.R. 2.309(c); LBP-09-26, 70 NRC 939 (2009)
the filing of new or amended contentions based on new information is permitted if sufficient justification is provided; LBP-09-15, 70 NRC 198 (2009)
the standard for amendment of a contention is whether the information was available to the public, not whether the petitioner has recently found it; LBP-09-26, 70 NRC 939 (2009)
to be admitted in a proceeding, a new contention must meet the new or amended contention requirements as well as the general contention admissibility requirements; LBP-09-9, 70 NRC 41 (2009)
where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by the Staff in a draft EIS, intervenors must timely file a new or amended contention that addresses the factors in section 2.714(b) in order to raise specific challenges regarding the new information; LBP-09-27, 70 NRC 992 (2009)
AMENDMENT OF HEARING REQUESTS
licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing; LBP-09-18, 70 NRC 385 (2009)
ANTITRUST REVIEW
an enrichment facility is not a production or utilization facility and, therefore, NRC does not have antitrust responsibilities for it; CLI-09-15, 70 NRC 1 (2009)
APPEALS
a court inclined to apply collateral estoppel based on a judgment that is subject to appeal may want to avoid the question by staying the case pending the appeal; LBP-09-24, 70 NRC 676 (2009)
any appeal by petitioners of the admitted contentions must abide the end of the case, i.e., wait approximately 2 or 3 years until the Staff issues the final safety evaluation report and final

environmental impact statement and the final disposition of the evidentiary hearing on the three admitted contentions; LBP-09-10, 70 NRC 51 (2009)
care should be taken in dealing with judgments that are final, but still subject to direct review, so as to avoid the risks of denying relief on the basis of a judgment that is subsequently overturned; LBP-09-24, 70 NRC 676 (2009)
pendency of an appeal need not preclude reliance on the lower court's decision being appealed to estop relitigation of the same matter in another forum; LBP-09-24, 70 NRC 676 (2009)
potentially duplicative and unnecessary litigation in the second forum does not take place while an appeal is pending, but if the appeal later proves successful, thus invalidating the original judgment upon which collateral estoppel had been based, then the litigation in the second forum is allowed to proceed; LBP-09-24, 70 NRC 676 (2009)
the Commission defers to a board's rulings on standing unless the appeal points to an error of law or abuse of discretion; CLI-09-22, 70 NRC 932 (2009)
the pendency of an appeal has no effect on the finality or binding effect of a trial court's holding; LBP-09-24, 70 NRC 676 (2009)
there is an automatic right to appeal a licensing board standing and contention admissibility decision on the issue of whether the request for hearing or petition to intervene should have been wholly denied; CLI-09-22, 70 NRC 932 (2009)
APPEALS, INTERLOCUTORY
petitioners may request, and the Commission, in its discretion, may grant interlocutory review if it is shown that the issue threatens petitioners with immediate and serious irreparable impacts or affects the basic structure of the proceeding in a pervasive manner; LBP-09-10, 70 NRC 51 (2009)
See also Review, Interlocutory
APPELLATE REVIEW
a standing ruling in one proceeding is not dispositive of a determination in another proceeding with the same petitioner because the ruling was not the subject of appellate review; LBP-09-18, 70 NRC 385 (2009)
an exception to the general policy limiting interlocutory review permits an appeal of a board's ruling on contention admissibility when a board grants a petition to intervene following consideration of the full petition; CLI-09-18, 70 NRC 859 (2009)
filing of a petition for review is mandatory for a party to exhaust its administrative remedies before seeking judicial review; LBP-09-9, 70 NRC 41 (2009)
initial decisions are not effective until they are reviewed by the Commission; LBP-09-19, 70 NRC 433 (2009)
the Commission gives substantial deference to a board's rulings on contention admissibility in the absence of clear error or abuse of discretion; CLI-09-16, 70 NRC 33 (2009); CLI-09-20, 70 NRC 911 (2009)
the section 2.341(a)(2) sua sponte review process that applies to a licensing board determination approving a settlement agreement affords the Commission the opportunity to correct any participant or board misapprehensions regarding the items contemplated in the settlement agreement; LBP-09-23, 70 NRC 659 (2009)
to be appealable, a disputed order must dispose of the entire petition so that a successful appeal by a nonpetitioner will terminate the proceeding as to the appellee petitioner; CLI-09-18, 70 NRC 859 (2009)
where intervenors have filed new contentions based on a supplement to the COL application, in advance of a full board ruling on the original contentions, no appeal lies until the board acts on all contentions, both the original and the newly filed ones; CLI-09-18, 70 NRC 859 (2009)
with respect to an applicant's appeal, applicant must contend that, after considering all pending contentions, the board has erroneously granted a hearing to the petitioner; CLI-09-18, 70 NRC 859 (2009)
APPLICANTS
the National Environmental Policy Act applies only to NRC and not to the applicant; LBP-09-10, 70 NRC 51 (2009)
the proponent of the license bears the burden of proof; LBP-09-10, 70 NRC 51 (2009)
to demonstrate financial qualification, applicant for a combined license must show that it possesses funds or has reasonable assurance of obtaining funds necessary to cover estimated construction and fuel cycle costs; LBP-09-10, 70 NRC 51 (2009)

with respect to an applicant's appeal, applicant must contend that, after considering all pending contentions, the board has erroneously granted a hearing to the petitioner; CLI-09-18, 70 NRC 859 (2009)
ATOMIC ENERGY ACT
an affirmative finding by the Commission that issuance of a license for a uranium enrichment facility will not be inimical to the common defense and security is required; CLI-09-15, 70 NRC 1 (2009)
analysis of compliance with section 103d of the Atomic Energy Act is a function performed by the NRC Staff as part of its evaluation of the combined license application; CLI-09-20, 70 NRC 911 (2009)
creditor interests are created in equipment, devices, or important parts thereof, capable of separating the isotopes of uranium or enriching uranium in the isotope U-235; CLI-09-15, 70 NRC 1 (2009)
creditor regulations may be augmented by license conditions as necessary to allow ownership arrangements, such as sale and leaseback, provided it can be found that such arrangements are not inimical to the common defense and security of the United States; CLI-09-15, 70 NRC 1 (2009)
in ruling on petitioner's standing, boards should consider the nature of petitioner's right under the Atomic Energy Act or the National Environmental Policy Act to be made a party to the proceeding, the nature and extent of petitioner's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest; LBP-09-13, 70 NRC 168 (2009)
no license may be issued to an 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-09-20, 70 NRC 911 (2009)
NRC must provide a hearing upon the request of any person whose interest may be affected by the proceeding; CLI-09-20, 70 NRC 911 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009)
NRC shall conduct a hearing on each application under 42 U.S.C. 2133 or 2134(b) for a construction permit for a facility; LBP-09-19, 70 NRC 433 (2009)
NRC shall conduct a single adjudicatory hearing on the record with regard to the licensing of the construction and operation of a uranium enrichment facility; CLI-09-15, 70 NRC 1 (2009)
severe accident mitigation alternatives analysis must be site specific and given careful consideration in order to comply with safety requirements; LBP-09-10, 70 NRC 51 (2009)
BURDEN OF PERSUASION
absent an obvious potential for harm, it is a petitioner's burden to show how harm will or may occur; LBP-09-28, 70 NRC 1019 (2009)
boards may appropriately view petitioners' support for contentions in a light favorable to petitioners, but it is petitioners' burden to establish the admissibility of a contention; LBP-09-17, 70 NRC 311 (2009)
in source materials cases, petitioner has the burden to show a specific and plausible means of how proposed license activities may affect him or her; LBP-09-13, 70 NRC 168 (2009)
BURDEN OF PROOF
although the contention admissibility rule imposes on a petitioner the burden of going forward with a sufficient factual basis, it does not shift the ultimate burden of proof from the applicant to the petitioner; LBP-09-27, 70 NRC 992 (2009)
applicant, as the proponent of the license, bears the burden of proof; LBP-09-10, 70 NRC 51 (2009)
in addition to having the burden on immediate effectiveness, the target of an enforcement order is expected to address the merits at the immediate effectiveness review as well; LBP-09-24, 70 NRC 676 (2009)
NRC Staff's role in an enforcement proceeding is akin to that of a prosecutor, and it has the burden to prove its allegations by a preponderance of the reliable, probative, and substantial evidence; LBP-09-24, 70 NRC 676 (2009)
to prevail in establishing that the accused's actions constituted a violation, Staff must demonstrate by a preponderance of the evidence that the accused had actual knowledge of the information associated with his actions and that he deliberately acted contrary to that knowledge; LBP-09-24, 70 NRC 676 (2009)
CANCER
releases from the nuclear fuel cycle in general, incidences of childhood cancers near nuclear power plants, and a request for the NRC to address radioactive releases from the burning of coal at fossil fuel plants are outside the scope of a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)

SUBJECT INDEX

CASE MANAGEMENT
- allowing discovery or an evidentiary hearing with respect to safety-related issues to proceed before the final safety evaluation report is issued will serve to further the Commission's objective to ensure a fair, prompt, and efficient resolution of contested issues; CLI-09-15, 70 NRC 1 (2009)
- although a presiding officer should issue a separate partial initial decision regarding a limited work authorization request, the board finds no practical or logical basis for separating its consideration of the adequacy of the LWA request from its determination regarding the early site permit with which it is associated; LBP-09-19, 70 NRC 433 (2009)
- an initial scheduling order is designed to ensure proper case management; LBP-09-22, 70 NRC 640 (2009)
- boards have an obligation to establish a case scheduling order, and to advise the Commission of any significant delay in meeting major activities set forth in the hearing schedule; CLI-09-17, 70 NRC 309 (2009)
- boards have the duty to conduct a fair and impartial hearing according to law, to take appropriate action to control the prehearing and hearing process, to avoid delay, and to maintain order; LBP-09-22, 70 NRC 640 (2009)
- if the board concludes that it has no questions for any witness concerning a particular contention, it will so advise the parties and will resolve that contention; LBP-09-22, 70 NRC 640 (2009)
- in addressing a petition for a rule waiver, the board, in lieu of holding oral argument to obtain answers to its questions, poses questions for NRC Staff about the waiver petition; LBP-09-29, 70 NRC 1028 (2009)
- the initial scheduling order is to be issued within 55 days of the board decision granting intervention and admitting contentions; LBP-09-22, 70 NRC 640 (2009)
- the licensing board shall not entertain motions for summary disposition in a uranium enrichment facility proceeding unless the board finds that such motions, if granted, are likely to expedite the proceeding; CLI-09-15, 70 NRC 1 (2009); LBP-09-22, 70 NRC 640 (2009)
- to avoid unnecessary delays in a uranium enrichment facility proceeding, the licensing board should not routinely grant requests for extensions of time and should manage the schedule such that the overall hearing process is completed within 28-1/2 months; CLI-09-15, 70 NRC 1 (2009)

CASE OR CONTROVERSY
- a justiciable controversy must involve adverse parties representing a true clash of interests and the questions raised must be presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-09-25, 70 NRC 867 (2009)
- although the Commission is not strictly bound by the mootness doctrine, the agency's adjudicatory tribunals have generally adhered to the principle; LBP-09-15, 70 NRC 198 (2009)
- the business of federal courts is restricted to questions presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-09-14, 70 NRC 193 (2009)
- the mootness doctrine derives from the Constitution's limitation of federal courts' jurisdiction to cases or controversies; LBP-09-15, 70 NRC 198 (2009)
- this requirement of Article III is rooted in the separation of powers; LBP-09-15, 70 NRC 198 (2009)
- when a federal court dismisses a claim as moot and avoids any further consideration of the merits of that claim, it does so because the claim no longer satisfies the case or controversy requirement of Article III; LBP-09-15, 70 NRC 198 (2009)

CERTIFICATION
- applicant, 2 years before and 1 year before the scheduled date for the initial fuel loading, shall submit a report to NRC containing a certification updating the financial information, including a copy of the financial instrument to be used; LBP-09-18, 70 NRC 385 (2009)
- for combined license applications, the report must contain a certification that financial assurance for decommissioning will be provided no later than 30 days after the Commission publishes notice in the *Federal Register* of the initial fuel load; LBP-09-18, 70 NRC 385 (2009)
- if applicant chooses to submit a complete and integrated emergency plan at the early site permit stage, applicant also is required to make a good-faith effort to obtain a certification from federal, state, and local governmental agencies with emergency planning responsibilities; LBP-09-19, 70 NRC 433 (2009)

licensing boards must promptly certify to the Commission all novel legal or policy issues that would benefit from early Commission consideration; CLI-09-15, 70 NRC 1 (2009)
motions will be rejected if they do not include certification by the attorney or representative of the moving party that they have made a sincere effort to contact the other parties in the proceeding, to explain to them the factual and legal issues raised in the motion, and to resolve those issues; LBP-09-22, 70 NRC 640 (2009)
See also Design Certification
CLASSIFIED INFORMATION
all decisions on questions of classification or declassification of information shall be made by appropriate classification officials in the NRC and are not subject to *de novo* review; CLI-09-15, 70 NRC 1 (2009)
guidance governing the classification of information related to the design, construction, operation, and safeguarding of a uranium enrichment facility is described; CLI-09-15, 70 NRC 1 (2009)
persons needing access to classified portions of a uranium enrichment facility license application will be required to have the appropriate security clearance for the level of classified information to which access is required; CLI-09-15, 70 NRC 1 (2009)
CLIMATE CHANGE
contention alleging that the environmental report failed to address the alleged greenhouse gas and global climate disruption impacts resulting from prematurely killing trees is inadmissible; LBP-09-10, 70 NRC 51 (2009)
COLLATERAL ESTOPPEL
a court inclined to apply collateral estoppel based on a judgment that is subject to appeal may want to avoid the question by staying the case pending the appeal; LBP-09-24, 70 NRC 676 (2009)
a party's failure to advance a collateral estoppel argument does not perforce trigger the waiver principle, thus precluding a tribunal from applying collateral estoppel; LBP-09-24, 70 NRC 676 (2009)
a tribunal, when considering the applicability of collateral estoppel, may not look behind the decision to determine whether its findings of fact and conclusions of law were well founded; LBP-09-24, 70 NRC 676 (2009)
an exception to the application of collateral estoppel occurs when broad public policy considerations or special public interest factors are involved such that an agency's need for flexibility outweighs the reasons underlying this repose doctrine so as to favor relitigation of a particular issue; LBP-09-24, 70 NRC 676 (2009)
application is appropriate in administrative adjudicatory proceedings; LBP-09-24, 70 NRC 676 (2009)
boards have some leeway to consider the existence of other factors that could outweigh the jurisprudential reasons for applying the doctrine; LBP-09-24, 70 NRC 676 (2009)
pendency of an appeal need not preclude reliance on the lower court's decision being appealed to estop relitigation of the same matter in another forum; LBP-09-24, 70 NRC 676 (2009)
potentially duplicative and unnecessary litigation in the second forum does not take place while an appeal is pending, but if the appeal later proves successful, thus invalidating the original judgment upon which collateral estoppel had been based, then the litigation in the second forum is allowed to proceed; LBP-09-24, 70 NRC 676 (2009)
questions over the equivalence of the "knowledge" standard that governed the jury and the standard applicable in the administrative proceeding can lead a board to exercise its discretion not to apply collateral estoppel; LBP-09-24, 70 NRC 676 (2009)
the doctrine is grounded on considerations of economy of judicial time and the public policy favoring the establishment of certainty in legal relations; LBP-09-24, 70 NRC 676 (2009)
the doctrine promotes the compelling public interest in preserving the acceptability of judicial dispute resolution against the corrosive disrespect that would follow if the same matter were twice litigated to inconsistent results; LBP-09-24, 70 NRC 676 (2009)
the possibility that the jury verdict was internally inconsistent can lead a board to exercise its discretion not to apply collateral estoppel; LBP-09-24, 70 NRC 676 (2009)
this form of issue preclusion prevents the relitigation of issues of law or fact that have been finally adjudicated by a tribunal of competent jurisdiction in a proceeding involving the same parties or their privies; LBP-09-24, 70 NRC 676 (2009)

to determine whether to apply collateral estoppel to a general verdict, a trial judge is to examine the record of the prior trial in detail to see if the jury might have disbelieved some aspects of the acts charged; LBP-09-24, 70 NRC 676 (2009)
to preclude the relitigation of an issue, four factors must be present; LBP-09-24, 70 NRC 676 (2009)
where all factors are met, the application of collateral estoppel by the subsequent tribunal is to some degree a discretionary matter; LBP-09-24, 70 NRC 676 (2009)
where the impact of delay is a concern, the desirability of avoiding any further delay in reaching a final merits determination can be a key discretionary factor counseling nonreliance upon the collateral estoppel principle, even if that doctrine otherwise appeared applicable; LBP-09-24, 70 NRC 676 (2009)
COLOCATED UNITS
a contention challenging the absence in the environmental report of consideration of impacts from a severe radiological accident at one unit on other colocated units is admitted; LBP-09-17, 70 NRC 311 (2009)
COMBINED LICENSE APPLICATION
a challenge to applicant's site-specific measurements of adsorption and retention coefficients relative to hydrological radionuclide transport is an admissible contention; LBP-09-16, 70 NRC 227 (2009)
a contention asserting that the COLA is incomplete because it incorporates by reference a standard design certification and a pending application for a revision to that certified design is inadmissible; LBP-09-10, 70 NRC 51 (2009)
a description of equipment and measures taken to ensure that any exposures to radioactive materials such as low-level radioactive waste are kept as low as reasonably achievable, including a description of the provisions for storage of solid waste containing radioactive materials is required; LBP-09-10, 70 NRC 51 (2009)
a license application will not be held in abeyance until the design certification rulemaking is completed; LBP-09-16, 70 NRC 227 (2009)
a report must be included that indicates how reasonable assurance will be provided that funds will be available to decommission the facility; LBP-09-18, 70 NRC 385 (2009)
agencies are to exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals; LBP-09-10, 70 NRC 51 (2009)
although petitioners need to explain how or why they disagree with statements in the application or environmental report, there is no presumption that statements and assessments in the application or ER are correct or accurate; LBP-09-10, 70 NRC 51 (2009)
an application's lack of consideration of any alternative to offsite disposal of low-level radioactive waste is a material issue for litigation; LBP-09-18, 70 NRC 385 (2009)
analysis of compliance with section 103d of the Atomic Energy Act is a function performed by the NRC Staff as part of its evaluation of the COLA; CLI-09-20, 70 NRC 911 (2009)
applicant for a construction permit or a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
applicant may not define the objectives of its action in terms so unreasonably narrow that only one alternative would accomplish the applicant's goals because this would make the agency's EIS alternatives analysis a foreordained formality; LBP-09-10, 70 NRC 51 (2009)
applicant may reference a design certification that the Commission has docketed but not granted; LBP-09-16, 70 NRC 227 (2009)
applicant may reference both an early site permit and a standard design certification in its application; LBP-09-19, 70 NRC 433 (2009)
applicant must include the proposed inspections, tests, and analyses, including those applicable to emergency planning, to be performed and the acceptance criteria that are necessary and sufficient to support the Commission's finding that a COL can be granted; LBP-09-19, 70 NRC 433 (2009)
applicant should explain its current plan for management of low-level radioactive waste, given the lack of an offsite disposal facility, and the potential environmental impact of retaining LLRW at the reactor site for an extended period; LBP-09-16, 70 NRC 227 (2009); LBP-09-27, 70 NRC 992 (2009)

applicants are to consider long-term onsite low-level radioactive waste storage, but 10 C.F.R. 52.79(a)(3) sets no quantity or time restrictions relative to onsite storage of such waste; CLI-09-16, 70 NRC 33 (2009)
applicant's environmental report is required to analyze the alternatives available for reducing or avoiding adverse environmental effects; LBP-09-10, 70 NRC 51 (2009)
applicants must submit a decommissioning report containing a certification that the funding assurance will be provided no later than 30 days after the NRC publishes notice in the *Federal Register* of its scheduled date for initial fuel loading; LBP-09-18, 70 NRC 385 (2009); LBP-09-21, 70 NRC 581 (2009)
at the time the COLA is submitted, it must identify the method of decommissioning funding assurance that the applicant proposes to use and to show that the method complies with any applicable financial test; LBP-09-18, 70 NRC 385 (2009)
because the environmental report is the only environmental document available when NRC issues its notice of opportunity to request a hearing, all initial contentions necessarily focus on the adequacy of the applicant's ER, but the public will have a new opportunity to file environmental contentions when the NRC Staff issues the environmental impact statement or environmental analysis; LBP-09-10, 70 NRC 51 (2009)
because the requirement of 10 C.F.R. 50.75(b)(3) applies to the amount of financial assurance specified in the decommissioning report, it is readily apparent that the report must explain how that requirement will be fulfilled; LBP-09-15, 70 NRC 198 (2009)
challenges to the Commission regulations regarding the design certification process are inadmissible; LBP-09-18, 70 NRC 385 (2009)
each environmental report must take Table S-3 as the basis for evaluating the contribution of the environmental effects of the fuel cycle to the environmental costs of licensing the reactor; CLI-09-21, 70 NRC 927 (2009)
electric utilities need not include operating and maintenance costs in their demonstration of financial qualifications; LBP-09-10, 70 NRC 51 (2009)
emergency planning information for the emergency planning zone, generally consisting of an area with a 10-mile radius from the proposed reactor, must be included; LBP-09-10, 70 NRC 51 (2009)
environmental reports and environmental impact statements must include an assessment of all environmental impacts and alternatives, even though NRC has no jurisdiction to regulate such impacts or jurisdiction to impose such alternatives; LBP-09-10, 70 NRC 51 (2009)
focus of a contention must be on the COLA as it exists when the contention is filed and must point out an omission or deficiency with regard to the application as of that moment in time; LBP-09-10, 70 NRC 51 (2009)
if a COLA is amended or material new information subsequently becomes available, petitioners must be given a fair opportunity to file new or amended contentions challenging these changes; LBP-09-10, 70 NRC 51 (2009)
if new information becomes available in the course of waste confidence rulemaking proceedings that contravenes the COLA, petitioner may file a motion to admit a new or amended contention; LBP-09-18, 70 NRC 385 (2009)
if the application references an early site permit, applicant must demonstrate that the chosen design falls within the parameters specified in the ESP or, on the safety side, request a variance; LBP-09-19, 70 NRC 433 (2009)
if the environmental impact of mining activities is potentially significant, then the failure of the environmental report to disclose the location of the offsite mine does not immunize it from being the subject of a legitimate contention; LBP-09-10, 70 NRC 51 (2009)
including language deferring the obligation that would otherwise apply to COL applicants in 10 C.F.R. 50.75(b)(4), but including no equivalent provision in section 50.75(b)(3), confirms that the Commission did not intend to defer the requirement of section 50.75(b)(3) until after the license is issued; LBP-09-15, 70 NRC 198 (2009)
information in the form of a report, as described in 10 C.F.R. 50.75, indicating how reasonable assurance will be provided that funds will be available to decommission the facility must be included; LBP-09-15, 70 NRC 198 (2009)

information on kinds and quantities of materials expected to be produced during plant operation and the means for controlling and limiting radioactive effluents and radiation exposures to comply with Part 20 limits must be included; CLI-09-16, 70 NRC 33 (2009)
information required in a COLA by section 52.79(a)(3) is largely dependent on the individual applicant's plans; LBP-09-27, 70 NRC 992 (2009)
NRC is required to consider measures to mitigate the environmental impacts of the project; LBP-09-10, 70 NRC 51 (2009)
NRC safety regulations require that applicant address the mitigation and potential consequences of a severe accident; LBP-09-10, 70 NRC 51 (2009)
NRC Staff issuance of a request for additional information does not alone establish deficiencies in an application, and intervention petitioner must do more than merely quote an RAI to justify admission of a contention; CLI-09-16, 70 NRC 33 (2009); LBP-09-10, 70 NRC 51 (2009)
Part 51 does not authorize NRC to regulate or enforce compliance with all other environmental laws and regulations; LBP-09-10, 70 NRC 51 (2009)
petitioner is obligated to read the pertinent portions of the license application, state the applicant's position and the petitioner's opposing view, and explain why it disagrees with the applicant; LBP-09-25, 70 NRC 867 (2009)
petitioners' claim that applicant must pursue the prepayment method for decommissioning conflicts with NRC guidance and rules and so is outside the permissible scope of the COL proceeding; LBP-09-21, 70 NRC 581 (2009)
reasonable assurance of adequate decommissioning funding must be provided, and this assurance must identify the method or methods of funding the applicant plans to use, and the assurance must provide the information required by 10 C.F.R. 50.75(e)(1)(iii)(B) if applicant plans to use a parent company guarantee; LBP-09-15, 70 NRC 198 (2009)
reference to an early site permit must include a safety analysis report that either includes or incorporates by reference the ESP site safety analysis report and that contains additional information and analyses sufficient to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the ESP; LBP-09-19, 70 NRC 433 (2009)
section 2.309(f)(1)(vi) is not a second hurdle of materiality that an intervenor must meet, but rather requires that intervenor identify the specific parts of the COLA that it disputes and show that resolution of those disputes is material to the licensing decision; LBP-09-27, 70 NRC 992 (2009)
severe accident mitigation alternatives analysis must be site specific and given careful consideration in order to comply with the Atomic Energy Act and the National Environmental Policy Act; LBP-09-10, 70 NRC 51 (2009)
the environmental report is required to address a list of environmental considerations that correspond to the environmental considerations that NEPA § 102(2)(C)(i)-(v) requires the agency to address in the environmental impact statement; LBP-09-16, 70 NRC 227 (2009)
the environmental report shall discuss the impacts of the proposed action on the environment in proportion to their significance; LBP-09-25, 70 NRC 867 (2009)
the fact that a COL is subject to, or even expected to, change does not make it legally deficient because NRC follows a dynamic licensing process; LBP-09-10, 70 NRC 51 (2009)
the final safety analysis report must contain analysis of a severe accident involving a fission product release from the core into the containment including any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-10, 70 NRC 51 (2009)
the requirement of Part 51 that the environmental report cover all significant environmental impacts associated with a project includes offsite as well as onsite impacts; LBP-09-10, 70 NRC 51 (2009)
the requirement that the designated amount of financial assurance be covered by an acceptable method arises concurrently with the requirement that the applicant submit a decommissioning report to NRC; LBP-09-15, 70 NRC 198 (2009)
when an applicant decides it no longer wishes to have the agency evaluate its application, the usual approach is for the applicant to request that the agency permit it to withdraw its licensing request; LBP-09-23, 70 NRC 659 (2009)
COMBINED LICENSE PROCEEDINGS
a decision dismissing the contested adjudication relating to a COL has no impact on the subsequent need to conduct a mandatory hearing relating to the COLA, over which the Commission would preside;

LBP-09-23, 70 NRC 659 (2009)
adequacy of applicant's control room and equipment design for radiological protections, in light of the fact that the reactor is proposed to be located within the EPZ of an existing reactor, is an issue that is appropriate in a combined license or standard design certification proceeding; LBP-09-10, 70 NRC 51 (2009)
assertion that applicant might need to obtain a Part 72 license is irrelevant, because a grant of the COL could be accompanied by grant of a Part 72 general license if the applicant complies with certain conditions; LBP-09-21, 70 NRC 581 (2009)
assertions that building two new nuclear reactors in a troubled economy is fiscally irresponsible is outside the scope the proceeding; LBP-09-10, 70 NRC 51 (2009)
claims related to the decommissioning of the facility are not currently ripe for review and are outside the scope of the proceeding; LBP-09-16, 70 NRC 227 (2009)
contention alleging that the environmental report failed to address the alleged greenhouse gas and global climate disruption impacts resulting from prematurely killing trees is inadmissible; LBP-09-10, 70 NRC 51 (2009)
contention alleging that the threatened eastern fox snake inhabits the nuclear plant site and that construction activities for the new reactor will kill snakes, destroy their habitat, and might eliminate them from the area is within the scope of the proceeding; LBP-09-16, 70 NRC 227 (2009)
contention that concerns onsite and offsite impacts of active and passive dewatering associated with the proposed project satisfies the admissibility criteria; LBP-09-10, 70 NRC 51 (2009)
contentions on information a COL applicant should supply in order to satisfy NRC regulations regarding the safety of long-term storage of low-level radioactive waste are application-specific and thus would benefit from further development by the board and the parties; CLI-09-16, 70 NRC 33 (2009)
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 385 (2009)
controls other countries may impose on mining and milling, and the impacts of such activities, are outside the scope of the proceeding; LBP-09-17, 70 NRC 311 (2009)
even assuming arguendo that applicant might someday require a permit under Part 61 for a disposal facility, that issue is too speculative at the combined license stage and is therefore not material to the findings the NRC must make to support the action that is involved in the COL proceeding; LBP-09-27, 70 NRC 992 (2009)
if a combined license application references a design certification, then the presiding officer shall not admit a contention concerning severe accident design mitigation alternatives unless the contention demonstrates that the site characteristics fall outside the site parameters in the standard design certification; LBP-09-10, 70 NRC 51 (2009)
if applicant requests a Commission finding on the completion of inspections, tests, analyses, and acceptance criteria needed for issuance of a COL, the Commission is required to identify these ITAAC in the notice of hearing published in the *Federal Register* for the proceeding; LBP-09-19, 70 NRC 433 (2009)
items for which sufficient information is lacking at the early site permit stage of the licensing process may be subject to deferral for consideration at the combined license stage; LBP-09-19, 70 NRC 433 (2009)
low-level radioactive waste disposal contentions have been admitted when that issue was not sufficiently discussed in the applications and there was no mention of the closure of the Barnwell facility; LBP-09-18, 70 NRC 385 (2009)
only the management of Class B and Class C wastes is properly the subject of a contention in a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
Part 61 is inapplicable in a combined license proceeding because it applies only to land disposal facilities that receive waste from others, not to onsite facilities where licensee intends to store its own low-level radioactive waste; LBP-09-27, 70 NRC 992 (2009)
petitioners' concerns regarding applicant's commitments to relax conservatisms in its laboratory testing and groundwater release analysis are in regard to the revised analysis to be submitted in response to the Staff request for additional information and therefore are dismissed as outside the scope of the proceeding; LBP-09-16, 70 NRC 227 (2009)

portions of a contention that allege that the environmental report also failed to adequately address the zone of environmental impact, impact on listed species, and appropriate mitigation are admissible; LBP-09-10, 70 NRC 51 (2009)
questions of the safety and environmental impacts of onsite low-level waste storage are largely site- and design-specific and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions; LBP-09-10, 70 NRC 51 (2009)
questions of the safety and environmental impacts of onsite low-level waste storage are largely site- and design-specific, and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions; LBP-09-16, 70 NRC 227 (2009)
ratepayer impacts are outside the scope of the proceeding because the state, not the NRC, is charged with protecting ratepayers' interests; LBP-09-10, 70 NRC 51 (2009)
releases from the nuclear fuel cycle in general, incidences of childhood cancers near nuclear power plants, and a request for the NRC to address radioactive releases from the burning of coal at fossil fuel plants are outside the scope of the proceeding; LBP-09-16, 70 NRC 227 (2009)
request that a combined license application be held in abeyance until the design certification is completed must be denied; LBP-09-18, 70 NRC 385 (2009)
revenue decoupling is a state regulatory matter that is outside the scope of, and not material to, the NRC licensing process; LBP-09-10, 70 NRC 51 (2009)
Table S-3 does not include health effects from the effluents described in the table, and that issue may be the subject of litigation in individual licensing proceedings; LBP-09-16, 70 NRC 227 (2009)
the Commission may have more to offer regarding the need for a NEPA carbon footprint analysis in new reactor licensing proceedings; LBP-09-19, 70 NRC 433 (2009)
the environmental impacts related to storage of spent fuel under Part 72 have been generically evaluated under two previous rulemakings and the Commission's waste confidence proceedings, and thus need not be reassessed; LBP-09-21, 70 NRC 581 (2009)
the fact that disposal of dredged or fill material in wetlands is regulated by the Environmental Protection Agency and the U.S. Army Corps of Engineers does not render a contention inadmissible; LBP-09-10, 70 NRC 51 (2009)
the proximity presumption applies to hearings on combined licenses; LBP-09-16, 70 NRC 227 (2009)
the Waste Confidence Rule is applicable to all new reactor proceedings and contentions challenging the rule or seeking its reconsideration are inadmissible; LBP-09-18, 70 NRC 385 (2009)
whether other permits may be required from other agencies is outside the scope of NRC proceedings, and those concerns are properly raised before those respective permitting authorities; LBP-09-21, 70 NRC 581 (2009)
COMBINED LICENSES
a COL is issued for a period of 40 years; LBP-09-16, 70 NRC 227 (2009)
an opportunity for hearing will be provided in the *Federal Register* notice of fuel loading, regarding whether inspections, tests, or analyses that have not been found to have been met under 10 C.F.R. 52.97(a)(2) prior to issuance of the COL; LBP-09-19, 70 NRC 433 (2009)
any permit conditions imposed that are not met before a combined license referencing the early site permit is issued will attach to the COL; LBP-09-19, 70 NRC 433 (2009)
applicant must obtain the financial instrument for decommissioning funding and submit a copy to the Commission as provided in 10 C.F.R. 50.75(e)(3); LBP-09-15, 70 NRC 198 (2009)
applicant who may apply for a construction permit under Part 50, or a COL under Part 52, may apply for an early site permit; LBP-09-19, 70 NRC 433 (2009)
decommissioning plans are not required until the applicant files a post-shutdown decommissioning activities report, which is not due until 2 years before permanent cessation of operation; LBP-09-21, 70 NRC 581 (2009)
funding for financial assurance for decommissioning must be covered by prepayment, an external sinking fund, or a surety method, insurance, or other guarantee including a parent company guarantee; LBP-09-18, 70 NRC 385 (2009)
holder of a combined license must begin filing biannual reports on the status of decommissioning funding once the Commission has made a finding that all acceptance criteria in the license have been met; LBP-09-15, 70 NRC 198 (2009)

if licensee changes its method of decommissioning funding assurance, the new method will also have to pass any applicable financial test; LBP-09-15, 70 NRC 198 (2009)
no later than 1 year after issuance of the COL or at the start of construction, whichever is later, the COL licensee must submit its schedule for completing the inspections, tests, or analyses and provide schedule updates; LBP-09-19, 70 NRC 433 (2009)
Part 61 only applies to the land disposal of radioactive waste received from other persons and is therefore inapplicable to the issue of low-level waste generated and managed onsite at the nuclear power plant; LBP-09-10, 70 NRC 51 (2009)
the financial test for a parent company guarantee is a material issue because the Staff must decide whether the test is satisfied in order to grant the COL; LBP-09-15, 70 NRC 198 (2009)
the parent company guarantee is based on a financial test and may only be used if the guarantee and test are as contained in Appendix A to 10 C.F.R. Part 30; LBP-09-18, 70 NRC 385 (2009)
the purpose of the financial qualification requirements of 10 C.F.R. 50.33(f) is to ensure the protection of public health and safety and the common defense and security, not to evaluate the financial wisdom of the proposed project; LBP-09-10, 70 NRC 51 (2009)
the requirements of 10 C.F.R. 50.75 are intended to ensure that entities who construct and operate a nuclear power plant will have sufficient funds at the end of the operational life of the plant to complete the decommissioning of the plant; LBP-09-15, 70 NRC 198 (2009)
the Waste Confidence Rule covers the storage of spent fuel in new or existing facilities; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
to demonstrate financial qualification, applicant must show that it possesses funds or has reasonable assurance of obtaining funds necessary to cover estimated construction and fuel cycle costs; LBP-09-10, 70 NRC 51 (2009)
COMMON DEFENSE AND SECURITY
an affirmative finding by the Commission that issuance of a license for a uranium enrichment facility will not be inimical to the common defense and security is required; CLI-09-15, 70 NRC 1 (2009)
creditor regulations may be augmented by license conditions as necessary to allow ownership arrangements, such as sale and leaseback, provided it can be found that such arrangements are not inimical to the common defense and security of the United States; CLI-09-15, 70 NRC 1 (2009)
CONFIRMATORY ORDER
it is unlikely that petitioners will often obtain hearings on confirmatory enforcement orders because such orders presumably enhance rather than diminish public safety; LBP-09-20, 70 NRC 565 (2009)
CONSIDERATION OF ALTERNATIVES
a rule of reason governs the agency's duty to identify and consider all reasonable alternatives under the National Environmental Policy Act; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-26, 70 NRC 939 (2009)
a solely wind- or solar-powered facility could not satisfy a project's purpose of providing baseload power; LBP-09-17, 70 NRC 311 (2009)
agencies are required to exercise a degree of skepticism in dealing with self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
agencies are required to study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources and include a detailed statement of the alternatives to the proposed action in its environmental impact statement; LBP-09-10, 70 NRC 51 (2009); LBP-09-19, 70 NRC 433 (2009)
all reasonable alternatives to the site proposed for the early site permit are to be identified; LBP-09-19, 70 NRC 433 (2009)
although applicant's goals are given substantial weight, the National Environmental Policy Act does not allow applicant to define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
an agency cannot redefine the applicant's goals, and the environmental impact statement alternatives analysis should be based around the applicant's goals, including its economic goals; LBP-09-17, 70 NRC 311 (2009)

an environmental report and an environmental impact statement for a materials license must include a statement on the alternatives to the proposed action, including a discussion of the no-action alternative; CLI-09-15, 70 NRC 1 (2009)
an otherwise reasonable alternative will not be excluded from discussion in environmental impact statement solely on the ground that it is not within the jurisdiction of NRC; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
applicant is not obliged to examine general efficiency or conservation proposals that would do nothing to satisfy the particular project's goals of producing baseload power; LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)
applicant is required to evaluate only alternatives that support the purpose of the project; LBP-09-21, 70 NRC 581 (2009)
applicant may not define the objectives of its action in terms so unreasonably narrow that only one alternative would accomplish the applicant's goals because this would make the agency's EIS alternatives analysis a foreordained formality; LBP-09-10, 70 NRC 51 (2009)
applicant's environmental report must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-09-19, 70 NRC 433 (2009)
applicant's initial consideration of DOE's Portsmouth, Ohio, and SRS sites as alternative sites was reasonable as part of its alternative site analysis for an early site permit; LBP-09-19, 70 NRC 433 (2009)
because petitioners fail to create a genuine issue, the board need not resolve whether applicant's purpose is unreasonably narrow or whether a proposed alternative is so far beyond the realm of reason that it must be rejected out of hand; LBP-09-21, 70 NRC 581 (2009)
brownfield sites owned by companies other than the applicant may reasonably be excluded as alternative sites; LBP-09-19, 70 NRC 433 (2009)
failure to provide facts or expert opinion sufficient to show that the environmental report disregarded a feasible alternative based on either wind power, solar power, or some combination of the two renders a contention inadmissible; LBP-09-16, 70 NRC 227 (2009)
goals of a project's sponsor are given substantial weight in determining whether a NEPA alternative is reasonable; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
if the proposed siting of a plant slated for an early site permit involves unresolved conflicts concerning alternative uses of available resources, then this discussion must be sufficiently complete to allow the Staff to develop and to explore appropriate alternatives to the ESP pursuant to NEPA § 102(2)(E); LBP-09-19, 70 NRC 433 (2009)
no discussion of need for power or alternative energy sources is required in a supplemental environmental report at the operating license stage; LBP-09-26, 70 NRC 939 (2009)
noninclusion of DOE sites in alternative sites analysis that are far outside applicant's region of interest is reasonable; LBP-09-19, 70 NRC 433 (2009)
NRC Staff's environmental impact statement prepared during review of an early site permit application must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-09-19, 70 NRC 433 (2009)
presentation of alternatives in an applicant's environmental report and in an NRC environment impact statement must be in comparative form; LBP-09-19, 70 NRC 433 (2009)
reasonable alternatives under the National Environmental Policy Act do not include alternatives that are impractical, that present unique problems, or that cause extraordinary costs; LBP-09-16, 70 NRC 227 (2009)
the concept of alternatives must be bounded by some notion of feasibility; LBP-09-17, 70 NRC 311 (2009)
the decision as to whether an alleged environmental impact or alternative is significant or reasonable is the merits of a NEPA contention and should not be adjudicated at the contention admissibility stage under the guise of materiality or scope; LBP-09-10, 70 NRC 51 (2009)
the discussion in the environmental report or environmental impact statement need not include every possible alternative, only reasonable alternative; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)
the NEPA alternatives analysis is the heart of the environmental impact statement; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)

the reasonableness of energy conservation as an alternative in light of the need for a large amount of baseload electric power is questioned; LBP-09-10, 70 NRC 51 (2009)
the requirement to discuss alternatives in the environmental report parallels NEPA's requirement that an environmental impact statement provide a detailed statement of reasonable alternatives to a proposed action; LBP-09-16, 70 NRC 227 (2009)
where the final environmental impact statement discussion of alternative sites was insufficient, the board independently reviewed the record on greenfield, competitors' brownfield, noncompetitors' brownfield, and applicant's other nuclear sites to conclude that the Staff's underlying alternative site review was adequate; LBP-09-19, 70 NRC 433 (2009)
with regard to alternative sites for an early site permit, NRC Staff must evaluate both the process (i.e., methodology) used by the applicant and the reasonableness of the product (e.g., potential sites) identified by that process; LBP-09-19, 70 NRC 433 (2009)
CONSTRUCTION
activities requiring a limited work authorization are the driving of piles, subsurface preparation, placement of backfill, concrete, or permanent retaining walls within an excavation, installation of foundations, or in-place assembly, erection, fabrication, or testing that are for safety-related structures, systems, or component; LBP-09-16, 70 NRC 227 (2009); LBP-09-19, 70 NRC 433 (2009)
activities that are not considered "construction" are site exploration, clearing, grading, or installation of environmental mitigation measures, erection of fences and other access control measures, excavation, erection of support buildings for use in connection with construction, building of service facilities, and procurement or offsite fabrication of facility components; LBP-09-19, 70 NRC 433 (2009)
applicant is authorized to perform certain site preparation activities that would otherwise only be permitted following the issuance of a Part 50 construction permit or a Part 52 combined license; LBP-09-19, 70 NRC 433 (2009)
boards are to determine whether the site redress plan will adequately redress the activities performed under a limited work authorization should the activities be terminated by either the holder of the LWA or by Commission denial of any corresponding early site permit or combined license; LBP-09-19, 70 NRC 433 (2009)
if limited work authorization activities are approved by NRC in conjunction with an early site permit, the ESP as issued shall specify those authorized activities; LBP-09-19, 70 NRC 433 (2009)
no later than 1 year after issuance of the combined license or at the start of construction, whichever is later, the COL licensee must submit its schedule for completing the inspections, tests, or analyses and provide schedule updates; LBP-09-19, 70 NRC 433 (2009)
CONSTRUCTION PERMITS
a generalized assertion, without specific ties to NRC regulatory requirements or to safety in general, do not provide adequate support demonstrating the existence of a genuine dispute of fact or law with respect to the construction authorization application; LBP-09-27, 70 NRC 992 (2009)
although analysis of aircraft impact is required, reactors whose construction permits were issued prior to July 13, 2009, are excluded, and the rule is not NEPA-based; LBP-09-26, 70 NRC 939 (2009)
an applicant who may apply for a construction permit under Part 50, or a combined license under Part 52, may apply for an early site permit; LBP-09-19, 70 NRC 433 (2009)
CONSULTATION DUTY
dispositive motions may be filed 20 days after the occurrence or circumstance from which the motion arises, rather than the 10-day time frame, provided that the moving party commences sincere efforts to contact and consult all other parties within 10 days of the occurrence or circumstance, and the accompanying certification so states; LBP-09-22, 70 NRC 640 (2009)
if the attorney or representative of a party is contacted pursuant to the consultation requirement, then that person (or his or her alternate) must make a sincere effort to make himself or herself available to listen and to respond to the moving party's explanation, and to resolve the factual and legal issues raised in the motion; LBP-09-22, 70 NRC 640 (2009)
it is inconsistent with the dispute avoidance/resolution purposes of a section, and thus insufficient, for the contacted attorney or representative to fail or refuse to consider the substance of the consultation attempt, or for the party to respond that it takes no position on the motion (or issues) and that it reserves the right to file a response to the motion when it is filed; LBP-09-22, 70 NRC 640 (2009)

motions will be rejected if they do not include certification by the attorney or representative of the moving party that they have made a sincere effort to contact the other parties in this proceeding, to explain to them the factual and legal issues raised in the motion, and to resolve those issues; LBP-09-22, 70 NRC 640 (2009)
only Indian Tribes that appear on the Department of the Interior's list of recognized tribes have consultation rights under the National Historic Preservation Act; LBP-09-13, 70 NRC 168 (2009)
to be sincere, movant should contact other parties sufficiently in advance to provide enough time for the possible resolution of the matter or issues in question; LBP-09-22, 70 NRC 640 (2009)
CONTAINMENT DESIGN
early site permit applicants must submit a safety assessment that includes an analysis of a fission product release from an accident, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-19, 70 NRC 433 (2009)
CONTEMPT
courts have been careful to strictly limit the exercise of summary contempt power to cases in which it was clear that all of the elements of misconduct were personally observed by the judge; LBP-09-24, 70 NRC 676 (2009)
CONTENTIONS
a "contention of omission" is one that claims the application fails to contain information on a relevant matter as required by law and the supporting reasons for the petitioner's belief; LBP-09-16, 70 NRC 227 (2009); LBP-09-27, 70 NRC 992 (2009)
a brief explanation of the basis is an explanation of the rationale or theory of the contention; LBP-09-10, 70 NRC 51 (2009)
a motion and proposed new contention shall be deemed timely if it is filed within 30 days of the date when the new and material information on which it is based first becomes available; LBP-09-22, 70 NRC 640 (2009)
challenges to a combined license application must focus on the application as it exists when the contention is filed and must point out an omission or deficiency with regard to the application as of that moment in time; LBP-09-10, 70 NRC 51 (2009)
contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register,* unless a longer period is therein specified, an extension is granted, or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time; LBP-09-17, 70 NRC 311 (2009)
even if the term "contention," as used in 10 C.F.R. 2.336(a)(1) must be read as pertaining only to formal contentions admitted under section 2.309(f)(1), the term "claim," is not so constrained, and can only be read in its normal sense; LBP-09-30, 70 NRC 1039 (2009)
if the board concludes that it has no questions for any witness concerning a particular contention, it will so advise the parties and will resolve that contention; LBP-09-22, 70 NRC 640 (2009)
NRC rules permit contentions that raise issues of law as well as contentions that raise issues of fact; LBP-09-10, 70 NRC 51 (2009)
once standing to intervene in the licensing process is established, petitioners will then be free to assert any contention, which, if proved, will afford them the relief they seek; LBP-09-21, 70 NRC 581 (2009)
petitioner may in instances of exigent or unavoidable circumstances file a request for an extension of time to file an original hearing petition and contentions; LBP-09-17, 70 NRC 311 (2009)
the term "contention" in 10 C.F.R. 2.336(a)(1) means simply a point or argument asserted or advanced by any party; LBP-09-30, 70 NRC 1039 (2009)
when a contention of omission encompasses issues that are addressed completely in materials the applicant subsequently files, the contention is rendered moot; LBP-09-21, 70 NRC 581 (2009)
See also Abeyance of Contention; Amendment of Contentions
CONTENTIONS, ADMISSIBILITY
a board ruling on a contention may be referred to the Commission if it raises significant and novel legal or policy issues or the referral would materially advance the orderly disposition of the proceeding; LBP-09-26, 70 NRC 939 (2009)
a challenge to applicant's site-specific measurements of adsorption and retention coefficients relative to hydrological radionuclide transport is an admissible contention; LBP-09-16, 70 NRC 227 (2009)

SUBJECT INDEX

a combined license application's lack of consideration of any alternative to offsite disposal of low-level radioactive waste is a material issue for litigation; LBP-09-18, 70 NRC 385 (2009)

a contention alleging that a license application omits material information becomes moot when the applicant cures the omission; LBP-09-15, 70 NRC 198 (2009)

a contention asserting that an application is incomplete because it incorporates by reference a standard design certification and a pending application for a revision to that certified design is inadmissible; LBP-09-10, 70 NRC 51 (2009)

a contention can be one of omission as well as one of inadequacy when it alleges that the environmental report is insufficient because it fails to discuss all aspects of a topic adequately; LBP-09-10, 70 NRC 51 (2009)

a contention challenging the absence in the environmental report of consideration of impacts from a severe radiological accident at one unit on other colocated units is admitted; LBP-09-17, 70 NRC 311 (2009)

a contention concerning environmental impacts of offsite mining is rejected because petitioner failed to support the allegations with information indicating that such impacts are even plausibly significant; LBP-09-10, 70 NRC 51 (2009)

a contention is admissible if it raises a genuine dispute that is material to the findings the NRC must make to support the action involved; LBP-09-25, 70 NRC 867 (2009)

a contention is material if it shows that some significant link exists between the claimed deficiency and either the health and safety of the public, or the environment; LBP-09-26, 70 NRC 939 (2009)

a contention is not admissible if it is not plausibly explained or supported by alleged facts; LBP-09-21, 70 NRC 581 (2009)

a contention is timely to the extent it challenges the adequacy of the new low-level radioactive waste storage plan, but untimely as to those aspects of the contention that merely reargue issues already decided by the board, without identifying any new information relevant to those issues; LBP-09-27, 70 NRC 992 (2009)

a contention must explain why the application is deficient through reference to specific portions of the application, and it must directly controvert a position taken by the applicant in the application; LBP-09-17, 70 NRC 311 (2009)

a contention must show that a genuine dispute exists on a material issue of law or fact with regard to the license application, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-09-26, 70 NRC 939 (2009)

a contention of omission becomes moot if applicant cures the omission in its application; LBP-09-16, 70 NRC 227 (2009)

a 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 the petitioner's belief; LBP-09-16, 70 NRC 227 (2009)

a contention should be dismissed if it does not directly controvert a position taken by the applicant in the license application; LBP-09-27, 70 NRC 992 (2009)

a contention that fails to provide even a ballpark figure for the cost of implementing any proposed severe accident mitigation alternatives is inadmissible because it is difficult to assess whether a SAMA may be cost-beneficial and thus warrant serious consideration; LBP-09-26, 70 NRC 939 (2009)

a contention that seeks to impose new requirements on applicants and licensees is an impermissible challenge to the agency's regulations; LBP-09-26, 70 NRC 939 (2009)

a document put forth by an intervenor as supporting the basis for a contention is subject to scrutiny, for both what it does and does not show; LBP-09-27, 70 NRC 992 (2009)

a finding that applicant has cured an omission does not preclude litigation concerning the adequacy of the information the applicant has supplied and intervenors must timely file a new or amended contention that addresses the factors in 10 C.F.R. 2.309(f)(1); LBP-09-15, 70 NRC 198 (2009)

a general assessment of radioactivity within waters of the Great Lakes Basin does not address specific issues with regard to the proposed reactor, and it does not provide any support for petitioners' assertions; LBP-09-16, 70 NRC 227 (2009)

a generalized assertion, without specific ties to NRC regulatory requirements or to safety in general, do not provide adequate support demonstrating the existence of a genuine dispute of fact or law with respect to the construction authorization application; LBP-09-27, 70 NRC 992 (2009)

SUBJECT INDEX

a genuine material dispute is one that could lead to a different conclusion on potential cost-beneficial severe accident mitigation alternatives; LBP-09-26, 70 NRC 939 (2009)

a justiciable controversy must involve adverse parties representing a true clash of interests and the questions raised must be presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-09-25, 70 NRC 867 (2009)

a legal issue contention need not satisfy all the contention admissibility criteria; LBP-09-29, 70 NRC 1028 (2009)

a legal issue contention raises a genuine dispute with the application, because it challenges DOE's performance assessment for the post-10,000-year period; LBP-09-29, 70 NRC 1028 (2009)

a new safety contention can be filed, with leave of the board, on a showing that the new contention is based on information that was not previously available and is materially different from previously available information, and the new contention has been submitted in a timely fashion based on the availability of the subsequent information; LBP-09-9, 70 NRC 41 (2009)

a nexus between the injury and the relief is required rather than a nexus between the claimed injury and the contention; LBP-09-16, 70 NRC 227 (2009)

a party cannot satisfy the "not previously available" standard of 10 C.F.R. 2.309(f)(2)(i) by showing that, as a subjective matter, he or she only recently became aware of, or realized the significance of, public information that was previously available to all; LBP-09-10, 70 NRC 51 (2009)

a properly pleaded contention of omission must challenge a specific portion of the application and provide a basis for demonstrating the alleged deficiency; LBP-09-26, 70 NRC 939 (2009)

a proposed contention that fails to directly controvert the application or that mistakenly asserts the application does not address a relevant issue is subject to dismissal; LBP-09-27, 70 NRC 992 (2009)

a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)

absent a waiver, contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications; CLI-09-20, 70 NRC 911 (2009); LBP-09-10, 70 NRC 51 (2009)

although a board may appropriately view petitioners' support for its contention in a light that is favorable to the petitioner, the petitioner must provide some support for his or her contention, in the form of either facts or expert testimony; LBP-09-26, 70 NRC 939 (2009)

although a board may deny certain portions of a multipart contention as outside the scope or too attenuated, applying all six criteria of 10 C.F.R. 2.309(f)(1) to each subpart of the contention is inappropriate; LBP-09-10, 70 NRC 51 (2009)

although a licensing board will take into account any information from reply briefs that legitimately amplifies issues presented in the original petitions, it will not consider instances of what essentially constitute untimely attempts to amend the original petitions; LBP-09-17, 70 NRC 311 (2009)

although a petitioner does not have to prove its contention at the admissibility stage, mere notice pleading is insufficient; LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)

although an expert may be misinterpreting data submitted by applicant, this is not considered at the contention admissibility stage; LBP-09-27, 70 NRC 992 (2009)

although boards are not required to narrow contentions to make them acceptable, they may do so; LBP-09-25, 70 NRC 867 (2009)

although the contention admissibility rule imposes on a petitioner the burden of going forward with a sufficient factual basis, it does not shift the ultimate burden of proof from the applicant to the petitioner; LBP-09-27, 70 NRC 992 (2009)

an exception to the general policy limiting interlocutory review permits an appeal of a board's ruling on contention admissibility when a board grants a petition to intervene following consideration of the full petition; CLI-09-18, 70 NRC 859 (2009)

an expert opinion that merely states a conclusion (e.g., the application is deficient, inadequate, or wrong) without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; LBP-09-16, 70 NRC 227 (2009)

any contention that fails to controvert the application directly, or that mistakenly asserts the application fails to address an issue that the application does address, can be dismissed; LBP-09-18, 70 NRC 385 (2009); LBP-09-26, 70 NRC 939 (2009)

any material provided by petitioner in support of its contention, including those portions of the material that are not relied upon, is subject to board scrutiny; LBP-09-17, 70 NRC 311 (2009); LBP-09-26, 70 NRC 939 (2009)
arguments premised on the prediction that someday a nuclear plant site will become a permanent storage or disposal facility for low-level radioactive waste are too speculative and therefore not material to the findings the NRC must make to support the action that is involved in a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
as long as either denial of a license or issuance of a decision mandating compliance with legal requirements would alleviate a petitioner's potential injury, then under longstanding NRC jurisprudence the petitioner may prosecute any admissible contention that could result in the denial or in the compliance decision; CLI-09-20, 70 NRC 911 (2009)
assertions that building two new nuclear reactors in a troubled economy is fiscally irresponsible is outside the scope of a combined license proceeding; LBP-09-10, 70 NRC 51 (2009)
at the admissibility stage, all that is required is that the petitioner provide an expert opinion or some alleged fact, or facts, in support of its position; LBP-09-26, 70 NRC 939 (2009)
at the admission stage of the proceedings, boards admit contentions, not bases; LBP-09-26, 70 NRC 939 (2009)
attacks on applicable statutory requirements, challenges to the basic structure of the NRC's regulatory process, or mere expression of generalized policy grievances are not appropriate for a licensing board hearing; LBP-09-18, 70 NRC 385 (2009)
because NEPA is a procedural statute, petitioners need not show that favorable rulings on their NEPA contentions will require denial of the license, but rather that procedures intended for protection of their members' concrete interests will be observed; LBP-09-16, 70 NRC 227 (2009)
because petitioners fail to create a genuine issue, the board need not resolve whether applicant's purpose is unreasonably narrow or whether a proposed alternative is so far beyond the realm of reason that it must be rejected out of hand; LBP-09-21, 70 NRC 581 (2009)
because the environmental report is the only environmental document available when NRC issues its notice of opportunity to request a hearing, initial contentions necessarily focus on the adequacy of the applicant's ER under Part 51; LBP-09-10, 70 NRC 51 (2009); LBP-09-25, 70 NRC 867 (2009)
because the reach of a contention necessarily hinges upon its terms and its stated bases, the brief explanation helps define the scope of the contention; LBP-09-26, 70 NRC 939 (2009)
before the board can consider a new contention, petitioner must show that it is based on information that was not previously available, is based on information that is materially different than information previously available, and has been submitted in a timely fashion; LBP-09-29, 70 NRC 1028 (2009)
boards have authority to narrow low-level radioactive waste contentions; LBP-09-16, 70 NRC 227 (2009)
boards may appropriately view petitioners' support for their contentions in a light favorable to petitioners, but it is petitioners' burden to establish the admissibility of contentions; LBP-09-17, 70 NRC 311 (2009)
boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-09-16, 70 NRC 227 (2009)
by complying with the six contention requirements, an admissible contention must raise an issue that is both within the scope of the proceeding (normally defined by the hearing notice) and material to the findings the NRC must make to support the action involved; LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
by definition, contentions admitted under 10 C.F.R. 2.309(f)(2)(i)-(iii) are timely because they are founded on material new information that was not available at the time when the petition was initially due; LBP-09-10, 70 NRC 51 (2009)
challenges to a Commission rule or that seek to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, are inadmissible; LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009)
challenges to applicable statutory requirements or Commission regulations are not admissible in agency adjudications; LBP-09-16, 70 NRC 227 (2009)
challenges to Commission rules or regulations are inadmissible, unless a waiver is requested under 10 C.F.R. 2.335(b); LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)

challenges to the Commission regulations regarding the design certification process are inadmissible; LBP-09-18, 70 NRC 385 (2009)
challenges to the Waste Confidence Rule are inadmissible; LBP-09-17, 70 NRC 311 (2009)
claims related to the decommissioning of the facility are not currently ripe for review and are outside the scope of a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
contention admissibility requirements are deliberately strict and any contention that does not satisfy the requirements of 10 C.F.R. 2.309(f)(1) will be rejected; CLI-09-20, 70 NRC 911 (2009); LBP-09-26, 70 NRC 939 (2009)
contention alleging that the environmental report failed to address the alleged greenhouse gas and global climate disruption impacts resulting from prematurely killing trees is inadmissible; LBP-09-10, 70 NRC 51 (2009)
contention alleging that the threatened eastern fox snake inhabits the nuclear plant site and that construction activities for the new reactor will kill snakes, destroy their habitat, and might eliminate them from the area is within the scope of a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
contention asserting that DOE's description of its expert elicitation relating to a probabilistic volcanic hazard analysis update fails to comply with this section or the NRC guidance document that DOE formally committed to follow, is admissible; LBP-09-29, 70 NRC 1028 (2009)
contention disputing the cost estimate for decommissioning is an indirect challenge to 10 C.F.R. 50.75(c) and therefore inadmissible; LBP-09-16, 70 NRC 227 (2009)
contention in combined license proceeding focusing exclusively on regulations governing waste disposal is inadmissible; CLI-09-16, 70 NRC 33 (2009)
contention that concerns onsite and offsite impacts of active and passive dewatering associated with the proposed project satisfies the admissibility criteria; LBP-09-10, 70 NRC 51 (2009)
contention that the high-level waste application inadequately addresses generalized corrosion because it relies on flawed experimental data raises a genuine, material dispute with the application by pointing to specific sections that allegedly fail to comply with the NRC's requirements for conducting a post-closure performance assessment; LBP-09-29, 70 NRC 1028 (2009)
contentions must be accompanied by a concise statement of the alleged facts or expert opinions that support the requestor's/petitioner's position on the issue together with references to the specific sources and documents on which it intends to rely to support its position; LBP-09-10, 70 NRC 51 (2009); LBP-09-26, 70 NRC 939 (2009)
contentions of omission must describe the information that should have been included in the environmental report and provide the legal basis that requires the omitted information to be included; LBP-09-16, 70 NRC 227 (2009)
contentions on information a COL applicant should supply in order to satisfy NRC regulations regarding the safety of long-term storage of low-level radioactive waste are application-specific and thus would benefit from further development by the board and the parties; CLI-09-16, 70 NRC 33 (2009)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 227 (2009)
contentions that fall outside the scope of the proceeding must be rejected; LBP-09-26, 70 NRC 939 (2009)
controls other countries may impose on mining and milling, and the impacts of such activities, are outside the scope of a combined license proceeding; LBP-09-17, 70 NRC 311 (2009)
determining whether the contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-09-26, 70 NRC 939 (2009)
dismissal of one contention on mootness grounds would not terminate a case where the board had expressly retained jurisdiction to decide whether to admit another contention; LBP-09-27, 70 NRC 992 (2009)
each contention must assert an issue of law or fact that is within the scope of the proceeding and is material to the outcome of the licensing proceeding; CLI-09-15, 70 NRC 1 (2009)
environmental impacts of spent fuel storage are inadmissible in a combined license proceeding; LBP-09-18, 70 NRC 385 (2009)

failure of a contention to meet any of the requirements of 10 C.F.R. 2.309(f)(1) is grounds for its dismissal; CLI-09-15, 70 NRC 1 (2009); LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009)
failure to provide facts or expert opinion sufficient to show that the environmental report disregarded a feasible alternative based on either wind power, solar power, or some combination of the two renders the contention inadmissible; LBP-09-16, 70 NRC 227 (2009)
for a contention of omission, petitioner's burden is to show the facts necessary to establish that the application omits information that should have been included; LBP-09-16, 70 NRC 227 (2009)
for a contention to be held in abeyance, it must otherwise be admissible; LBP-09-18, 70 NRC 385 (2009)
for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion, but must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-27, 70 NRC 992 (2009)
for timely new or amended contentions, the pleading shall include a motion for leave to file the contention showing that it satisfies 10 C.F.R. 2.309(f)(1); LBP-09-22, 70 NRC 640 (2009)
if a combined license application references a design certification, then the presiding officer shall not admit contentions concerning severe accident design mitigation alternatives unless the contention demonstrates that the site characteristics fall outside of the site parameters in the standard design certification; LBP-09-10, 70 NRC 51 (2009)
if a contention concerning a certification application that has been docketed but not granted is otherwise admissible under 10 C.F.R. 2.309(f)(1), it might be held in abeyance and referred to the Staff; LBP-09-17, 70 NRC 311 (2009)
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; LBP-09-16, 70 NRC 227 (2009)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-09-27, 70 NRC 992 (2009)
if a NEPA contention alleges that impacts or alternatives that are patently outside the realm of reason must be considered, then the contention should be denied for failure to demonstrate that the issue raised is within the legitimate scope of NEPA; LBP-09-10, 70 NRC 51 (2009)
if a new contention is not timely, then its admissibility is evaluated under the eight-factor balancing test of 10 C.F.R. 2.309(c)(i)-(viii); LBP-09-10, 70 NRC 51 (2009)
if a party files a new contention within 30 days of the availability of the new information, the contention will generally be considered timely; LBP-09-17, 70 NRC 311 (2009)
if no expert opinion or supporting relevant documents are submitted with a contention, any fact-based argument that is provided must be reasonably specific, coherent, and logical, sufficient to show such a dispute and indicate the appropriateness of further inquiry; LBP-09-17, 70 NRC 311 (2009)
if petitioner fails to provide the requisite support for its contentions, the board may not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-09-18, 70 NRC 385 (2009); LBP-09-26, 70 NRC 939 (2009)
if petitioners are dissatisfied with the Commission's generic approach to problems, their remedy lies in the rulemaking process, not in adjudication; LBP-09-16, 70 NRC 227 (2009)
if the environmental impact of mining activities is potentially significant, then the failure of the environmental report for a combined license application to disclose the location of the offsite mine does not immunize it from being the subject of a legitimate contention; LBP-09-10, 70 NRC 51 (2009)
in an abundance of caution and in order to give petitioners every benefit of the doubt, the board considers whether any of the material at issue in a reply brief that would not constitute legitimate amplification might be admissible under the criteria of 10 C.F.R. 2.309(c) or (f)(2); LBP-09-17, 70 NRC 311 (2009)
in ruling on contention admissibility a board is not to look to the merits of the contention; LBP-09-17, 70 NRC 311 (2009)
information, facts, and expert opinions provided by petitioner will be examined by the board to confirm that the petitioner does indeed supply adequate support for the contention; LBP-09-26, 70 NRC 939 (2009)

integration, consolidation, restatement, or collection of previously available information into a new document does not convert it into information that was not previously available within the meaning of 10 C.F.R. 2.309(f)(2)(i); LBP-09-10, 70 NRC 51 (2009)
issuance of a proposed rulemaking and request for comments does not, in itself, constitute information not previously available that entitles a party to file a new contention; LBP-09-10, 70 NRC 51 (2009)
issuance of requests for additional information does not alone establish deficiencies in the application; LBP-09-16, 70 NRC 227 (2009)
licensing boards may not admit a contention that directly or indirectly challenges Table S-3 of 10 C.F.R. 51.51; LBP-09-16, 70 NRC 227 (2009); LBP-09-18, 70 NRC 385 (2009)
low-level radioactive waste disposal contentions have been admitted when that issue was not sufficiently discussed in the applications and there was no mention of the closure of the Barnwell facility; LBP-09-18, 70 NRC 385 (2009)
materiality requires a showing that the alleged error or omission is of possible significance to the result of the proceeding; LBP-09-26, 70 NRC 939 (2009); LBP-09-27, 70 NRC 992 (2009)
mere mention of a document without providing its contents or an explanation of its significance cannot support admissibility of a contention; LBP-09-21, 70 NRC 581 (2009)
mere statements of government officials are insufficient to overturn 10 C.F.R. 51.23; LBP-09-21, 70 NRC 581 (2009)
NEPA is the only legal grounds for an admissible contention relating to environmental justice issues; LBP-09-18, 70 NRC 385 (2009)
new contention on the adequacy of consideration of the dissolved oxygen factor in the cumulative usage factor environmental analysis and use of inappropriate heat transfer equations was previously litigated and resolved and thus is not admissible; LBP-09-9, 70 NRC 41 (2009)
nontimely petitions to intervene and contentions, amended petitions, and supplemental petitions will not be entertained absent a determination by the Commission, the licensing board, or a presiding officer that the petition should be granted and/or the contentions should be admitted based upon a balancing of eight factors; CLI-09-15, 70 NRC 1 (2009)
nothing in the NRC case law or regulations requires, at the contention admissibility stage, that a contention be supported by an expert opinion, substantive affidavits, or evidence; LBP-09-10, 70 NRC 51 (2009)
NRC Staff issuance of a request for additional information does not alone establish deficiencies in an application, and intervention petitioner must do more than merely quote an RAI to justify admission of a contention; CLI-09-16, 70 NRC 33 (2009); LBP-09-10, 70 NRC 51 (2009)
NRC Staff issuance of a request for additional information does not immunize the combined license application from challenge; LBP-09-10, 70 NRC 51 (2009)
NRC's adjudicatory process is not the proper venue for the evaluation of a petitioner's own view regarding the direction that regulatory policy should take; LBP-09-26, 70 NRC 939 (2009)
only the management of Class B and Class C wastes is properly the subject of a contention in a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
organizations seeking to challenge regulations of a government agency failed to demonstrate standing where they did not demonstrate a concrete application of the regulations that threatened imminent harm to their interests; CLI-09-20, 70 NRC 911 (2009)
petitioner demonstrates a genuine dispute with the applicant on the adequacy of the water quality analysis; LBP-09-16, 70 NRC 227 (2009)
petitioner does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that a dispute exists, but must make a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate; LBP-09-17, 70 NRC 311 (2009)
petitioner does not have to prove its contention at the admissibility stage; LBP-09-26, 70 NRC 939 (2009)
petitioner is obligated to read the pertinent portions of the license application, state the applicant's position and the petitioner's opposing view, and explain why it disagrees with the applicant; LBP-09-17, 70 NRC 311 (2009); LBP-09-25, 70 NRC 867 (2009)
petitioner is required merely to provide a simple nexus between the contention and the referenced factual or legal support; LBP-09-21, 70 NRC 581 (2009); LBP-09-25, 70 NRC 867 (2009)

petitioner must demonstrate that its contention is within the scope of the proceeding; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)
petitioner 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; LBP-09-21, 70 NRC 581 (2009)
petitioner must include sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of fact; LBP-09-10, 70 NRC 51 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-27, 70 NRC 992 (2009)
petitioner must provide a brief explanation of the basis for the contention; LBP-09-21, 70 NRC 581 (2009)
petitioner must provide a concise statement of the alleged facts or expert opinions that support its position on the issue and on which petitioner intends to rely at hearing, together with references to the specific sources and documents on which petitioner intends to rely to support its position on the issue; LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-27, 70 NRC 992 (2009)
petitioner must provide a specific statement of the issue of law or fact to be raised or controverted; LBP-09-21, 70 NRC 581 (2009)
petitioner must show that information missing from a license application is required by the Commission's regulations; LBP-09-18, 70 NRC 385 (2009)
petitioner must show that the subject matter of the contention would impact the grant or denial of the license application at issue in the proceeding; LBP-09-26, 70 NRC 939 (2009)
petitioners' assertion that applicant's environmental report fails to include an analysis of the impacts of a governmental entity managing long-term storage of high-level waste onsite and cost quantifications of such management fails to create a genuine dispute; LBP-09-21, 70 NRC 581 (2009)
petitioners' assertion that no exposure levels are safe is an impermissible challenge to the exposure limits set forth in the NRC's regulations; LBP-09-16, 70 NRC 227 (2009)
petitioners' claim that applicant must pursue the prepayment method for decommissioning conflicts with NRC guidance and rules and so is outside the permissible scope of the COL proceeding; LBP-09-21, 70 NRC 581 (2009)
petitioners' concerns regarding the applicant's commitments to relax conservatisms in its laboratory testing and groundwater release analysis are in regard to the revised analysis to be submitted in response to the Staff request for additional information and therefore are dismissed as outside the scope of the proceeding; LBP-09-16, 70 NRC 227 (2009)
petitioner's inaccurate reading and presentation of applicant's spent fuel storage plan cannot serve as a litigable basis for a contention; LBP-09-27, 70 NRC 992 (2009)
petitioner's issue will be ruled inadmissible if petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only 'bare assertions and speculation; LBP-09-15, 70 NRC 198 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-26, 70 NRC 939 (2009)
petitioners question the underlying analysis of fish kills in the environmental report as being outdated, but they fail to provide any information to show that the results of the study are no longer representative; LBP-09-16, 70 NRC 227 (2009)
petitioners who base their contentions on requests for additional information must provide analysis, discussion, or information of their own on the issues raised; LBP-09-16, 70 NRC 227 (2009)
pleading requirements call for a recitation of facts or expert opinion supporting the issue raised, but are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-09-16, 70 NRC 227 (2009)
portions of a contention that allege that the environmental report failed to adequately address the zone of environmental impact, impact on listed species, and appropriate mitigation are admissible; LBP-09-10, 70 NRC 51 (2009)
presentation of excerpts from combined license application without further explanation does not provide sufficient support for a contention; LBP-09-16, 70 NRC 227 (2009)

providing any material or document as the foundation for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of a contention; LBP-09-26, 70 NRC 939 (2009)
questions on the safety and environmental impacts of onsite low-level waste storage are largely site- and design-specific and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions; LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009)
ratepayer impacts are outside the scope of a combined license proceeding because the state, not NRC, is charged with protecting ratepayers' interests; LBP-09-10, 70 NRC 51 (2009)
releases from the nuclear fuel cycle in general, incidences of childhood cancers near nuclear power plants, and a request for the NRC to address radioactive releases from the burning of coal at fossil fuel plants are outside the scope of a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
replies may provide only legitimate amplifications of the original contentions or a logical/legal response to the answers of the Staff and applicant; LBP-09-17, 70 NRC 311 (2009)
reports before a board are subject to scrutiny both as to those portions that support an intervenor's assertion and those that do not; LBP-09-21, 70 NRC 581 (2009)
requirements for filing both new and nontimely contentions are stringent; LBP-09-27, 70 NRC 992 (2009)
revenue decoupling is a state regulatory matter that is outside the scope of, and not material to, the NRC licensing process; LBP-09-10, 70 NRC 51 (2009)
scope of an adjudicatory proceeding is specified by the notice of hearing, and contentions that raise matters outside that defined scope must be rejected; LBP-09-18, 70 NRC 385 (2009)
section 2.309(f)(1)(vi) is not a second hurdle of materiality that an intervenor must meet, but rather requires that intervenor identify the specific parts of the combined license application that it disputes and show that resolution of those disputes is material to the licensing decision; LBP-09-27, 70 NRC 992 (2009)
simply attaching materials or documents, without explaining their significance, is insufficient support for contention admission; LBP-09-18, 70 NRC 385 (2009)
standards for the admissibility of contentions originally came into being in 1989, when the Commission amended its rules to raise the threshold for the admission of contentions; LBP-09-17, 70 NRC 311 (2009)
stating that an allegation that some aspect of a license application is inadequate or unacceptable does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect; LBP-09-18, 70 NRC 385 (2009)
submittal of the information by applicant is the basis for the finding of mootness of a contention, but the adequacy of the information submitted may be the subject of a new or amended contention; LBP-09-21, 70 NRC 581 (2009)
Table S-3 does not include health effects from the effluents described in the table, and that issue may be the subject of litigation in the individual licensing proceedings; LBP-09-16, 70 NRC 227 (2009)
technical perfection is not an essential element of contention pleading, but the rules have nonetheless been held to bar contentions where petitioners have only what amounts to generalized suspicions, hoping to substantiate them later; LBP-09-17, 70 NRC 311 (2009)
terrorism-related issues are outside the scope of NRC adjudications; LBP-09-17, 70 NRC 311 (2009)
the admissibility decision sometimes turns on a determination about when, as a cumulative matter, separate pieces of the information puzzle were sufficiently in place to make the particular concerns reasonably apparent; LBP-09-10, 70 NRC 51 (2009)
the assertion that applicant might need to obtain a Part 72 license is irrelevant because a grant of the combined license could be accompanied by grant of a Part 72 general license if applicant complies with certain conditions; LBP-09-21, 70 NRC 581 (2009)
the Commission declined to review licensing board referred rulings because the contentions were rejected by the board due to legal insufficiency; CLI-09-21, 70 NRC 927 (2009)
the Commission dispensed with all but the good cause factor for late-filed contentions; LBP-09-29, 70 NRC 1028 (2009)
the Commission gives substantial deference to a board's rulings on contention admissibility in the absence of clear error or abuse of discretion; CLI-09-16, 70 NRC 33 (2009); CLI-09-20, 70 NRC 911 (2009)

the Commission has previously rejected claims that NRC regulations require discharge permits of their licensees; LBP-09-25, 70 NRC 867 (2009)
the Commission, rather than petitioner, holds the authority to define the scope of a proceeding; LBP-09-20, 70 NRC 565 (2009)
the contention admissibility rule does not require a petitioner to prove its case at the contention stage; LBP-09-27, 70 NRC 992 (2009)
the contention admissibility threshold is less than is required at the summary disposition stage; LBP-09-26, 70 NRC 939 (2009)
the contention requirements were never intended to be turned into a fortress to deny intervention; LBP-09-21, 70 NRC 581 (2009)
the contention rule is strict by design, having been toughened in 1989 because in prior years licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation; LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)
the contention that applicant cannot pass a financial test because the parent company is already committed to providing funding for the decommissioning of another site is an impermissible challenge to NRC regulations; LBP-09-18, 70 NRC 385 (2009)
the decision as to whether an alleged environmental impact or alternative is significant or reasonable is the merits of a NEPA contention and should not be adjudicated at the contention admissibility stage under the guise of materiality or scope; LBP-09-10, 70 NRC 51 (2009)
the environmental baseline reflects the effects of all currently existing pollution sources in the relevant watershed, including contributions of all nuclear power plants, and petitioners failed to provide information indicating that this aggregate analysis was insufficient under NEPA; LBP-09-16, 70 NRC 227 (2009)
the environmental impacts related to storage of spent fuel under Part 72 have been generically evaluated under two previous rulemakings and the Commission's waste confidence proceedings, and thus need not be reassessed; LBP-09-21, 70 NRC 581 (2009)
the fact that a combined license application is subject to, or even expected to, change does not make it legally deficient, because NRC follows a dynamic licensing process; LBP-09-10, 70 NRC 51 (2009)
the fact that disposal of dredged or fill material in wetlands is regulated by the Environmental Protection Agency and the U.S. Army Corps of Engineers does not render a contention inadmissible; LBP-09-10, 70 NRC 51 (2009)
the financial test for a parent company guarantee is a material issue because the Staff must decide whether the test is satisfied in order to grant the combined license; LBP-09-15, 70 NRC 198 (2009)
the first step in assessing the admissibility of a new contention is to determine if it is timely under 10 C.F.R. 2.309(f)(2)(iii) or nontimely under section 2.309(c); LBP-09-10, 70 NRC 51 (2009)
the issue that generally arises under 10 C.F.R. 2.309(f)(1)(i) is whether a contention is stated with sufficient specificity; LBP-09-17, 70 NRC 311 (2009)
the licensing board did not commit reversible error by admitting a contention based on low-level radioactive waste storage duration because the NRC Staff itself had issued a request for additional information on this very issue and thus this conflicted with Staff's argument that the issue is immaterial to the findings that must be made on the application; LBP-09-27, 70 NRC 992 (2009)
the mandatory disclosure requirements are not an opportunity to relitigate the admissibility of a contention; LBP-09-30, 70 NRC 1039 (2009)
the public will have a new opportunity to file environmental contentions when the NRC Staff issues the environmental impact statement or environmental analysis; LBP-09-10, 70 NRC 51 (2009); LBP-09-25, 70 NRC 867 (2009)
the purpose of the contention admissibility rules is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-09-26, 70 NRC 939 (2009)
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 requires an explanation of the rationale or theory of the contention; LBP-09-10, 70 NRC 51 (2009)
the scope of a proceeding is defined in the Commission's initial hearing notice and order referring the proceeding to the Licensing Board; LBP-09-25, 70 NRC 867 (2009); LBP-09-26, 70 NRC 939 (2009)
the six criteria that govern the admissibility of contentions are discussed; LBP-09-21, 70 NRC 581 (2009)

the strict contention rule serves multiple interests; LBP-09-17, 70 NRC 311 (2009)
the subject matter of the contention must impact the grant or denial of a pending license application; CLI-09-15, 70 NRC 1 (2009); LBP-09-27, 70 NRC 992 (2009)
the Waste Confidence Rule is applicable to all new reactor proceedings and contentions challenging the rule or seeking its reconsideration are inadmissible; LBP-09-18, 70 NRC 385 (2009)
there must be some significant link between the deficiency claimed in a contention and the agency's ultimate determination whether the license applicant will adequately protect the health and safety of the public and the environment; LBP-09-27, 70 NRC 992 (2009)
to be admissible, a contention must assert 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-09-26, 70 NRC 939 (2009)
to be admitted in a proceeding, a new contention must meet the new or amended contention requirements as well as the general contention admissibility requirements; LBP-09-9, 70 NRC 41 (2009)
to challenge a regulation, petitioner must submit a supporting affidavit setting forth with particularity the special circumstances that justify the waiver or exception requested; LBP-09-18, 70 NRC 385 (2009)
to qualify as an environmental justice contention, the contention must show that the affected local population qualifies as a minority or low-income population; LBP-09-18, 70 NRC 385 (2009)
to the extent that petitioners argue that the provisions of 10 C.F.R. 50.54(hh) should be applied to dry cask storage, they may file a rulemaking petition with the Commission; LBP-09-17, 70 NRC 311 (2009)
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; LBP-09-16, 70 NRC 227 (2009)
when denial of a license would alleviate a petitioner's asserted potential injury, any admissible contention with such a result can be prosecuted by a petitioner, regardless of whether that contention is directly related to that petitioner's articulated injury; LBP-09-16, 70 NRC 227 (2009)
when information becomes available piecemeal over time, and the foundation for a new contention does not become reasonably apparent until the last piece of information becomes available and falls into place, the test for good cause for late filing may be met; LBP-09-10, 70 NRC 51 (2009)
where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by the Staff in a draft EIS, the contention is moot; LBP-09-27, 70 NRC 992 (2009)
whether other permits may be required from other agencies is outside the scope of NRC proceedings, and those concerns are properly raised before those respective permitting authorities; LBP-09-21, 70 NRC 581 (2009)
with limited exceptions, no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-09-26, 70 NRC 939 (2009)
with respect to orders modifying a license, petitioner must always request a remedy that falls within the scope of the proceeding, as articulated in the notice of hearing; LBP-09-20, 70 NRC 565 (2009)
CONTENTIONS, LATE-FILED
a contention is timely to the extent it challenges the adequacy of the new low-level radioactive waste storage plan, but untimely as to those aspects of the contention that merely reargue issues already decided by the board, without identifying any new information relevant to those issues; LBP-09-27, 70 NRC 992 (2009)
a motion and proposed contention filed later than 30 days after the date when the new and material information on which it is based first becomes available shall be deemed untimely; LBP-09-22, 70 NRC 640 (2009)
a motion and proposed new contention may address the selection of the appropriate hearing procedure for the proposed new contention; LBP-09-22, 70 NRC 640 (2009)
a motion for leave to file a new contention, accompanied by the proposed contention, shall be deemed timely if filed within 30 days of the date when the new and material information on which it is based first became available; LBP-09-29, 70 NRC 1028 (2009)
a new contention may be filed after the initial docketing with leave of the presiding officer upon a showing that the information upon which it is based was not previously available, is materially different than information previously available, and has been submitted in a timely fashion based on the

availability of the subsequent information; LBP-09-26, 70 NRC 939 (2009); LBP-09-27, 70 NRC 992 (2009); LBP-09-29, 70 NRC 1028 (2009)
a party cannot satisfy the "not previously available" standard of 10 C.F.R. 2.309(f)(2)(i) by showing that, as a subjective matter, he or she only recently became aware of, or realized the significance of, public information that was previously available to all; LBP-09-10, 70 NRC 51 (2009)
absent good cause, petitioner's demonstration on the other late-filing factors must be compelling; LBP-09-26, 70 NRC 939 (2009)
an amended or new contention must be submitted in a timely fashion based on the availability of the subsequent information; LBP-09-27, 70 NRC 992 (2009)
challenges to board rulings on late-filed contentions normally fall under the rules for interlocutory review; CLI-09-18, 70 NRC 859 (2009)
contentions based on the safety evaluation report and any necessary National Environmental Policy Act document should be filed within 30 days of the issuance of those documents; LBP-09-27, 70 NRC 992 (2009)
factors that must be addressed for nontimely intervention petitions, hearing requests, and contentions are set forth; LBP-09-20, 70 NRC 565 (2009)
for untimely new or amended contentions, the pleading shall include a motion for leave to file the contention and the support for the proposed new or amended contention showing that it satisfies 10 C.F.R. 2.309(f)(1); LBP-09-22, 70 NRC 640 (2009)
good cause for the failure to file on time is the most important of the late-filing factors; LBP-09-26, 70 NRC 939 (2009)
if a combined license application is amended or material new information subsequently becomes available, petitioners must be given a fair opportunity to file new or amended contentions challenging these changes; LBP-09-10, 70 NRC 51 (2009)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c) which specifically applies to nontimely filings; LBP-09-27, 70 NRC 992 (2009)
if a new contention is not timely, then its admissibility is evaluated under the eight-factor balancing test of 10 C.F.R. 2.309(c)(i)-(viii); LBP-09-10, 70 NRC 51 (2009); LBP-09-26, 70 NRC 939 (2009)
if a new contention is timely, then its admissibility is evaluated under the three-factor test of 10 C.F.R. 2.309(f)(2)(i)-(iii); LBP-09-10, 70 NRC 51 (2009)
if new information becomes available in the course of waste confidence rulemaking proceedings that contravenes a combined license application, petitioner may file a motion to admit a new or amended contention; LBP-09-18, 70 NRC 385 (2009)
issuance of a proposed rulemaking and request for comments do not constitute information not previously available that entitles a party to file a new contention; LBP-09-10, 70 NRC 51 (2009)
nontimely petitions to intervene and contentions, amended petitions, and supplemental petitions will not be entertained absent a determination by the Commission, the licensing board, or a presiding officer that the petition should be granted and/or the contentions should be admitted based upon a balancing of eight factors; CLI-09-15, 70 NRC 1 (2009)
reply briefs that raise new issues must address the late filing and new-contention factors in 10 C.F.R. 2.309(c) or (f)(2); LBP-09-17, 70 NRC 311 (2009)
requirements for filing both new and nontimely contentions are stringent; LBP-09-27, 70 NRC 992 (2009)
the admissibility decision sometimes turns on a determination about when, as a cumulative matter, separate pieces of the information puzzle were sufficiently in place to make the particular concerns reasonably apparent; LBP-09-10, 70 NRC 51 (2009)
the Commission dispensed with all but the good cause factor for late-filed contentions; LBP-09-29, 70 NRC 1028 (2009)
the filing of new or amended contentions based on new information is permitted if sufficient justification is provided; LBP-09-15, 70 NRC 198 (2009)
thirty days is a reasonable limit for fulfilling the timing requirement of 10 C.F.R. 2.309(f)(2)(iii) because of the significant effort involved in identifying new information, assembling the required expertise, and then drafting a contention that satisfies 10 C.F.R. 2.309(f)(1); LBP-09-27, 70 NRC 992 (2009)
to be admitted, a new contention must meet the new or amended contention requirements as well as the general contention admissibility requirements; LBP-09-9, 70 NRC 41 (2009)

when information becomes available piecemeal over time, and the foundation for a new contention does not become reasonably apparent until the last piece of information becomes available and falls into place, the test for good cause for late filing may be met; LBP-09-10, 70 NRC 51 (2009)
where petitioners failed to file on time or seek an extension because they had not yet decided whether to seek to intervene, such indecision does not constitute good cause; LBP-09-26, 70 NRC 939 (2009)
CONTESTED LICENSE APPLICATIONS
a decision dismissing the contested adjudication relating to a combined license has no impact on the subsequent need to conduct a mandatory hearing relating to combined license application, over which the Commission would preside; LBP-09-23, 70 NRC 659 (2009)
in uranium enrichment facility proceedings, a licensing board must determine in its initial decision whether the requirements of section 102(2)(A), (C), and (E) of the National Environmental Policy Act have been complied with in the proceeding; CLI-09-15, 70 NRC 1 (2009)
in uranium enrichment facility proceedings, the licensing board shall make findings of fact and conclusions of law on admitted contentions; CLI-09-15, 70 NRC 1 (2009)
CONTINUANCE
if it appears from the affidavits of a party opposing a motion for summary disposition or other dispositive motion that the opposing party cannot, for reasons stated, present by affidavit facts essential to justify the party's opposition, the board may refuse the application for summary disposition or may order a continuance as may be necessary or just; LBP-09-22, 70 NRC 640 (2009)
CONTROL ROOM
adequacy of applicant's design for radiological protections, in light of the fact that the reactor is proposed to be located within the EPZ of an existing reactor, is an issue that is appropriate in a combined license or standard design certification proceeding; LBP-09-10, 70 NRC 51 (2009)
CORROSION
contention that the high-level waste application inadequately addresses generalized corrosion because it relies on flawed experimental data raises a genuine, material dispute with the application by pointing to specific sections that allegedly fail to comply with the NRC's requirements for conducting a post-closure performance assessment; LBP-09-29, 70 NRC 1028 (2009)
COST-BENEFIT ANALYSES
a contention that fails to provide even a ballpark figure for the cost of implementing any proposed severe accident mitigation alternatives is inadmissible because it is difficult to assess whether a SAMA may be cost-beneficial and thus warrant serious consideration; LBP-09-26, 70 NRC 939 (2009)
if the adverse environmental impacts of the proposed action are adequately identified and evaluated, the agency is not constrained by the National Environmental Policy Act from deciding that other values outweigh the environmental costs; LBP-09-16, 70 NRC 227 (2009)
NRC is required to evaluate and balance both the claimed benefits and the environmental costs of a proposed new reactor; LBP-09-16, 70 NRC 227 (2009)
NRC must analyze the need for additional power when it relies on a benefit in performing the balancing of benefits and costs; LBP-09-16, 70 NRC 227 (2009)
the environmental report associated with each application for a standard design certification must address the costs and benefits of severe accident design mitigation alternatives; LBP-09-10, 70 NRC 51 (2009)
COSTS
accuracy of an applicant's estimate is not material to the findings the NRC must make under the National Environmental Policy Act; LBP-09-16, 70 NRC 227 (2009)
parties need not provide discovery of electronically stored information from sources that the party identifies as not reasonably accessible because of undue burden or cost; LBP-09-22, 70 NRC 640 (2009)
See also Decommissioning Costs
COUNCIL ON ENVIRONMENTAL QUALITY
although NRC does not consider CEQ pronouncements to be binding, they are entitled to substantial deference; LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)
CEQ regulations define "direct and indirect" impacts and "cumulative" impacts and require that they be considered in the environmental impact statement; LBP-09-10, 70 NRC 51 (2009)

in implementing NEPA, the NRC uses certain of the definitions provided in CEQ regulations; LBP-09-19, 70 NRC 433 (2009)
CREDIBILITY
Subpart G procedures focus on issues where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness; LBP-09-22, 70 NRC 640 (2009)
CRIMINAL PROCEEDING
conviction of a crime that is identical to a charge in an enforcement order provides substantial assurance that the enforcement order was not baseless or unwarranted; LBP-09-24, 70 NRC 676 (2009)
"deliberate ignorance" or "willful blindness" instruction has its place and sees frequent usage in drug possession cases where the defendant purports not to know, for example, what is in the package someone asked him to deliver in secretive fashion; LBP-09-24, 70 NRC 676 (2009)
juries may be asked to provide a special verdict indicating in some fashion the legal theory it applied to reach any findings of guilt; LBP-09-24, 70 NRC 676 (2009)
the conclusion that a finding of deliberate ignorance is a proxy for a finding of knowledge is supported by the definition of knowledge in the Model Penal Code, which has guided the Supreme Court in determining the intended scope of the word "knowing" in the criminal context; LBP-09-24, 70 NRC 676 (2009)
the warning to jurors that the added instruction on deliberate ignorance or willful blindness is not intended to allow them to base guilt on negligence or carelessness is sufficient to legitimize the instruction; LBP-09-24, 70 NRC 676 (2009)
CRIMINAL PROSECUTION
an accused person is to be informed of the nature and cause of the accusation; LBP-09-24, 70 NRC 676 (2009)
with respect to a prosecutor's role, government lawyers should understand and follow the venerable maxim that the government wins when justice is done; LBP-09-24, 70 NRC 676 (2009)
CROSS-EXAMINATION
a party to NRC proceedings is entitled to conduct such cross-examination as may be required for a full and true disclosure of the facts; LBP-09-10, 70 NRC 51 (2009); LBP-09-22, 70 NRC 640 (2009)
boards may allow parties to conduct cross-examination in Subpart L proceedings; LBP-09-22, 70 NRC 640 (2009)
in Subpart G hearings, cross-examination occurs virtually automatically, subject to normal judicial management and the requirement to file a cross-examination plan; LBP-09-10, 70 NRC 51 (2009)
no later than 30 days after service of materials, all parties shall file any motions or requests to permit that party to conduct cross-examination of a specified witness or witnesses, together with the associated cross-examination plans; LBP-09-22, 70 NRC 640 (2009)
the substantive standard for allowing parties to conduct cross-examination is the same under 10 C.F.R. Part 2, Subparts G and L; LBP-09-10, 70 NRC 51 (2009)
under Subpart L, a party seeking to conduct cross-examination must file a written motion and obtain leave from the board; LBP-09-10, 70 NRC 51 (2009)
CULTURAL RESOURCES
only Indian tribes that appear on the Department of the Interior's list of recognized tribes have consultation rights under the National Historic Preservation Act; LBP-09-13, 70 NRC 168 (2009)
CUMULATIVE IMPACTS ANALYSIS
although applicant's description of existing water quality conditions did not separately evaluate the contributions of specific sources, it nonetheless formed an environmental baseline against which to measure the cumulative impact of the proposed new reactor; LBP-09-16, 70 NRC 227 (2009)
an agency environmental impact statement must consider direct, indirect, and cumulative impacts of an action; LBP-09-19, 70 NRC 433 (2009)
"cumulative impact"is defined as the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions; LBP-09-16, 70 NRC 227 (2009)
the environmental baseline reflects the effects of all currently existing pollution sources in the relevant watershed, including contributions of all nuclear power plants, and petitioners failed to provide

information indicating that this aggregate analysis was insufficient under the National Environmental Policy Act; LBP-09-16, 70 NRC 227 (2009)
the environmental consequences of proposals being considered by an agency within a region must be considered together to determine the synergistic and cumulative environmental effects; LBP-09-16, 70 NRC 227 (2009)
CUMULATIVE USAGE FACTOR
if CUF environmental metal fatigue analysis produces a value of greater than unity, then the analysis indicates that the component would be likely to develop metal fatigue cracks that might affect their function during the 20-year license renewal period of extended operation, and thus requires an aging management program; LBP-09-9, 70 NRC 41 (2009)
new contention on the adequacy of consideration of the dissolved oxygen factor in the cumulative usage factor environmental analysis and use of inappropriate heat transfer equations was previously litigated and resolved and thus is not admissible; LBP-09-9, 70 NRC 41 (2009)
DEADLINES
a motion for leave to file a new contention, accompanied by the proposed contention, shall be deemed timely if filed within 30 days of the date when the new and material information on which it is based first became available; LBP-09-22, 70 NRC 640 (2009); LBP-09-29, 70 NRC 1028 (2009)
agency notices must provide at least 15 days before the opportunity for a hearing is forfeited unless a shorter period is reasonable; LBP-09-20, 70 NRC 565 (2009)
although NRC's rules of practice regarding motions do not provide for reply pleadings, the board presumes that for a reply to be timely it would have to be filed within 7 days of the date of service of the response it is intended to address; LBP-09-22, 70 NRC 640 (2009)
an answer supporting or opposing a motion for summary disposition or other dispositive motion shall be filed within 20 days after service of the motion; LBP-09-22, 70 NRC 640 (2009)
COL applicants must submit a decommissioning report containing a certification that the funding assurance will be provided no later than 30 days after the NRC publishes notice in the *Federal Register* of its scheduled date for initial fuel loading; LBP-09-21, 70 NRC 581 (2009)
contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register,* unless a longer period is therein specified, an extension is granted, or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time; LBP-09-17, 70 NRC 311 (2009)
decommissioning plans are not required until the applicant files a post-shutdown decommissioning activities report, which is not due until 2 years before permanent cessation of operation; LBP-09-21, 70 NRC 581 (2009)
dispositive motions may be filed 20 days after the occurrence or circumstance from which the motion arises, rather than the 10-day time frame, provided that the moving party commences sincere efforts to contact and consult all other parties within 10 days of the occurrence or circumstance, and the accompanying certification so states; LBP-09-22, 70 NRC 640 (2009)
final decommissioning financial assurance documents must be submitted to the NRC 30 days after the notification in the *Federal Register* pursuant to section 52.103(a) that licensee has set a date to load fuel; LBP-09-15, 70 NRC 198 (2009)
for an order issued under 10 C.F.R. 2.202, the time for filing a hearing request runs from the date of the order, not the date of publication of the order in the *Federal Register*; LBP-09-20, 70 NRC 565 (2009)
if a party files a new contention within 30 days of the availability of the new information to that party, the contention will generally be considered timely; LBP-09-17, 70 NRC 311 (2009)
initial disclosures must be made within 30 days of the order granting a request for hearing, which is typically at least 18-24 months before the evidentiary hearing begins; LBP-09-30, 70 NRC 1039 (2009)
late-filed contentions based on the safety evaluation report and any necessary National Environmental Policy Act document should be filed within 30 days of the issuance of those documents; LBP-09-27, 70 NRC 992 (2009)
motions to compel or challenges regarding the adequacy of any mandatory disclosure or hearing file, redactions, or the validity of any claim that a document is privileged or protected shall be filed within 10 days after the occurrence or circumstance from which the motion arises; LBP-09-22, 70 NRC 640 (2009)

no later than 20 days after service of materials, the parties and the NRC Staff shall file their written responses, rebuttal testimony with supporting affidavits, and rebuttal exhibits, on a contention-by-contention basis; LBP-09-22, 70 NRC 640 (2009)
no later than 30 days after service of materials, all parties and NRC Staff shall file proposed questions for the board to consider propounding to the direct or rebuttal witnesses; LBP-09-22, 70 NRC 640 (2009)
no later than 30 days after service of materials, all parties shall file any motions or requests to permit that party to conduct cross-examination of a specified witness or witnesses, together with the associated cross-examination plans; LBP-09-22, 70 NRC 640 (2009)
thirty days is a reasonable limit for fulfilling the timing requirement of 10 C.F.R. 2.309(f)(2)(iii) because of the significant effort involved in identifying new information, assembling the required expertise, and then drafting a contention that satisfies 10 C.F.R. 2.309(f)(1); LBP-09-27, 70 NRC 992 (2009)
twenty days in which to request a hearing is the minimum required by the agency's regulations for orders issued under 10 C.F.R. 2.202(a); LBP-09-20, 70 NRC 565 (2009)
when issuing an order modifying a license, the agency is required to inform the licensee or any other person adversely affected by the order of his or her right, within 20 days of the date of the order, or such other time as may be specified in the order, to demand a hearing; LBP-09-20, 70 NRC 565 (2009)
within 25 days after service of a motion and proposed contention, any other party may file an answer responding to all elements of the motion and contention, and within 7 days of service of the answer, the movant may file a reply; LBP-09-22, 70 NRC 640 (2009)
within 30 days of the board's ruling admitting contentions, the parties must automatically make certain mandatory disclosures; LBP-09-22, 70 NRC 640 (2009)
DECISIONS
See Initial Decisions; Licensing Board Decisions; Partial Initial Decisions
DECOMMISSIONING
an operating license cannot be terminated, in effect, until all spent fuel and high-level waste has been removed from the site; LBP-09-17, 70 NRC 311 (2009)
claims related to the decommissioning of the facility are not currently ripe for review and are outside the scope of a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
"decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license or release of the property under restricted conditions and termination of the license; LBP-09-15, 70 NRC 198 (2009)
if after public notice and review the NRC approves the decommissioning plan, licensee has 60 years to complete decommissioning; LBP-09-17, 70 NRC 311 (2009)
when a nuclear power plant ceases operations, the owner must apply for a license to terminate, which cannot be granted until the NRC is satisfied that the plant has been properly dismantled and decommissioned so that residual radiation meets established rules and that no spent fuel or high-level wastes remains onsite; LBP-09-21, 70 NRC 581 (2009)
DECOMMISSIONING COSTS
contention disputing the cost estimate for decommissioning is an indirect challenge to 10 C.F.R. 50.75(c) and therefore inadmissible; LBP-09-16, 70 NRC 227 (2009)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 227 (2009)
DECOMMISSIONING FUNDING
a board can only decide whether or not a current funding proposal fulfills NRC requirements; LBP-09-18, 70 NRC 385 (2009)
a combined license applicant must obtain the financial instrument and submit a copy to the Commission as provided in 10 C.F.R. 50.75(e)(3); LBP-09-15, 70 NRC 198 (2009)
a combined license application must provide the information required by 10 C.F.R. 50.75(e)(1)(iii)(B) if applicant plans to use a parent company guarantee; LBP-09-15, 70 NRC 198 (2009); LBP-09-18, 70 NRC 385 (2009)

a parent-company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in 10 C.F.R. Part 30, Appendix A; LBP-09-15, 70 NRC 198 (2009)
acceptable methods include a sinking fund, prepayment of the entire decommissioning amount, and a surety method, insurance, or other guarantee method; LBP-09-15, 70 NRC 198 (2009)
applicant may choose one or more of the funding methods provided in 10 C.F.R. 50.75(e); LBP-09-18, 70 NRC 385 (2009)
applicant, 2 years before and 1 year before the scheduled date for the initial fuel loading, shall submit a report to NRC containing a certification updating the financial information, including a copy of the financial instrument to be used; LBP-09-18, 70 NRC 385 (2009)
at the time the combined license application is submitted, it must identify the method of decommissioning funding assurance that the applicant proposes to use and to show that the method complies with any applicable financial test; LBP-09-15, 70 NRC 198 (2009); LBP-09-18, 70 NRC 385 (2009)
because the requirement of 10 C.F.R. 50.75(b)(3) applies to the amount of financial assurance specified in the decommissioning report, it is readily apparent that the report must explain how that requirement will be fulfilled; LBP-09-15, 70 NRC 198 (2009)
combined license applicants must submit a decommissioning report containing a certification that the funding assurance will be provided no later than 30 days after the NRC publishes notice in the *Federal Register* of its scheduled date for initial fuel loading; LBP-09-15, 70 NRC 198 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-21, 70 NRC 581 (2009)
decommissioning rules are designed to minimize the administrative effort of licensees and the Commission and to provide reasonable assurance that funds will be available to carry out decommissioning in a manner that protects public health and safety; LBP-09-21, 70 NRC 581 (2009)
holder of a combined license must begin filing biannual reports on the status of decommissioning funding once the Commission has made a finding that all acceptance criteria in the license have been met; LBP-09-15, 70 NRC 198 (2009)
if licensee changes its method of decommissioning funding assurance, the new method will also have to pass any applicable financial test; LBP-09-15, 70 NRC 198 (2009)
it is beyond licensing board authority to require applicant to choose a particular method of decommissioning funding; LBP-09-15, 70 NRC 198 (2009)
neither market capitalization nor share price are variables to be used in the financial test for decommissioning funding assurance; LBP-09-15, 70 NRC 198 (2009)
NRC will defer to state economic regulators where decommissioning funding is assured by the fact that any shortfall in decommissioning funds will be provided by ratepayers pursuant to state law; LBP-09-21, 70 NRC 581 (2009)
petitioners' claim that applicant must pursue the prepayment method for decommissioning conflicts with the NRC guidance and rules and so is outside the permissible scope of a combined license proceeding; LBP-09-21, 70 NRC 581 (2009)
the amount of financial assurance must be adjusted annually, using a rate calculated pursuant to 10 C.F.R. 50.75(c)(2); LBP-09-15, 70 NRC 198 (2009)
the contention that applicant cannot pass a financial test because the parent company is already committed to providing funding for the decommissioning of another site is an impermissible challenge to NRC regulations; LBP-09-18, 70 NRC 385 (2009)
the fact that the Commission included language deferring the obligation that would otherwise apply to combined license applicants in 10 C.F.R. 50.75(b)(4), but included no equivalent provision in section 50.75(b)(3), confirms that the Commission did not intend to defer the requirement of section 50.75(b)(3) until after the license is issued; LBP-09-15, 70 NRC 198 (2009)
the financial test for a parent company guarantee is a material issue because the Staff must decide whether the test is satisfied in order to grant the combined license; LBP-09-15, 70 NRC 198 (2009)
the requirement that the designated amount of financial assurance be covered by an acceptable method arises concurrently with the requirement that the applicant submit a decommissioning report to NRC; LBP-09-15, 70 NRC 198 (2009)
the requirements of 10 C.F.R. 50.75 are intended to ensure that entities who construct and operate a nuclear power plant will have sufficient funds at the end of the operational life of the plant to complete the decommissioning of the plant; LBP-09-15, 70 NRC 198 (2009)

SUBJECT INDEX

DECOMMISSIONING FUNDING PLANS
decommissioning funding assurance is the process through which a combined license applicant assures the NRC that funds will be available to decommission a site or facility; LBP-09-15, 70 NRC 198 (2009)
funding for financial assurance for decommissioning must be covered by prepayment, an external sinking fund, or a surety method, insurance, or other guarantee including a parent company guarantee; LBP-09-18, 70 NRC 385 (2009)
the parent company guarantee is based on a financial test and may only be used if the guarantee and test are as contained in Appendix A to 10 C.F.R. Part 30; LBP-09-18, 70 NRC 385 (2009)
DECOMMISSIONING PLANS
because the requirement of 10 C.F.R. 50.75(b)(3) applies to the amount of financial assurance specified in the decommissioning report, it is readily apparent that the report must explain how that requirement will be fulfilled; LBP-09-15, 70 NRC 198 (2009)
plans are not required until the applicant files a post-shutdown decommissioning activities report, which is not due until 2 years before permanent cessation of operation; LBP-09-21, 70 NRC 581 (2009)
the fact that the Commission included language deferring the obligation that would otherwise apply to combined license applicants in 10 C.F.R. 50.75(b)(4), but included no equivalent provision in section 50.75(b)(3), confirms that the Commission did not intend to defer the requirement of section 50.75(b)(3) until after the license is issued; LBP-09-15, 70 NRC 198 (2009)
DEFINITIONS
a "claim" is an assertion, statement, or implication; LBP-09-30, 70 NRC 1039 (2009)
a "contention" is simply a point or argument asserted or advanced by any party; LBP-09-30, 70 NRC 1039 (2009)
a "contention of omission" is one that claims the application fails to contain information on a relevant matter as required by law and the supporting reasons for the petitioner's belief; LBP-09-16, 70 NRC 227 (2009); LBP-09-27, 70 NRC 992 (2009)
a "deliberately ignorant defendant" is one who was aware of the high probability of a critical fact, but deliberately ignored that probability; LBP-09-24, 70 NRC 676 (2009)
a "federally recognized Indian tribe" is one that is included on the Bureau of Indian Affairs' list of federally recognized Indian tribes published in the *Federal Register*; LBP-09-13, 70 NRC 168 (2009)
a "negligent defendant" is one who should have had similar suspicions but, in fact, did not; LBP-09-24, 70 NRC 676 (2009)
a "potential party" is any person who intends or may intend to participate as a party by demonstrating standing and filing an admissible contention under 10 C.F.R. 2.309; CLI-09-15, 70 NRC 1 (2009)
a "reckless defendant" is one who merely knew of a substantial and unjustifiable risk that his conduct was criminal; LBP-09-24, 70 NRC 676 (2009)
"collateral estoppel" is a form of issue preclusion that prevents the relitigation of issues of law or fact that have been finally adjudicated by a tribunal of competent jurisdiction in a proceeding involving the same parties or their privies; LBP-09-24, 70 NRC 676 (2009)
"construction" does not include site exploration, clearing, grading, or installation of environmental mitigation measures, erection of fences and other access control measures, excavation, erection of support buildings for use in connection with construction, building of service facilities, and procurement or offsite fabrication of facility components; LBP-09-19, 70 NRC 433 (2009)
"constructive knowledge" is knowledge of facts sufficient to prompt an inquiry that would have uncovered misrepresentations and is not actual knowledge; LBP-09-24, 70 NRC 676 (2009)
"cumulative impact"is the effect on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions; LBP-09-16, 70 NRC 227 (2009)
"decommission" means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits release of the property for unrestricted use and termination of the license or release of the property under restricted conditions and termination of the license; LBP-09-15, 70 NRC 198 (2009)
"deliberate misconduct" refers to an intentional act or omission that the person knows would cause a licensee to be in violation of any rule; LBP-09-24, 70 NRC 676 (2009)

"design basis events" are those conditions of normal operation, including anticipated operational occurrences, design basis accidents, external events, and natural phenomena for which the plant must be designed; LBP-09-26, 70 NRC 939 (2009)
"direct environmental impacts" are those caused by the federal action, and occurring at the same time and place as that action; LBP-09-19, 70 NRC 433 (2009)
"emergency action levels" are the criteria used to determine the notifications that need to be made to federal, state, and local authorities and to determine the appropriate protective responses to a particular set of emergency conditions; LBP-09-19, 70 NRC 433 (2009)
"Indian tribe" is an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994; LBP-09-13, 70 NRC 168 (2009)
"indirect environmental impacts" are caused by the action at a later time or more distant place, yet are still reasonably foreseeable; LBP-09-19, 70 NRC 433 (2009)
"injury-in-fact" is an invasion of a legally protected interest that is concrete and particularized and actual or imminent; LBP-09-13, 70 NRC 168 (2009)
"severe accident" is a reactor accident more severe than a design basis accident, and it results in substantial damage to the reactor core, whether or not there are serious offsite consequences; LBP-09-10, 70 NRC 51 (2009); LBP-09-19, 70 NRC 433 (2009)
DELAY OF PROCEEDING
where the impact of delay is a concern, the desirability of avoiding any further delay in reaching a final merits determination can be a key discretionary factor counseling nonreliance on the collateral estoppel principle even if that doctrine otherwise appeared applicable; LBP-09-24, 70 NRC 676 (2009)
DELIBERATE MISCONDUCT
a conviction based on deliberate ignorance requires a finding that a defendant's action is intentional, premeditated, and fully considered; LBP-09-24, 70 NRC 676 (2009)
a deliberately ignorant defendant is one who was aware of the high probability of a critical fact, but deliberately ignored that probability; LBP-09-24, 70 NRC 676 (2009)
an intentional act or omission that the person knows would cause a licensee to be in violation of any rule is considered deliberate misconduct; LBP-09-24, 70 NRC 676 (2009)
careless disregard in the execution of one's duties does not amount to deliberate misconduct or a violation; LBP-09-24, 70 NRC 676 (2009)
causing inaccurate and incomplete information to be provided to the NRC concerning conditions at a reactor resulted in debarment from licensed activities for 5 years; LBP-09-11, 70 NRC 151 (2009)
constructive knowledge is knowledge of facts sufficient to prompt an inquiry that would have uncovered misrepresentations and is not actual knowledge; LBP-09-24, 70 NRC 676 (2009)
courts have been careful to strictly limit the exercise of summary contempt power to cases in which it was clear that all of the elements of misconduct were personally observed by the judge; LBP-09-24, 70 NRC 676 (2009)
establishing a party's actual knowledge requires showing more than that a party had a suspicion that something was awry; LBP-09-24, 70 NRC 676 (2009)
inquiry into an individual's actual knowledge is entirely factual, requiring examination of the record; LBP-09-24, 70 NRC 676 (2009)
the "deliberate ignorance" theory is not embraced within the "deliberate misconduct" standard that governs NRC proceedings; LBP-09-24, 70 NRC 676 (2009)
the conclusion that a finding of deliberate ignorance is a proxy for a finding of knowledge is supported by the definition of knowledge in the Model Penal Code, which has guided the Supreme Court in determining the intended scope of the word "knowing" in the criminal context; LBP-09-24, 70 NRC 676 (2009)
the danger of instruction to juries on deliberate ignorance or willful blindness in an inappropriate case is that juries will convict on a basis akin to a standard of negligence; LBP-09-24, 70 NRC 676 (2009)
the element of "actual knowledge" must be present to sustain a charge of deliberate misconduct under the NRC's regulations; LBP-09-24, 70 NRC 676 (2009)
the knowledge component of the deliberate ignorance theory is slightly less than knowledge to a 100% certainty where the prosecutor's case is based on circumstantial evidence that precludes establishing defendant's knowledge to a 100% certainty; LBP-09-24, 70 NRC 676 (2009)

to prevail in establishing that the accused's actions constituted a violation, Staff must demonstrate by a preponderance of the evidence that the accused had actual knowledge of the information associated with his actions and that he deliberately acted contrary to that knowledge; LBP-09-24, 70 NRC 676 (2009)
when knowledge of the existence of a particular fact is an element of an offense, such knowledge is established if a person is aware of a high probability of its existence, unless he actually believes that it does not exist; LBP-09-24, 70 NRC 676 (2009)
where the record in an enforcement proceeding may be devoid of direct evidence to establish knowledge, the Staff may have to build its case upon circumstantial evidence alone; LBP-09-24, 70 NRC 676 (2009)
with the jury in a parallel criminal case not having been asked to render a special verdict, the general verdict provides the board insufficient guidance from which to determine whether the jury conviction was premised on actual knowledge or on deliberate ignorance; LBP-09-24, 70 NRC 676 (2009)
DEMAND FOR INFORMATION
petitioner's request that NRC issue a demand for information to licensee regarding vibration levels prior to restart is denied; DD-09-2, 70 NRC 899 (2009)
DEMAND-SIDE MANAGEMENT
applicant is not required to evaluate energy conservation as an alternative because it is not an alternative to the proposal to build new baseload power generation; LBP-09-10, 70 NRC 51 (2009); LBP-09-21, 70 NRC 581 (2009)
DEPLETED URANIUM
an approach that is consistent with the USEC Privatization Act, such as transfer to DOE for disposal, constitutes a plausible strategy for disposition of depleted tails; CLI-09-15, 70 NRC 1 (2009)
tails from an enrichment facility are appropriately classified as a low-level radioactive waste; CLI-09-15, 70 NRC 1 (2009)
DESIGN BASIS ACCIDENT
nuclear reactors are required to be designed to withstand certain postulated events or accidents, which result in negligible offsite consequences because the reactor is designed to handle such events; LBP-09-10, 70 NRC 51 (2009)
DESIGN BASIS EVENTS
the agency uses a threshold probability for design basis events of 1 in 10 million for nuclear power plants; LBP-09-26, 70 NRC 939 (2009)
the design basis flood is the magnitude of the flood event that is used to evaluate safety structures, systems, and components important to safety during facility design; LBP-09-25, 70 NRC 867 (2009)
the threshold probability for DBEs should be set at one in a million; LBP-09-17, 70 NRC 311 (2009)
these are defined as those conditions of normal operation, including anticipated operational occurrences, design basis accidents, external events, and natural phenomena for which the plant must be designed; LBP-09-26, 70 NRC 939 (2009)
DESIGN CERTIFICATION
a contention asserting that a combined license application is incomplete because it incorporates by reference a standard design certification and a pending application for a revision to that certified design is inadmissible; LBP-09-10, 70 NRC 51 (2009)
a license application will not be held in abeyance until the design certification rulemaking is completed; LBP-09-16, 70 NRC 227 (2009); LBP-09-18, 70 NRC 385 (2009)
adequacy of applicant's control room and equipment design for radiological protections, in light of the fact that the reactor is proposed to be located within the EPZ of an existing reactor, is an issue that is appropriate in a combined license or standard design certification proceeding; LBP-09-10, 70 NRC 51 (2009)
all environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's environmental assessment for a certified design are considered resolved; LBP-09-19, 70 NRC 433 (2009)
applicant for a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted; LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
applicants are required to address severe accident mitigation design alternatives; LBP-09-19, 70 NRC 433 (2009)

at the combined license stage, applicant may reference both an early site permit and a standard design certification in its application; LBP-09-16, 70 NRC 227 (2009); LBP-09-19, 70 NRC 433 (2009)
challenges to the Commission regulations regarding the design certification process are inadmissible; LBP-09-18, 70 NRC 385 (2009)
if a contention concerning a certification application that has been docketed but not granted is otherwise admissible under 10 C.F.R. 2.309(f)(1), it might be held in abeyance and referred to the Staff; LBP-09-17, 70 NRC 311 (2009)
if the combined license application references an early site permit, applicant must demonstrate that the chosen design falls within the parameters specified in the ESP or, on the safety side, request a variance; LBP-09-19, 70 NRC 433 (2009)
severe accident mitigation design alternative issues are resolved for an application referencing a design control document if the specific site parameters are covered by the site parameters assumed in the DCD SAMDA analysis; LBP-09-19, 70 NRC 433 (2009)
the environmental report associated with each application for a standard design certification must address the costs and benefits of severe accident design mitigation alternatives; LBP-09-10, 70 NRC 51 (2009)
the safety analysis report component of an application for a standard design certification must analyze and address the problem of extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products; LBP-09-10, 70 NRC 51 (2009)
until the reactor design is certified and the rulemaking proceeding concluded, the design continues to change, creating potentially new safety and environmental concerns; LBP-09-18, 70 NRC 385 (2009)
DESIGN
adequacy of applicant's control room and equipment design for radiological protections, in light of the fact that the reactor is proposed to be located within the EPZ of an existing reactor, is an issue that is appropriate in a combined license or standard design certification proceeding; LBP-09-10, 70 NRC 51 (2009)
See also Containment Design
DISCLOSURE
a board may impose sanctions including dismissal of the specific contentions, dismissal of the adjudication, or dismissal of the application for any continuing unexcused failure to make the required mandatory disclosures; LBP-09-30, 70 NRC 1039 (2009)
all parties, except NRC Staff, shall make the mandatory disclosures required within 45 days of the issuance of the licensing board order admitting contentions; CLI-09-15, 70 NRC 1 (2009)
content of a statement that explains an individual's "need to know" safeguards information is described; CLI-09-15, 70 NRC 1 (2009)
if an expert witness is subsequently selected, or any analysis or other authority is subsequently amended or newly developed, then this information must be promptly disclosed; LBP-09-30, 70 NRC 1039 (2009)
mandatory disclosures by parties include the disclosure of the name of any person, including any expert, upon whose opinion the party bases its claims and contentions and may rely upon as a witness, and a copy of the analysis or other authority upon which that person bases his or her opinion; LBP-09-22, 70 NRC 640 (2009)
parties and NRC Staff must provide a list of documents otherwise required to be disclosed for which a claim of privilege or protected status is being made, together with sufficient information for assessing the claim of privilege or protected status of the documents; LBP-09-22, 70 NRC 640 (2009)
parties and the NRC Staff have a continuing duty to update their mandatory disclosures; LBP-09-22, 70 NRC 640 (2009)
scheduling orders are to include provisions for disclosure of electronically stored information; LBP-09-22, 70 NRC 640 (2009)
within 30 days of the board's ruling admitting contentions, the parties must automatically make certain mandatory disclosures; LBP-09-22, 70 NRC 640 (2009)
DISCOVERY
a board may impose sanctions including dismissal of the specific contentions, dismissal of the adjudication, or dismissal of the application for any continuing unexcused failure to make the required mandatory disclosures; LBP-09-30, 70 NRC 1039 (2009)

all parties, except NRC Staff, shall make the mandatory disclosures required within 45 days of the issuance of the licensing board order admitting contentions; CLI-09-15, 70 NRC 1 (2009)
allowing discovery or an evidentiary hearing with respect to safety-related issues to proceed before the final safety evaluation report is issued will serve to further the Commission's objective to ensure a fair, prompt, and efficient resolution of contested issues; CLI-09-15, 70 NRC 1 (2009)
applicant may challenge an expert opinion in the disclosure stage, via a motion for summary disposition, if it can show that there is no genuine issue as to any material fact and that it is entitled to a decision as a matter of law; LBP-09-30, 70 NRC 1039 (2009)
disclosure of a nonwitness (e.g., an expert that the party consulted, but does not intend to use as a witness) is not required; LBP-09-30, 70 NRC 1039 (2009)
disclosure of the name and telephone number of an expert witness, if this information is not known to the party, is not required; LBP-09-30, 70 NRC 1039 (2009)
documents and information exchanged in the mandatory disclosures enter the adjudicatory record only if and when a party proffers the document or information as evidence for the evidentiary hearing; LBP-09-30, 70 NRC 1039 (2009)
if an expert witness has a copy of the analysis or other authority upon which his or her opinion is based, and it is extant and reasonably available to that witness and/or the party, then the mandatory disclosure should include that analysis or other authority; LBP-09-30, 70 NRC 1039 (2009)
if any party attempts to include exhibits that were not disclosed in the mandatory disclosures, thus making it impossible for the other parties to examine the reliability of that information, then the board may prohibit the admission of this new evidence into the record; LBP-09-30, 70 NRC 1039 (2009)
if the duty to make disclosures applied only to parties who have claims and contentions, it would create an unintended and invidious asymmetry in mandatory disclosures, which are the only form of discovery available in Subpart L proceedings; LBP-09-30, 70 NRC 1039 (2009)
if, after the initial disclosure, a party subsequently develops or obtains additional information or documents that meet the requirements of this section, then that party must promptly file a supplemental mandatory disclosure; LBP-09-30, 70 NRC 1039 (2009)
initial disclosures must be made within 30 days of the order granting a request for hearing, which is typically at least 18-24 months before the evidentiary hearing begins; LBP-09-30, 70 NRC 1039 (2009)
intervenors' expert is not required to create a written analysis, but only disclose the written analysis or other documentary authority, if any, that exists and is reasonably available at the time of the disclosure; LBP-09-30, 70 NRC 1039 (2009)
it is not a ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence; LBP-09-30, 70 NRC 1039 (2009)
mandatory disclosures required by 10 C.F.R. 2.336 consist of an exchange of prescribed information and documents between the litigants, and do not need to be submitted to the board; LBP-09-30, 70 NRC 1039 (2009)
mandatory disclosures, like all discovery exchanges, cover a vast array of information and documents that are not evidence and need not meet the requirements of admissible evidence; LBP-09-30, 70 NRC 1039 (2009)
motions to compel or challenges regarding the adequacy of any mandatory disclosure or hearing file, redactions, or the validity of any claim that a document is privileged or protected shall be filed within 10 days after the occurrence or circumstance from which the motion arises; LBP-09-22, 70 NRC 640 (2009)
parties need not provide discovery of electronically stored information from sources that the party identifies as not reasonably accessible because of undue burden or cost; LBP-09-22, 70 NRC 640 (2009)
the mandatory disclosure requirements are not an opportunity to relitigate the admissibility of a contention; LBP-09-30, 70 NRC 1039 (2009)
DISCOVERY AGAINST NRC STAFF
NRC Staff shall comply with discovery requests no later than 30 days after the licensing board order admitting contentions and shall update the information at the same time as the issuance of the safety evaluation report or final environmental impact statement, and, subsequent to the publication of the SER and FEIS, as otherwise required by the Commission's regulations; CLI-09-15, 70 NRC 1 (2009)

SUBJECT INDEX

DISPUTE RESOLUTION
if the attorney or representative of a party is contacted pursuant to the consultation requirement, then that person (or his or her alternate) must make a sincere effort to make himself or herself available to listen and to respond to the moving party's explanation, and to resolve the factual and legal issues raised in the motion; LBP-09-22, 70 NRC 640 (2009)
it is inconsistent with the dispute avoidance/resolution purposes of NRC regulations, and thus insufficient, for the contacted attorney or representative to fail or refuse to consider the substance of the consultation attempt, or for the party to respond that it takes no position on the motion (or issues) and that it reserves the right to file a response to the motion when it is filed; LBP-09-22, 70 NRC 640 (2009)
motions will be rejected if they do not include certification by the attorney or representative of the moving party that they have made a sincere effort to contact the other parties in this proceeding, to explain to them the factual and legal issues raised in the motion, and to resolve those issues; LBP-09-22, 70 NRC 640 (2009)
to be sincere, movant should contact other parties sufficiently in advance to provide enough time for the possible resolution of the matter or issues in question; LBP-09-22, 70 NRC 640 (2009)
DOCUMENT PRODUCTION
each witness is not required to generate an analysis, but rather must disclose the analysis or other authority upon which the witness bases his or her opinion; LBP-09-30, 70 NRC 1039 (2009)
for Subpart G proceedings, each expert witness is required to create, sign, and submit a written expert report; LBP-09-30, 70 NRC 1039 (2009)
if an expert witness has a copy of the analysis or other authority upon which his or her opinion is based, and it is extant and reasonably available to that witness and/or the party, then the mandatory disclosure should include that analysis or other authority; LBP-09-30, 70 NRC 1039 (2009)
if, after the initial disclosure, a party subsequently develops or obtains additional information or documents that meet the requirements of this section, then that party must promptly file a supplemental mandatory disclosure; LBP-09-30, 70 NRC 1039 (2009)
intervenors' expert is not required to create a written analysis, but only disclose the written analysis or other documentary authority, if any, that exists and is reasonably available at the time of the disclosure; LBP-09-30, 70 NRC 1039 (2009)
it is not a ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence; LBP-09-30, 70 NRC 1039 (2009)
mandatory disclosures required by 10 C.F.R. 2.336 consist of an exchange of prescribed information and documents between the litigants, and do not need to be submitted to the board; LBP-09-30, 70 NRC 1039 (2009)
mandatory disclosures, like all discovery exchanges, cover a vast array of information and documents that are not evidence and need not meet the requirements of admissible evidence; LBP-09-30, 70 NRC 1039 (2009)
the mandatory disclosure requirements are not an opportunity to relitigate the admissibility of a contention; LBP-09-30, 70 NRC 1039 (2009)
DOSE, RADIOLOGICAL
if chelating agents are to be comingled in radioactive waste liquids or used to mitigate an accidental release, then they have to be specifically accounted for in the dose analyses; LBP-09-19, 70 NRC 433 (2009)
licensee must use procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable; CLI-09-16, 70 NRC 33 (2009)
DOSE LIMITS
a combined license application must explain the kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in 10 C.F.R. Part 20; LBP-09-27, 70 NRC 992 (2009)
individuals located at the boundary of the exclusion area cannot be exposed to more than 25 rem total effective dose equivalent in any 2-hour period, and any individual located at the outer boundary of the low population zone cannot be exposed to more than 25 rem TEDE during the entire period of any radioactive release; LBP-09-19, 70 NRC 433 (2009)

licensees subject to the provisions of EPA's generally applicable environmental radiation standards in 40 C.F.R. Part 190 shall comply with those standards; LBP-09-19, 70 NRC 433 (2009)
limits for individual members of the public are specified in 10 C.F.R. 20.1301-20.1302; CLI-09-16, 70 NRC 33 (2009)
numerical limits for radiation exposure, including occupational dose limits and radiation dose limits for members of the public, are provided; LBP-09-19, 70 NRC 433 (2009)
petitioners' assertion that no exposure levels are safe is an impermissible challenge to the exposure limits set forth in the NRC's regulations; LBP-09-16, 70 NRC 227 (2009)
the Commission has acknowledged applicability of EPA radiation exposure standards under 40 C.F.R. Part 190; LBP-09-19, 70 NRC 433 (2009)
upper limitations on occupational doses are specified in 10 C.F.R. 20.1201-20.1208; CLI-09-16, 70 NRC 33 (2009)
DRAFT ENVIRONMENTAL IMPACT STATEMENT
although the DEIS may rely in part on applicant's environmental report, Staff must independently evaluate and be responsible for the reliability of all information used in the DEIS; LBP-09-19, 70 NRC 433 (2009)
content of Staff's DEIS is discussed; LBP-09-19, 70 NRC 433 (2009)
DREDGING
the fact that disposal of dredged or fill material in wetlands is regulated by the Environmental Protection Agency and the U.S. Army Corps of Engineers does not render a contention inadmissible; LBP-09-10, 70 NRC 51 (2009)
DRY CASK STORAGE
to the extent that petitioners argue that the provisions of 10 C.F.R. 50.54(hh) should be applied to dry cask storage, they may file a rulemaking petition with the Commission; LBP-09-17, 70 NRC 311 (2009)
EARLY SITE PERMIT APPLICATION
a description and safety assessment of the site must includes an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under radiological consequence evaluation factors; LBP-09-19, 70 NRC 433 (2009)
all reasonable alternatives to the site proposed for the early site permit are to be identified; LBP-09-19, 70 NRC 433 (2009)
applicant may request that a limited work authorization be issued in conjunction with the ESP; LBP-09-19, 70 NRC 433 (2009)
applicant must describe equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences; LBP-09-19, 70 NRC 433 (2009)
applicant must file an environmental report, addressing the five factors of 10 C.F.R. 51.45(b)(1)-(5); LBP-09-19, 70 NRC 433 (2009)
applicant must submit a safety assessment that includes an analysis of a fission product release from an accident, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-19, 70 NRC 433 (2009)
applicant's environmental report must include an analysis of alternatives available for reducing or avoiding adverse environmental effects; LBP-09-19, 70 NRC 433 (2009)
as partial construction permit applications, ESP applications are subject to the Atomic Energy Act hearing requirement, as well as all procedural requirements in 10 C.F.R. Part 2; LBP-09-19, 70 NRC 433 (2009)
for applications filed after January 2, 1971, applicant must identify design objectives and means to maintain levels of radioactive effluents as low as is reasonably achievable; LBP-09-19, 70 NRC 433 (2009)
if applicant determines that there are physical characteristics that could pose a significant impediment to the development of emergency plans, the application must identify mitigation measures; LBP-09-19, 70 NRC 433 (2009)
in its review, Staff must consider physical characteristics of the site, specifically noting that factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 433 (2009)

NRC provides detailed guidance for Staff personnel reviewing the safety aspects of applications; LBP-09-19, 70 NRC 433 (2009)
NRC Staff is required to prepare an environmental impact statement in connection with issuance of an ESP; LBP-09-19, 70 NRC 433 (2009)
NRC Staff's environmental impact statement prepared during review of an early site permit application must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-09-19, 70 NRC 433 (2009)
severe accident mitigation design alternative issues are resolved for an application referencing a design control document if the specific site parameters are covered by the site parameters assumed in the DCD SAMDA analysis; LBP-09-19, 70 NRC 433 (2009)
Staff is to review ESP applications according to the applicable standards set out in 10 C.F.R. Part 50 and its appendices and 10 C.F.R. Part 100; LBP-09-19, 70 NRC 433 (2009)
the Commission may defer resolution of severe accident mitigation alternatives until the construction permit or combined license stage; LBP-09-19, 70 NRC 433 (2009)
the environmental report for an ESP application may evaluate the environmental impacts of a reactor or reactors falling within the site characteristics and design parameters for the ESP application; LBP-09-19, 70 NRC 433 (2009)
the site safety analysis report filed with an early site permit application must include information that identifies physical characteristics of the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans; LBP-09-19, 70 NRC 433 (2009)
the site safety analysis report submitted with an early site permit application must contain the seismic, meteorological, hydrologic, and geologic characteristics of the proposed site; LBP-09-19, 70 NRC 433 (2009)
with regard to alternative sites for an early site permit, NRC Staff must evaluate both the process (i.e., methodology) used by the applicant and the reasonableness of the product (e.g., potential sites) identified by that process; LBP-09-19, 70 NRC 433 (2009)
EARLY SITE PERMIT PROCEEDINGS
all environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's environmental assessment for a certified design are considered resolved; LBP-09-19, 70 NRC 433 (2009)
board authority to make findings on limited work authorizations is discussed; LBP-09-19, 70 NRC 433 (2009)
environmental findings that a board must make to authorize issuance of an ESP are described; LBP-09-19, 70 NRC 433 (2009)
for purposes of the mandatory/uncontested portion of an ESP proceeding, the board takes official notice of publicly available documents associated with the Staff's safety and environmental reviews; LBP-09-19, 70 NRC 433 (2009)
in a mandatory hearing, a licensing board must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance; LBP-09-19, 70 NRC 433 (2009)
items for which sufficient information is lacking at the ESP stage of the licensing process may be subject to deferral for consideration at the combined license stage of the process; LBP-09-19, 70 NRC 433 (2009)
on baseline NEPA issues in early site permit cases, boards must reach their own independent determination, but should do so without second-guessing underlying technical or factual findings by the NRC Staff; LBP-09-19, 70 NRC 433 (2009)
prior to issuance of an ESP, the findings required by 10 C.F.R. Part 51, Subpart A must be made; LBP-09-19, 70 NRC 433 (2009)
safety findings that a board must make for issuance of an ESP are clarified; LBP-09-19, 70 NRC 433 (2009)
when an ESP is issued with an associated limited work authorization, the board must find relative to the LWA that any significant adverse environmental impact resulting from activities requested under 10 C.F.R. 52.17(c) can be redressed; LBP-09-19, 70 NRC 433 (2009)

when reviewing an ESP application in an uncontested proceeding, licensing boards are to conduct a simple sufficiency review rather than a *de novo* review on both Atomic Energy Act and National Environmental Policy Act issues; LBP-09-19, 70 NRC 433 (2009)
with respect to certain NEPA findings, boards in ESP proceedings are to make independent environmental judgments, though they need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities; LBP-09-19, 70 NRC 433 (2009)
EARLY SITE PERMITS
a combined license application reference to an ESP must include a safety analysis report that either includes or incorporates by reference the ESP site safety analysis report and that contains additional information and analyses sufficient to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the ESP; LBP-09-19, 70 NRC 433 (2009)
a site redress plan remains in effect for an EST applicant even if the ESP with which the LWA is issued is not referenced in a construction permit or COL application during the period that the ESP remains valid; LBP-09-19, 70 NRC 433 (2009)
although a presiding officer should issue a separate partial initial decision regarding a limited work authorization request, the board finds no practical or logical basis for separating its consideration of the adequacy of the LWA request from its determination regarding the early site permit with which it is associated; LBP-09-19, 70 NRC 433 (2009)
an applicant who may apply for a construction permit under Part 50, or a combined license under Part 52, may apply for an ESP; LBP-09-19, 70 NRC 433 (2009)
an ESP is an approval for a nuclear plant site; LBP-09-19, 70 NRC 433 (2009)
an ESP specifies design parameters for the site; LBP-09-19, 70 NRC 433 (2009)
an initial decision directing the issuance or amendment of a limited work authorization or an early site permit is immediately effective upon issuance unless the presiding officer finds that good cause has been shown by a party why the initial decision should not become immediately effective; LBP-09-19, 70 NRC 433 (2009)
any permit conditions imposed that are not met before a combined license referencing the ESP is issued will attach to the combined license; LBP-09-19, 70 NRC 433 (2009)
applicant has the option of either proposing a complete and integrated emergency plan or proposing major features of the emergency plan for review and approval by NRC, in consultation with the Department of Homeland Security; LBP-09-19, 70 NRC 433 (2009)
applicant is authorized to perform certain site preparation activities that would otherwise only be permitted following the issuance of a Part 50 construction permit or a Part 52 combined license; LBP-09-19, 70 NRC 433 (2009)
applicant may request that a limited work authorization be issued in conjunction with the ESP; LBP-09-19, 70 NRC 433 (2009)
applicant must perform an evaluation and analysis of the postulated fission product release to evaluate the offsite radiological consequences; LBP-09-19, 70 NRC 433 (2009)
applicant's environmental report must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-09-19, 70 NRC 433 (2009)
applicant's initial consideration of DOE's Portsmouth, Ohio, and SRS sites as alternative sites was reasonable as part of its alternative site analysis; LBP-09-19, 70 NRC 433 (2009)
at the combined license stage, applicant may reference both an ESP and a standard design certification in its application; LBP-09-19, 70 NRC 433 (2009)
brownfield sites owned by companies other than applicant may reasonably be excluded as alternative sites; LBP-09-19, 70 NRC 433 (2009)
if applicant chooses to submit a complete and integrated emergency plan, applicant also is required to make a good-faith effort to obtain a certification from federal, state, and local governmental agencies with emergency planning responsibilities; LBP-09-19, 70 NRC 433 (2009)
if applicant submits a complete and integrated emergency plan in conjunction with an ESP application, NRC Staff must find that the emergency plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency; LBP-09-19, 70 NRC 433 (2009)
if granted, an ESP evidences Commission approval of a site for one or more nuclear power facilities; LBP-09-19, 70 NRC 433 (2009)

if limited work authorization activities are approved by NRC in conjunction with an ESP, the ESP as issued shall specify those authorized activities; LBP-09-19, 70 NRC 433 (2009)
if the combined license application references an ESP, applicant must demonstrate that the chosen design falls within the parameters specified in the ESP or, on the safety side, request a variance; LBP-09-19, 70 NRC 433 (2009)
if the Commission decides to authorize issuance of an ESP, the issued ESP must specify the site characteristics, design parameters, and terms and conditions of the ESP that the Commission deems appropriate; LBP-09-19, 70 NRC 433 (2009)
if the proposed siting of a plant slated for an ESP involves unresolved conflicts concerning alternative uses of available resources, then this discussion must be sufficiently complete to allow the Staff to develop and explore appropriate alternatives to the ESP pursuant to NEPA § 102(2)(E); LBP-09-19, 70 NRC 433 (2009)
noninclusion of DOE sites in alternative site analysis that are far outside applicant's region of interest is reasonable; LBP-09-19, 70 NRC 433 (2009)
preconstruction activities that do not require NRC approval are discussed; LBP-09-19, 70 NRC 433 (2009)
the inspections, tests, analyses, and acceptance criteria associated with emergency planning reflect those aspects of the emergency plan that cannot be described or completed until the plant is further along in the licensing and construction process; LBP-09-19, 70 NRC 433 (2009)
to grant an ESP, the Commission must find that the proposed inspections, tests, analyses, and acceptance criteria, including any on emergency planning, are necessary and sufficient, within the scope of the ESP, to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the Act, and the Commission's regulations; LBP-09-19, 70 NRC 433 (2009)
ECONOMIC EFFECTS
assertions that building two new nuclear reactors in a troubled economy is fiscally irresponsible is outside the scope of a combined license proceeding; LBP-09-10, 70 NRC 51 (2009)
ECONOMIC INJURY
ratepayer impacts are outside the scope of a combined license proceeding because the state, not the NRC, is charged with protecting ratepayers' interests; LBP-09-10, 70 NRC 51 (2009)
ECONOMIC ISSUES
an agency cannot redefine the applicant's goals, and the EIS alternatives analysis should be based around the applicant's goals, including its economic goals; LBP-09-17, 70 NRC 311 (2009)
revenue decoupling is a state regulatory matter that is outside of the scope of, and not material to, the NRC licensing process; LBP-09-10, 70 NRC 51 (2009)
See also Costs; Financial Assurance; Financial Qualifications; Financial Resources
EFFECTIVENESS
initial decisions are not effective until they are reviewed by the Commission; LBP-09-19, 70 NRC 433 (2009)
See also Immediate Effectiveness
ELECTRONIC FILING
all participants in NRC proceedings must submit and serve all adjudicatory documents over the Internet or, in some cases, mail copies on electronic storage media; CLI-09-15, 70 NRC 1 (2009)
participants may not submit paper copies of their filings unless they seek a waiver; CLI-09-15, 70 NRC 1 (2009)
procedures for electronic filing and for obtaining waivers from e-filing requirements are described; CLI-09-15, 70 NRC 1 (2009)
EMERGENCY ACTION LEVELS
EALs are the criteria used to determine the notifications that need to be made to federal, state, and local authorities and to determine the appropriate protective responses to a particular set of emergency conditions; LBP-09-19, 70 NRC 433 (2009)
EMERGENCY NOTIFICATION SYSTEM
procedures must be established to provide for early notification and clear instructions to the populace within the plume exposure pathway emergency planning zone; LBP-09-16, 70 NRC 227 (2009)

EMERGENCY OPERATIONS FACILITY
construction activities associated with onsite emergency facilities necessary to comply with section 50.47 and 10 C.F.R. Part 50, Appendix E require a limited work authorization; LBP-09-19, 70 NRC 433 (2009)
EMERGENCY PLANNING
a combined license application must include emergency planning information for the emergency planning zone, generally consisting of an area with a 10-mile radius from the proposed reactor; LBP-09-10, 70 NRC 51 (2009)
a combined license application must include the proposed inspections, tests, and analyses, including those applicable to emergency planning, to be performed and the acceptance criteria that are necessary and sufficient to support the Commission's finding that a COL can be granted; LBP-09-19, 70 NRC 433 (2009)
existence of another independent nuclear power plant within the 10-mile-radius emergency planning zone of a proposed new nuclear power plant is a significant factor for purposes of emergency planning for the new reactor; LBP-09-10, 70 NRC 51 (2009)
if an early site permit applicant determines that there are physical characteristics that could pose a significant impediment to the development of emergency plans, the application must identify measures that would mitigate or eliminate the significant impediment; LBP-09-19, 70 NRC 433 (2009)
procedures must be established to provide for early notification and clear instructions to the populace within the plume exposure pathway emergency planning zone; LBP-09-16, 70 NRC 227 (2009)
the site safety analysis report filed with an early site permit application must include information that identifies physical characteristics of the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans; LBP-09-19, 70 NRC 433 (2009)
EMERGENCY PLANNING ZONES
existence of another independent nuclear power plant within the 10-mile-radius emergency planning zone of a proposed new nuclear power plant is a significant factor for purposes of emergency planning for the new reactor; LBP-09-10, 70 NRC 51 (2009)
potassium iodide distribution beyond the 10-mile EPZ Is not necessary; LBP-09-16, 70 NRC 227 (2009)
procedures must be established to provide for early notification and clear instructions to the populace within the plume exposure pathway EPZ; LBP-09-16, 70 NRC 227 (2009)
the EPZ is established based on safety considerations and is not intended for use as a boundary for assessing environmental impacts; LBP-09-16, 70 NRC 227 (2009)
the plume exposure pathway EPZ shall generally consist of an area covering a radius of about 10 miles; LBP-09-16, 70 NRC 227 (2009)
EMERGENCY PLANS
an early site permit applicant has the option of either proposing a complete and integrated emergency plan or proposing major features of the emergency plan for review and approval by NRC, in consultation with the Department of Homeland Security; LBP-09-19, 70 NRC 433 (2009)
content of a complete and integrated emergency plan is discussed; LBP-09-19, 70 NRC 433 (2009)
FEMA's finding on emergency plans constitutes a rebuttable presumption on questions of adequacy and implementation capability in NRC licensing proceedings; LBP-09-19, 70 NRC 433 (2009)
if applicant chooses to submit a complete and integrated emergency plan at the early site permit stage, applicant also is required to make a good-faith effort to obtain a certification from federal, state, and local governmental agencies with emergency planning responsibilities; LBP-09-19, 70 NRC 433 (2009)
if applicant submits a complete and integrated emergency plan in conjunction with an early site permit application, NRC Staff must find that the emergency plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency; LBP-09-19, 70 NRC 433 (2009)
if applicant submits a complete and integrated emergency plan under section 52.17(b)(2)(ii), it must include in the ESP application the proposed inspections, tests, and analyses that will be performed, and the acceptance criteria that are necessary and sufficient for the Commission's required findings for issuance of the ESP; LBP-09-19, 70 NRC 433 (2009)
in its review of emergency plans, NRC Staff must take into account FEMA's findings; LBP-09-19, 70 NRC 433 (2009)

NRC Staff's review of an integrated emergency plan focuses primarily on the applicant-prepared onsite provisions of the plans, which include the evacuation time estimate provided by applicant, and the inspections, tests, analyses, and acceptance criteria; LBP-09-19, 70 NRC 433 (2009)
the inspections, tests, analyses, and acceptance criteria associated with emergency planning reflect those aspects of the emergency plan that cannot be described or completed until the plant is further along in the licensing and construction process; LBP-09-19, 70 NRC 433 (2009)
EMERGENCY RESPONSE
emergency action levels are the criteria used to determine the notifications that need to be made to federal, state, and local authorities and to determine the appropriate protective responses to a particular set of emergency conditions; LBP-09-19, 70 NRC 433 (2009)
EMPLOYMENT
the right to follow any of the common occupations of life is an inalienable right that was formulated as such under the phrase "pursuit of happiness" in the Declaration of Independence and it is a large ingredient in the civil liberty of the citizen; LBP-09-24, 70 NRC 676 (2009)
where the government has deprived an individual of a property interest without a hearing, the government must be prepared to show an important government interest, accompanied by a substantial assurance that the deprivation is not baseless or unwarranted; LBP-09-24, 70 NRC 676 (2009)
ENDANGERED SPECIES
contention alleging that the threatened eastern fox snake inhabits the nuclear plant site and that construction activities for the new reactor will kill snakes, destroy their habitat, and might eliminate them from the area is within the scope of a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
licensing boards lack the authority to require applicant to adopt additional mitigation measures for the protection of endangered or threatened species; LBP-09-16, 70 NRC 227 (2009)
portions of a contention that allege that the environmental report failed to adequately address the zone of environmental impact, impact on listed species, and appropriate mitigation are admissible; LBP-09-10, 70 NRC 51 (2009)
ENERGY EFFICIENCY
applicant is not obliged to examine general efficiency or conservation proposals that would do nothing to satisfy the particular project's goals of producing baseload power; LBP-09-17, 70 NRC 311 (2009)
ENFORCEMENT ACTIONS
engaging in deliberate misconduct that caused inaccurate and incomplete information to be provided to the NRC concerning conditions at a reactor resulted in debarment from licensed activities for 5 years; LBP-09-11, 70 NRC 151 (2009)
exercise of the power of compulsory process must be carefully circumscribed when the investigative process tends to impinge upon such highly sensitive areas as freedom of speech or press, freedom of political association, and freedom of communication of ideas; LBP-09-24, 70 NRC 676 (2009)
when the NRC Staff can, consistent with its duty to protect public health and safety, accord some form of predeprivation hearing, such a course of action is advisable in light of the important private interest in retaining employment and the fact that such a proceeding provides some opportunity for the employee to present his side of the case; LBP-09-24, 70 NRC 676 (2009)
ENFORCEMENT ORDERS
a challenge to immediate effectiveness must state with particularity the reasons why the enforcement order is unsound; LBP-09-24, 70 NRC 676 (2009)
a hearing challenging an immediately effective enforcement order will be conducted expeditiously, giving due consideration to the rights of the parties; LBP-09-24, 70 NRC 676 (2009)
conviction of a crime that is identical to a charge in an enforcement order provides substantial assurance that the enforcement order was not baseless or unwarranted; LBP-09-24, 70 NRC 676 (2009)
the subject of an enforcement order has the right to challenge, on limited grounds, the immediate effectiveness of the order; LBP-09-24, 70 NRC 676 (2009)
upon submitting for approval to work under a reciprocity agreement licensee will send a copy of the board order confirming the settlement agreement to the regulator processing the reciprocity application at least 2 weeks prior to engaging in activity authorized by the reciprocity agreement; LBP-09-12, 70 NRC 159 (2009)

SUBJECT INDEX

ENFORCEMENT PROCEEDINGS
a hearing challenging an immediately effective enforcement order will be conducted expeditiously, giving due consideration to the rights of the parties; LBP-09-24, 70 NRC 676 (2009)
boards should not be in the position of upholding Staff enforcement orders on legal theories that the Staff did not and does not embrace and in any event do not fit the circumstances of the case before them; LBP-09-24, 70 NRC 676 (2009)
in addition to having the burden on immediate effectiveness, the target is apparently expected to address the merits at that point as well; LBP-09-24, 70 NRC 676 (2009)
inquiry into an individual's actual knowledge is entirely factual, requiring examination of the record; LBP-09-24, 70 NRC 676 (2009)
licensing boards must be satisfied that the terms of a proposed agreement reflect a fair and reasonable resolution of the matter at hand and is in keeping with the objectives of NRC's enforcement policy and satisfies the requirements of 10 C.F.R. 2.338(g) and (h); LBP-09-11, 70 NRC 151 (2009)
licensing boards review NRC Staff's enforcement orders *de novo* to determine on the basis of the hearing record whether the charges are sustained and the sanction imposed is warranted; LBP-09-24, 70 NRC 676 (2009)
NRC Staff brings the charges that frame the board's review of enforcement orders; LBP-09-24, 70 NRC 676 (2009)
NRC Staff's role in an enforcement proceeding is akin to that of a prosecutor, and it has the burden to prove its allegations by a preponderance of the reliable, probative, and substantial evidence; LBP-09-24, 70 NRC 676 (2009)
providing predeprivation notice and informal hearing permits the employee to give his version of the events and provides a meaningful hedge against erroneous action; LBP-09-24, 70 NRC 676 (2009)
the scope of early review of an enforcement order is severely limited and the order's immediate effectiveness depriving the accused of the freedom to work pending trial is presumptively valid, placing the burden on the accused to demonstrate its invalidity; LBP-09-24, 70 NRC 676 (2009)
to prevail in establishing that the accused's actions constituted a violation, Staff must demonstrate by a preponderance of the evidence that the accused had actual knowledge of the information associated with his actions and that he deliberately acted contrary to that knowledge; LBP-09-24, 70 NRC 676 (2009)
to successfully challenge an enforcement order, the target must show that the order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error; LBP-09-24, 70 NRC 676 (2009)
where the record in an enforcement proceeding may be devoid of direct evidence to establish knowledge, the Staff may have to build its case upon circumstantial evidence alone; LBP-09-24, 70 NRC 676 (2009)
ENVIRONMENTAL ASSESSMENT
all environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's EA for a certified design are considered resolved; LBP-09-19, 70 NRC 433 (2009)
ENVIRONMENTAL EFFECTS
all significant environmental impacts and all reasonable alternatives should be considered for a combined license, but these are governed by the rule of reason; LBP-09-10, 70 NRC 51 (2009)
although applicant's description of existing water quality conditions did not separately evaluate the contributions of specific sources, it nonetheless formed an environmental baseline against which to measure the cumulative impact of the proposed new reactor; LBP-09-16, 70 NRC 227 (2009)
"cumulative impact"is defined as the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions; LBP-09-16, 70 NRC 227 (2009)
cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time; LBP-09-19, 70 NRC 433 (2009)
direct environmental impacts are those caused by the federal action, and occurring at the same time and place as that action; LBP-09-19, 70 NRC 433 (2009)
experience with and information about past direct and indirect effects of individual past actions may be useful in illuminating or predicting the direct and indirect effects of a proposed action; LBP-09-16, 70 NRC 227 (2009)

if a NEPA contention alleges that impacts or alternatives that are patently outside the realm of reason must be considered, then the contention should be denied for failure to demonstrate that the issue raised is within the legitimate scope of NEPA; LBP-09-10, 70 NRC 51 (2009)
in the context of NEPA, NRC is obligated to study matters that may be far afield of its primary mission, including the environmental impacts related to the permits and licenses issued by other governmental agencies; LBP-09-21, 70 NRC 581 (2009)
indirect environmental impacts are caused by the action at a later time or more distant place, yet are still reasonably foreseeable; LBP-09-19, 70 NRC 433 (2009)
portions of a contention that allege that the environmental report failed to adequately address the zone of environmental impact, impact on listed species, and appropriate mitigation are admissible; LBP-09-10, 70 NRC 51 (2009)
severe accident mitigation alternatives analysis must be site specific and given careful consideration in order to comply with the National Environmental Policy Act; LBP-09-10, 70 NRC 51 (2009)
the decision as to whether an alleged environmental impact or alternative is significant or reasonable is the merits of a NEPA contention and should not be adjudicated at the contention admissibility stage under the guise of materiality or scope; LBP-09-10, 70 NRC 51 (2009)
the emergency planning zone is established based on safety considerations and is not intended for use as a boundary for assessing environmental impacts; LBP-09-16, 70 NRC 227 (2009)
the environmental baseline reflects the effects of all currently existing pollution sources in the relevant watershed, including contributions of all nuclear power plants, and petitioners failed to provide information indicating that this aggregate analysis was insufficient under NEPA; LBP-09-16, 70 NRC 227 (2009)
the environmental consequences of proposals being considered by an agency within a region must be considered together to determine the synergistic and cumulative environmental effects; LBP-09-16, 70 NRC 227 (2009)
the environmental report shall discuss the impacts of the proposed action on the environment in proportion to their significance; LBP-09-25, 70 NRC 867 (2009)
when an early site permit is issued with an associated limited work authorization, the board must find relative to the LWA that any significant adverse environmental impact resulting from activities requested under section 52.17(c) can be redressed; LBP-09-19, 70 NRC 433 (2009)
ENVIRONMENTAL IMPACT STATEMENT
a detailed statement concerning the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided should the proposal be implemented, and any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented must be provided; LBP-09-16, 70 NRC 227 (2009)
agencies are required to study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources and include a detailed statement of the alternatives to the proposed action; LBP-09-10, 70 NRC 51 (2009)
agencies are to exercise a degree of skepticism in dealing with the self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals; LBP-09-10, 70 NRC 51 (2009)
all reasonable alternatives must be identified and discussed; LBP-09-17, 70 NRC 311 (2009); LBP-09-19, 70 NRC 433 (2009)
an agency cannot redefine the applicant's goals, and the alternatives analysis should be based around the applicant's goals, including its economic goals; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
an agency must consider direct, indirect, and cumulative impacts of an action; LBP-09-19, 70 NRC 433 (2009)
an assessment of all environmental impacts and alternatives must be included, even though NRC has no jurisdiction to regulate such impacts or jurisdiction to impose such alternatives; LBP-09-10, 70 NRC 51 (2009)
an EIS for a materials license must include a statement on the alternatives to the proposed action, including a discussion of the no-action alternative; CLI-09-15, 70 NRC 1 (2009)

an EIS for an early site permit application must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-09-19, 70 NRC 433 (2009)
an otherwise reasonable alternative will not be excluded from discussion solely on the ground that it is not within the jurisdiction of the NRC; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
applicant may not define the objectives of its action in terms so unreasonably narrow that only one alternative would accomplish the applicant's goals because this would make the agency's alternatives analysis a foreordained formality; LBP-09-10, 70 NRC 51 (2009)
applicant's environmental report is not the same as the NRC's EIS; LBP-09-10, 70 NRC 51 (2009)
because the environmental report is the only environmental document available when NRC issues its notice of opportunity to request a hearing, all initial contentions necessarily focus on the adequacy of the applicant's ER, but the public will have a new opportunity to file environmental contentions when the NRC Staff issues the EIS; LBP-09-10, 70 NRC 51 (2009); LBP-09-25, 70 NRC 867 (2009)
Council on Environmental Quality regulations define direct, indirect, and cumulative impacts and require that they be considered in the EIS; LBP-09-10, 70 NRC 51 (2009)
for purposes of the mandatory/uncontested portion of an ESP proceeding, the board takes official notice of publicly available documents associated with the Staff's safety and environmental reviews; LBP-09-19, 70 NRC 433 (2009)
NEPA § 102(2)(C)(ii) implicitly requires that the EIS disclose mitigation measures; LBP-09-16, 70 NRC 227 (2009)
no discussion of environmental impacts of spent fuel storage for the specified period is required in an environmental report or an environmental impact statement prepared in connection with the requested action; LBP-09-18, 70 NRC 385 (2009)
NRC is required to evaluate and balance both the claimed benefits and the environmental costs of a proposed new reactor; LBP-09-16, 70 NRC 227 (2009)
NRC must analyze the need for additional power when it relies upon a benefit in performing the balancing of benefits and costs; LBP-09-16, 70 NRC 227 (2009)
NRC Staff is required to prepare an EIS in connection with issuance of an early site permit; LBP-09-19, 70 NRC 433 (2009)
presentation of alternatives in an applicant's environmental report and in an NRC EIS must be in comparative form; LBP-09-19, 70 NRC 433 (2009)
Staff must address matters such as the environmental impacts of unregulated seepage into adjacent groundwater; LBP-09-25, 70 NRC 867 (2009)
the analysis of reasonably foreseeable significant adverse impacts regarding those events with potential catastrophic consequences must be supported by credible scientific evidence, must not be not based on pure conjecture, and must be within the rule of reason; LBP-09-26, 70 NRC 939 (2009)
the environmental report impact analysis must include sufficient data and the alternatives analysis must be sufficiently complete to aid the Commission in preparing the EIS; LBP-09-10, 70 NRC 51 (2009)
the environmental report is required to address a list of environmental considerations that correspond to the environmental considerations that NEPA § 102(2)(C)(i)-(v) requires the agency to address in the EIS; LBP-09-16, 70 NRC 227 (2009)
the fact that an environmental impact is regulated by another federal agency or by a state does not justify the exclusion of the analysis in NRC's EIS; LBP-09-16, 70 NRC 227 (2009)
the NEPA alternatives analysis to the proposed action is the heart of an EIS; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)
the requirement to discuss alternatives in the environmental report parallels NEPA's requirement that an EIS provide a detailed statement of reasonable alternatives to a proposed action; LBP-09-16, 70 NRC 227 (2009)
under NEPA the Commission looks to the reasonably foreseeable impacts of simply licensing the facility, not the reasonably foreseeable effects of a successful terrorist attack; LBP-09-26, 70 NRC 939 (2009)
under the rule of reason, the EIS need not consider an infinite range of alternatives, only reasonable or feasible ones; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)
See also Draft Environmental Impact Statement; Final Environmental Impact Statement

ENVIRONMENTAL ISSUES
commencement of evidentiary hearings on environmental issues is prohibited until after the final environmental impact statement is issued; LBP-09-22, 70 NRC 640 (2009)
ENVIRONMENTAL JUSTICE
contentions must show that the affected local population qualifies as a minority or low-income population; LBP-09-18, 70 NRC 385 (2009)
NEPA is the only legal grounds for an admissible contention relating to environmental justice issues; LBP-09-18, 70 NRC 385 (2009)
ENVIRONMENTAL PROTECTION AGENCY
carbon dioxide falls within the Clear Air Act's definition of air pollutants subject to EPA's regulatory authority; LBP-09-17, 70 NRC 311 (2009)
licensees subject to the provisions of EPA's generally applicable environmental radiation standards in 40 C.F.R. Part 190 shall comply with those standards; LBP-09-19, 70 NRC 433 (2009)
nothing in the National Environmental Policy Act shall be deemed to authorize any federal agency to review any effluent limitation or other requirement established pursuant to the Clean Water Act or to authorize any such agency to impose any effluent limitation other than those set by EPA or a state agency that has been delegated such authority; LBP-09-25, 70 NRC 867 (2009)
the Commission has acknowledged applicability of EPA radiation exposure standards under 40 C.F.R. Part 190; LBP-09-19, 70 NRC 433 (2009)
when water quality decisions have been made by a state pursuant to the Clean Water Act and these decisions are raised in NRC licensing proceedings, the NRC is bound to take EPA's considered decisions at face value; LBP-09-25, 70 NRC 867 (2009)
ENVIRONMENTAL REPORT
a contention challenging the absence in the ER of consideration of impacts from a severe radiological accident at one unit on other colocated units, supported by fact-based argument demonstrating a genuine dispute on a material issue and identifying supporting reasons for petitioners' belief, is admitted; LBP-09-17, 70 NRC 311 (2009)
a solely wind- or solar-powered facility could not satisfy a project's purpose of providing baseload power; LBP-09-17, 70 NRC 311 (2009)
although construction of the provisions of 10 C.F.R. Part 51 mandating the contents of applicant's ER may be informed by consideration of general National Environmental Policy Act principles, the Commission must look to the wording of the Part 51 regulations to determine if an ER is satisfactory or deficient; LBP-09-10, 70 NRC 51 (2009)
although the draft environmental impact statement may rely in part on applicant's ER, Staff must independently evaluate and be responsible for the reliability of all information used in the DEIS; LBP-09-19, 70 NRC 433 (2009)
an assessment of all environmental impacts and alternatives must be included, even though NRC has no jurisdiction to regulate such impacts or jurisdiction to impose such alternatives; LBP-09-10, 70 NRC 51 (2009)
an ER for a materials license must include a statement on the alternatives to the proposed action, including a discussion of the no-action alternative; CLI-09-15, 70 NRC 1 (2009)
applicant for an early site permit may evaluate the environmental impacts of a reactor or reactors falling within the site characteristics and design parameters for the ESP application; LBP-09-19, 70 NRC 433 (2009)
applicant for an early site permit must file an ER, addressing the five factors of 10 C.F.R. 51.45(b)(1)-(5); LBP-09-19, 70 NRC 433 (2009)
applicant is not obliged to examine general efficiency or conservation proposals that would do nothing to satisfy the particular project's goals of producing baseload power; LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)
applicant is required to address a list of environmental considerations that correspond to the environmental considerations that NEPA § 102(2)(C)(i)-(v) requires the agency to address in the environmental impact statement; LBP-09-16, 70 NRC 227 (2009)
applicant is required to analyze the alternatives available for reducing or avoiding adverse environmental effects; LBP-09-10, 70 NRC 51 (2009)

applicant is required to evaluate only alternatives that support the purpose of the project; LBP-09-21, 70 NRC 581 (2009)
applicant is required to take Table S-3 as the basis for evaluating the contribution of the environmental effects of management of high-level wastes related to uranium fuel cycle activities; LBP-09-21, 70 NRC 581 (2009)
applicant must address matters such as the environmental impacts of unregulated seepage into adjacent groundwater; LBP-09-25, 70 NRC 867 (2009)
applicant must include a description of the proposed action, a statement of its purposes, and a discussion of the impacts, adverse environmental effects, and alternatives to the proposed action; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
applicant must include an analysis of alternatives available for reducing or avoiding adverse environmental effects; LBP-09-19, 70 NRC 433 (2009)
applicant must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed; LBP-09-19, 70 NRC 433 (2009)
applicant must submit a supplement to its ER at the operating license stage that discusses the same matters described in 10 C.F.R. 51.45, 51.51, and 51.52, which would have been initially discussed in the ER at the construction permit stage, but only to the extent that those matters differ from those discussed or reflect new information; LBP-09-26, 70 NRC 939 (2009)
applicant shall discuss the impacts of the proposed action on the environment in proportion to their significance; LBP-09-25, 70 NRC 867 (2009)
applicants' assertion that low-level radioactive waste could be transferred to another licensee or that some other arrangement might be established in the future is not sufficient to erase the requirement that reasonably foreseeable environmental impacts be assessed in an environmental report; CLI-09-20, 70 NRC 911 (2009)
applicant's ER is not the same as the NRC's environmental impact statement; LBP-09-10, 70 NRC 51 (2009)
because petitioners fail to create a genuine issue, the board need not resolve whether applicant's purpose is unreasonably narrow or whether a proposed alternative is so far beyond the realm of reason that it must be rejected out of hand; LBP-09-21, 70 NRC 581 (2009)
because the environmental report is the only environmental document available when NRC issues its notice of opportunity to request a hearing, initial contentions necessarily focus on the adequacy of the applicant's ER under Part 51; LBP-09-10, 70 NRC 51 (2009); LBP-09-25, 70 NRC 867 (2009)
carbon dioxide emissions from the uranium fuel cycle are to be listed as zero; LBP-09-21, 70 NRC 581 (2009)
each application for a standard design certification must address the costs and benefits of severe accident design mitigation alternatives; LBP-09-10, 70 NRC 51 (2009)
each of the five subelements covered by NEPA § 102(2)(C) must be discussed; LBP-09-16, 70 NRC 227 (2009)
failure to provide facts or expert opinion sufficient to show that the environmental report disregarded a feasible alternative based on either wind power, solar power, or some combination of the two renders the contention inadmissible; LBP-09-16, 70 NRC 227 (2009)
if the environmental impact of mining activities is potentially significant, then the failure of the ER to disclose the location of the offsite mine does not immunize it from being the subject of a legitimate contention; LBP-09-10, 70 NRC 51 (2009)
information submitted in the ER should not be confined to information supporting the proposed action but should also include adverse information; LBP-09-16, 70 NRC 227 (2009)
information that the ER provides must be accurate and up-to-date in order to support an agency's determination that a project will have no significant impact on the environment; LBP-09-16, 70 NRC 227 (2009)
NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews; LBP-09-26, 70 NRC 939 (2009)
NEPA has only a limited role to play in interpreting Part 51's requirements for the ER; LBP-09-16, 70 NRC 227 (2009)
no discussion of any environmental impact of spent fuel storage for the period following the term of the reactor combined license is required; LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)

no discussion of need for power or alternative energy sources is required in a supplemental environmental report at the operating license stage; LBP-09-26, 70 NRC 939 (2009)
petitioners' assertion that applicant's ER fails to include an analysis of the impacts of a governmental entity managing long-term storage of high-level waste onsite and cost quantifications of such management fails to create a genuine dispute; LBP-09-21, 70 NRC 581 (2009)
petitioners question the underlying analysis of fish kills in the environmental report as being outdated, but they fail to provide any information to show that the results of the study are no longer representative; LBP-09-16, 70 NRC 227 (2009)
presentation of alternatives in an applicant's ER and in an NRC environment impact statement must be in comparative form; LBP-09-19, 70 NRC 433 (2009)
the alternatives discussion in the ER or environmental impact statement need not include every possible alternative, but every reasonable alternative; LBP-09-16, 70 NRC 227 (2009)
the ER prepared for the combined license stage must take Table S-3 as the basis for evaluating the contribution of the environmental effects of the fuel cycle to the environmental costs of licensing the reactor; CLI-09-21, 70 NRC 927 (2009)
the fact that an environmental impact is regulated by another federal agency or by a state does not justify the exclusion of the analysis from applicant's ER; LBP-09-16, 70 NRC 227 (2009)
the impact analysis must include sufficient data and the alternatives analysis must be sufficiently complete to aid the Commission in preparing the environmental impact statement; LBP-09-10, 70 NRC 51 (2009)
the requirement of Part 51 that the ER cover all significant environmental impacts associated with a project includes offsite as well as onsite impacts; LBP-09-10, 70 NRC 51 (2009)
the requirement to discuss alternatives in the ER parallels NEPA's requirement that an environmental impact statement provide a detailed statement of reasonable alternatives to a proposed action; LBP-09-16, 70 NRC 227 (2009)
ENVIRONMENTAL REVIEW
findings that a board must make to authorize issuance of an early site permit are described; LBP-09-19, 70 NRC 433 (2009)
the agency's environmental review need only account for those impacts that have some likelihood of occurring or are reasonably foreseeable; LBP-09-26, 70 NRC 939 (2009)
the Commission has declined to require the agency (outside of the Ninth Circuit) to consider terrorist threats as part of the NEPA review process; LBP-09-10, 70 NRC 51 (2009)
EQUIPMENT, SAFETY-RELATED
applicant is to describe equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences; LBP-09-19, 70 NRC 433 (2009)
ERROR
contentions involving possible errors in Table S-3 have been referred to the Commission; LBP-09-21, 70 NRC 581 (2009)
the Commission will affirm decisions on the admissibility of contentions where the appellant points to no error of law or abuse of discretion; CLI-09-20, 70 NRC 911 (2009)
the licensing board did not commit reversible error by admitting a contention based on low-level radioactive waste storage duration because the NRC Staff itself had issued a request for additional information on this very issue and thus this conflicted with Staff's argument that the issue is immaterial to the findings that must be made on the application; LBP-09-27, 70 NRC 992 (2009)
ETHICAL ISSUES
most jurisdictions require, and the board expects, that counsel will promptly correct statements of material fact that are no longer true; LBP-09-28, 70 NRC 1019 (2009)
EVIDENCE
a jury may infer that a taxpayer read his return and knew its contents from the bare fact that he signed it under penalty of perjury; LBP-09-24, 70 NRC 676 (2009)
an individual's later recall of the contents of any document will turn on the effort that the worker put into its creation or application, the need for the worker to have responded to the document, and the significance of the information in the document to those tasks assigned to the worker that are viewed as having higher priority or greater significance than others; LBP-09-24, 70 NRC 676 (2009)

boards are authorized to restrict irrelevant, immaterial, unreliable, duplicative, or cumulative evidence; LBP-09-30, 70 NRC 1039 (2009)
documents and information exchanged in the mandatory disclosures enter the adjudicatory record only if and when a party proffers the document or information as evidence for the evidentiary hearing; LBP-09-30, 70 NRC 1039 (2009)
if any party attempts to include exhibits that were not disclosed in the mandatory disclosures, thus making it impossible for the other parties to examine the reliability of that information, then the board may prohibit the admission of this new evidence into the record; LBP-09-30, 70 NRC 1039 (2009)
individual pieces of evidence, insufficient in themselves to prove a point, may in cumulation prove it; LBP-09-24, 70 NRC 676 (2009)
mandatory disclosures, like all discovery exchanges, cover a vast array of information and documents that are not evidence and need not meet the requirements of admissible evidence; LBP-09-30, 70 NRC 1039 (2009)
not every document processed by an individual gets the same level of attention, but the degree of attention paid to a document initially can later be a strong determinant of the extent to which a person can later recall the contents of, and therefore can be said to have "knowledge" of, that particular document; LBP-09-24, 70 NRC 676 (2009)
the overly simplistic view that "he saw it, so he knew it" is an analytical conundrum that cannot be the rule; LBP-09-24, 70 NRC 676 (2009)
unless and until a document or information is proffered into evidence, there is no basis for a party to object that the information it received in a mandatory disclosure was unreliable or otherwise not admissible as evidence; LBP-09-30, 70 NRC 1039 (2009)
where the record in an enforcement proceeding may be devoid of direct evidence to establish knowledge, the Staff may have to build its case upon circumstantial evidence alone; LBP-09-24, 70 NRC 676 (2009)
EVIDENTIARY HEARINGS
a party is entitled to conduct such cross-examination as may be required for a full and true disclosure of the facts; LBP-09-22, 70 NRC 640 (2009)
commencement of hearings on environmental issues is prohibited until after the final environmental impact statement is issued; LBP-09-22, 70 NRC 640 (2009)
documents and information exchanged in the mandatory disclosures enter the adjudicatory record only if and when a party proffers the document or information as evidence for the evidentiary hearing; LBP-09-30, 70 NRC 1039 (2009)
if the board concludes that it has no questions for any witness concerning a particular contention, it will so advise the parties and will resolve that contention; LBP-09-22, 70 NRC 640 (2009)
EXEMPTIONS
applicant seeks an exemption from the disposal site requirements of 10 C.F.R. 30.3 and 70.3 to allow disposal of low-activity radioactive waste from the Hematite facility at a site near Grand View, Idaho, that is not licensed by the NRC; LBP-09-28, 70 NRC 1019 (2009)
individuals requesting access to safeguards information who believe that they belong to one or more of the categories of individuals that are exempt from the criminal history records check and background check requirements should specifically state which exemption the requestor is invoking and explain the requestor's basis for believing that the exemption is applicable; CLI-09-15, 70 NRC 1 (2009)
EXTENSION OF TIME
petitioner may in instances of exigent or unavoidable circumstances file a request for an extension of time to file an original hearing petition and contentions; LBP-09-17, 70 NRC 311 (2009)
to avoid unnecessary delays in a uranium enrichment facility proceeding, the licensing board should not routinely grant requests for extensions of time and should manage the schedule such that the overall hearing process is completed within 28-1/2 months; CLI-09-15, 70 NRC 1 (2009)
See also Deadlines
FEDERAL EMERGENCY MANAGEMENT AGENCY
findings on emergency plans constitute a rebuttable presumption on questions of adequacy and implementation capability in NRC licensing proceedings; LBP-09-19, 70 NRC 433 (2009)
in its review of emergency plans, NRC Staff must take into account FEMA's findings; LBP-09-19, 70 NRC 433 (2009)

SUBJECT INDEX

FEDERAL REGISTER
prior to operation under a combined license, a notice of intended operation will be published not less than 180 days before the date scheduled for initial loading of fuel; LBP-09-19, 70 NRC 433 (2009)
publication in the *Federal Register* is legally sufficient notice to all interested or affected persons regardless of actual knowledge or hardship resulting from ignorance, except those who are legally entitled to personal notice; LBP-09-20, 70 NRC 565 (2009)
FEDERAL WATER POLLUTION CONTROL ACT
nothing in the National Environmental Policy Act shall be deemed to authorize any federal agency to review any effluent limitation or other requirement established pursuant to the Clean Water Act or to authorize any such agency to impose any effluent limitation other than those set by the Environmental Protection Agency or a state agency that has been delegated such authority; LBP-09-25, 70 NRC 867 (2009)
the reach of 33 U.S.C. § 1371(c)(2) is confined to navigable waters, which do not even encompass all surface waters; LBP-09-25, 70 NRC 867 (2009)
when water quality decisions have been made by a state pursuant to the Clean Water Act and these decisions are raised in NRC licensing proceedings, the NRC is bound to take the Environmental Protection Agency's considered decisions at face value; LBP-09-25, 70 NRC 867 (2009)
FIFTH AMENDMENT
carefully crafted restraints in the Constitution preserve freedom by curbing the exercise of power; LBP-09-24, 70 NRC 676 (2009)
exercise of the power of compulsory process must be carefully circumscribed when the investigative process tends to impinge upon such highly sensitive areas as freedom of speech or press, freedom of political association, and freedom of communication of ideas; LBP-09-24, 70 NRC 676 (2009)
states can be required to tailor carefully the means of satisfying a legitimate state interest when fundamental liberties and rights are threatened; LBP-09-24, 70 NRC 676 (2009)
FILINGS
petitioner may in instances of exigent or unavoidable circumstances file a request for an extension of time to file an original hearing petition and contentions; LBP-09-17, 70 NRC 311 (2009)
See also Electronic Filing
FINAL ENVIRONMENTAL IMPACT STATEMENT
commencement of evidentiary hearings on environmental issues is prohibited until after the FEIS is issued; LBP-09-22, 70 NRC 640 (2009)
the draft environmental impact statement is distributed for public comment and, based on the comments received, a review of information provided by the applicant, and supplemental independent information and analysis, the Staff prepares and issues a final EIS; LBP-09-19, 70 NRC 433 (2009)
where the discussion of alternative sites was insufficient, the board independently reviewed the record on greenfield, competitors' brownfield, noncompetitors' brownfield, and applicant's other nuclear sites to conclude that the Staff's underlying alternative site review was adequate; LBP-09-19, 70 NRC 433 (2009)
FINAL SAFETY ANALYSIS REPORT
analysis of a severe accident involving a fission product release from the core into the containment including any fission product cleanup systems intended to mitigate the consequences of the accidents must be included; LBP-09-10, 70 NRC 51 (2009)
information to be included is described; CLI-09-16, 70 NRC 33 (2009)
the fission product release is based on a major accident assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-10, 70 NRC 51 (2009)
FINALITY
the pendency of an appeal has no effect on the finality or binding effect of a trial court's holding; LBP-09-24, 70 NRC 676 (2009)
FINANCIAL ASSURANCE
a combined license applicant must obtain the financial instrument and submit a copy to the Commission as provided in 10 C.F.R. 50.75(e)(3); LBP-09-15, 70 NRC 198 (2009)

a parent-company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in 10 C.F.R. Part 30, Appendix A; LBP-09-15, 70 NRC 198 (2009)
acceptable methods of decommissioning funding include a sinking fund, prepayment of the entire decommissioning amount, and a surety method, insurance, or other guarantee method; LBP-09-15, 70 NRC 198 (2009)
holder of a combined license must begin filing biannual reports on the status of decommissioning funding once the Commission has made a finding that all acceptance criteria in the license have been met; LBP-09-15, 70 NRC 198 (2009)
if licensee changes its method of decommissioning funding assurance, the new method will also have to pass any applicable financial test; LBP-09-15, 70 NRC 198 (2009)
NRC will defer to state economic regulators where decommissioning funding is assured by the fact that any shortfall in decommissioning funds will be provided by ratepayers pursuant to state law; LBP-09-21, 70 NRC 581 (2009)
Part 70 financial criteria can be met by conditioning the materials license to require funding commitments to be in place prior to construction and operation; CLI-09-15, 70 NRC 1 (2009)
the amount for decommissioning funding must be adjusted annually, using a rate calculated pursuant to 10 C.F.R. 50.75(c)(2); LBP-09-15, 70 NRC 198 (2009)
the requirements of 10 C.F.R. 50.75 are intended to ensure that entities who construct and operate a nuclear power plant will have sufficient funds at the end of the operational life of the plant to complete the decommissioning of the plant; LBP-09-15, 70 NRC 198 (2009)
FINANCIAL ASSURANCE PLAN
a board can only decide whether or not a current funding proposal fulfills NRC requirements; LBP-09-18, 70 NRC 385 (2009)
at the time the combined license application is submitted, it must identify the method of decommissioning funding assurance that the applicant proposes to use and to show that the method complies with any applicable financial test; LBP-09-15, 70 NRC 198 (2009); LBP-09-18, 70 NRC 385 (2009)
applicant, 2 years before and 1 year before the scheduled date for the initial fuel loading, shall submit a report to NRC containing a certification updating the financial information, including a copy of the financial instrument to be used; LBP-09-18, 70 NRC 385 (2009)
applicant may choose one or more of the funding methods provided in 10 C.F.R. 50.75(e); LBP-09-18, 70 NRC 385 (2009)
final decommissioning financial assurance documents must be submitted to the NRC 30 days after the notification in the *Federal Register* pursuant to section 52.103(a) that licensee has set a date to load fuel; LBP-09-15, 70 NRC 198 (2009); LBP-09-21, 70 NRC 581 (2009)
for combined license applications, the report must contain a certification that financial assurance for decommissioning will be provided no later than 30 days after the Commission publishes notice in the *Federal Register* of the initial fuel load; LBP-09-18, 70 NRC 385 (2009)
if applicant plans to use a parent company guarantee for financial assurance of decommissioning funding, the assurance must provide the information required by 10 C.F.R. 50.75(e)(1)(iii)(B); LBP-09-15, 70 NRC 198 (2009)
petitioners' claim that applicant must pursue the prepayment method for decommissioning conflicts with the NRC guidance and rules and so is outside the permissible scope of a combined license proceeding; LBP-09-21, 70 NRC 581 (2009)
the parent company guarantee is based on a financial test and may only be used if the guarantee and test are as contained in Appendix A to 10 C.F.R. Part 30; LBP-09-18, 70 NRC 385 (2009)
FINANCIAL QUALIFICATIONS
applicant for a combined license must show that it possesses funds or has reasonable assurance of obtaining funds necessary to cover estimated construction and fuel cycle costs; LBP-09-10, 70 NRC 51 (2009)
electric utilities need not include operating and maintenance costs in their demonstration of financial qualifications in a combined license application; LBP-09-10, 70 NRC 51 (2009)
it is beyond licensing board authority to require applicant to choose a particular method of decommissioning funding; LBP-09-15, 70 NRC 198 (2009)

neither market capitalization nor share price are variables to be used in the financial test for decommissioning funding assurance; LBP-09-15, 70 NRC 198 (2009)
the financial test for a parent company guarantee is a material issue because the Staff must decide whether the test is satisfied in order to grant the combined license; LBP-09-15, 70 NRC 198 (2009)
the purpose of the requirements of 10 C.F.R. 50.33(f) is to ensure the protection of public health and safety and the common defense and security, not to evaluate the financial wisdom of the proposed project; LBP-09-10, 70 NRC 51 (2009)
FINANCIAL RESOURCES
creditor interests are created in equipment, devices, or important parts thereof, capable of separating the isotopes of uranium or enriching uranium in the isotope U-235; CLI-09-15, 70 NRC 1 (2009)
FINDINGS OF FACT
environmental findings that a board must make to authorize issuance of an early site permit are described; LBP-09-19, 70 NRC 433 (2009)
to grant an early site permit, the Commission must find that the proposed inspections, tests, analyses, and acceptance criteria, including any on emergency planning, are necessary and sufficient, within the scope of the ESP, to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the Act, and the Commission's regulations; LBP-09-19, 70 NRC 433 (2009)
when an early site permit is issued with an associated limited work authorization, the board must find relative to the LWA that any significant adverse environmental impact resulting from activities requested under 10 C.F.R. 52.17(c) can be redressed; LBP-09-19, 70 NRC 433 (2009)
FLOOD PROTECTION
the design basis flood is the magnitude of the flood event that is used to evaluate safety structures, systems, and components important to safety during facility design; LBP-09-25, 70 NRC 867 (2009)
FOREIGN OWNERSHIP
an affirmative finding by the Commission that issuance of a license for a uranium enrichment facility will not be inimical to the common defense and security is required; CLI-09-15, 70 NRC 1 (2009)
analysis of compliance with section 103d of the Atomic Energy Act is a function performed by the NRC Staff as part of its evaluation of the combined license application; CLI-09-20, 70 NRC 911 (2009)
creditor regulations may be augmented by license conditions as necessary to allow ownership arrangements, such as sale and leaseback, provided it can be found that such arrangements are not inimical to the common defense and security of the United States; CLI-09-15, 70 NRC 1 (2009)
no license may be issued to an 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-09-20, 70 NRC 911 (2009)
the Commission has not determined a specific threshold above which it would be conclusive that an applicant is controlled by foreign interests through ownership of a percentage of the applicant's stock; CLI-09-20, 70 NRC 911 (2009)
FUEL LOADING
prior to operation under a combined license, a notice of intended operation will be published in the *Federal Register* not less than 180 days before the date scheduled for initial loading of fuel; LBP-09-19, 70 NRC 433 (2009)
GENERAL LICENSES
the assertion that applicant might need to obtain a Part 72 license is irrelevant because a grant of a combined license could be accompanied by grant of a Part 72 general license if applicant complies with certain conditions; LBP-09-21, 70 NRC 581 (2009)
the Commission has issued a general license for the storage of spent fuel at an onsite independent spent fuel storage installation to all persons authorized to possess or operate nuclear power reactors under 10 C.F.R. Part 50 or Part 52; LBP-09-20, 70 NRC 565 (2009)
GENERIC ISSUES
if petitioners are dissatisfied with NRC's generic approach to a problem, their remedy lies in the rulemaking process, not in adjudication; LBP-09-18, 70 NRC 385 (2009)

SUBJECT INDEX

GEOLOGIC CONDITIONS
applicant's site safety analysis report must include seismic and geologic characteristics of the proposed site with appropriate consideration of the most severe historical natural phenomena that have been reported for the site; LBP-09-19, 70 NRC 433 (2009)
in providing information on seismic and geologic characteristics of a proposed site, applicants must conform to the requirements of 10 C.F.R. 100.23; LBP-09-19, 70 NRC 433 (2009)
the site safety analysis report submitted with an early site permit application must contain the seismic, meteorological, hydrologic, and geologic characteristics of the proposed site; LBP-09-19, 70 NRC 433 (2009)
GREENHOUSE GAS EMISSIONS
carbon dioxide emissions from the uranium fuel cycle are to be listed as zero; LBP-09-21, 70 NRC 581 (2009)
carbon dioxide falls within the Clear Air Act's definition of air pollutants subject to the Environmental Protection Agency's regulatory authority; LBP-09-17, 70 NRC 311 (2009)
contention alleging that the environmental report failed to address the alleged greenhouse gas and global climate disruption impacts resulting from prematurely killing trees is inadmissible; LBP-09-10, 70 NRC 51 (2009)
each environmental report prepared for the combined license stage must take Table S-3 as the basis for evaluating the contribution of the environmental effects of the fuel cycle to the environmental costs of licensing the reactor; CLI-09-21, 70 NRC 927 (2009)
the Commission may have more to offer regarding the need for a NEPA carbon footprint analysis in new reactor licensing proceedings; LBP-09-19, 70 NRC 433 (2009)
GROUNDWATER CONTAMINATION
a challenge to applicant's site-specific measurements of adsorption and retention coefficients relative to hydrological radionuclide transport is an admissible contention; LBP-09-16, 70 NRC 227 (2009)
in its review of early site permit applications, Staff must consider physical characteristics of the site, specifically noting that factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 433 (2009)
petitioners' concerns regarding applicant's commitments to relax conservatisms in its laboratory testing and groundwater release analysis are in regard to the revised analysis to be submitted in response to the Staff request for additional information and therefore are dismissed as outside the scope of the proceeding; LBP-09-16, 70 NRC 227 (2009)
Staff and applicant must address matters such as the environmental impacts of unregulated seepage into adjacent groundwater in their environmental impact statement and environmental report; LBP-09-25, 70 NRC 867 (2009)
HEALTH EFFECTS
Table S-3 does not include health effects from the effluents described in the table, and that issue may be the subject of litigation in individual licensing proceedings; LBP-09-16, 70 NRC 227 (2009)
HEARING FILE
in Subpart L proceedings, NRC Staff must produce a hearing file and make it available to all parties; LBP-09-22, 70 NRC 640 (2009)
NRC Staff has a continuing duty to update the hearing file; LBP-09-22, 70 NRC 640 (2009)
HEARING PROCEDURES
a motion and proposed new contention may address the selection of the appropriate hearing procedure for the proposed new contention; LBP-09-22, 70 NRC 640 (2009)
a party is entitled to conduct such cross-examination as may be required for a full and true disclosure of the facts; LBP-09-10, 70 NRC 51 (2009); LBP-09-22, 70 NRC 640 (2009)
boards must exercise their discretion and select the hearing procedure most appropriate for newly admitted contentions; LBP-09-10, 70 NRC 51 (2009)
circumstances where a particular hearing procedure is required are specified in 10 C.F.R. 2.310(b)-(k); LBP-09-10, 70 NRC 51 (2009)
cross-examination occurs virtually automatically in Subpart G hearings, subject to normal judicial management and the requirement to file a cross-examination plan; LBP-09-10, 70 NRC 51 (2009)
if no particular procedure is required, then the board may conduct the proceeding for a particular contention under Subpart L; LBP-09-10, 70 NRC 51 (2009)

in an evidentiary hearing, the board may weigh competing evidence and expert opinion and may resolve/decide factual disputes, whereas this is not possible when ruling on motions for summary disposition, which are restricted to situations where there is no genuine issue as to any material fact; LBP-09-22, 70 NRC 640 (2009)
selection of hearing procedures for contentions at the outset of a proceeding is not immutable, because the availability of Subpart G procedures depends critically on the credibility of eyewitnesses, and the identity of such witnesses may not be known until after the contentions are admitted; LBP-09-10, 70 NRC 51 (2009)
the substantive standard for allowing parties to conduct cross-examination is the same under 10 C.F.R. Part 2, Subparts G and L; LBP-09-10, 70 NRC 51 (2009)
under 10 C.F.R. 2.309(g) and 2.310, the board determines which hearing procedure will be used (Subpart G or L) on a contention-by-contention basis; LBP-09-10, 70 NRC 51 (2009)
under Subpart L, a party seeking to conduct cross-examination must file a written motion and obtain leave from the board; LBP-09-10, 70 NRC 51 (2009)
HEARING REQUESTS
a hearing request is timely when the petitioner lacks both actual and constructive notice of its opportunity to request a hearing as of the deadline specified by the agency, and the petitioner files the hearing request promptly upon receipt of actual notice; LBP-09-20, 70 NRC 565 (2009)
a hearing request must state the name, address, and telephone number of the requestor, the nature of the requestor's right under the governing statutes to be made a party to the proceeding, the nature and extent of the requestor's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on the requestor's interest; LBP-09-28, 70 NRC 1019 (2009)
anyone who wishes to request a hearing concerning a proposed licensing action must establish standing and proffer at least one admissible contention; LBP-09-28, 70 NRC 1019 (2009)
licensing boards will determine whether petitioner has an interest affected by the proceeding; LBP-09-23, 70 NRC 659 (2009)
twenty days in which to request a hearing is the minimum required by the agency's regulations; LBP-09-20, 70 NRC 565 (2009)
See also Amendment of Hearing Requests
HEARING REQUESTS, LATE-FILED
a request is timely when petitioner lacks both actual and constructive notice of its opportunity to request a hearing as of the deadline specified by the agency, and the petitioner files the hearing request promptly upon receipt of actual notice; LBP-09-20, 70 NRC 565 (2009)
factors that must be addressed for nontimely intervention petitions, hearing requests, and contentions are set forth; LBP-09-20, 70 NRC 565 (2009)
HEARING RIGHTS
a hearing challenging an immediately effective enforcement order will be conducted expeditiously, giving due consideration to the rights of the parties; LBP-09-24, 70 NRC 676 (2009)
even in the absence of constructive notice, the possibility remains that a petitioner had actual notice of the right to request a hearing; LBP-09-20, 70 NRC 565 (2009)
NRC must provide a hearing upon the request of any person whose interest may be affected by the proceeding; CLI-09-20, 70 NRC 911 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009)
the right to a hearing embraces not only the right to present evidence, but also a reasonable opportunity to know the claims of the opposing party and to meet them; LBP-09-24, 70 NRC 676 (2009)
the subject of an enforcement order has the right to challenge, on limited grounds, the immediate effectiveness of the order and the promise of an expedited hearing; LBP-09-24, 70 NRC 676 (2009)
when the NRC Staff can, consistent with its duty to protect public health and safety, accord some form of predeprivation hearing, such a course of action is advisable in light of the important private interest in retaining employment and the fact that such a proceeding provides some opportunity for the employee to present his side of the case; LBP-09-24, 70 NRC 676 (2009)

SUBJECT INDEX

HIGH-LEVEL WASTE REPOSITORY APPLICATION
a legal issue contention raises a genuine dispute with the application, because it challenges DOE's performance assessment for the post-10,000-year period; LBP-09-29, 70 NRC 1028 (2009)
contention asserting that DOE's description of its expert elicitation relating to a probabilistic volcanic hazard analysis update fails to comply with NRC regulations or the guidance document that DOE formally committed to follow is admissible; LBP-09-29, 70 NRC 1028 (2009)
contention that the application inadequately addresses generalized corrosion because it relies on flawed experimental data raises a genuine, material dispute with the application by pointing to specific sections that allegedly fail to comply with the NRC's requirements for conducting a post-closure performance assessment; LBP-09-29, 70 NRC 1028 (2009)
HIGH-LEVEL WASTE REPOSITORY PROCEEDING
the Commission dispensed with all but the good cause factor for late-filed contentions; LBP-09-29, 70 NRC 1028 (2009)
IMMEDIATE EFFECTIVENESS
a hearing challenging an immediately effective enforcement order will be conducted expeditiously, giving due consideration to the rights of the parties; LBP-09-24, 70 NRC 676 (2009)
an initial decision directing the issuance or amendment of a limited work authorization or an early site permit is immediately effective upon issuance unless the presiding officer finds that good cause has otherwise been shown by a party; LBP-09-19, 70 NRC 433 (2009)
immediately effective deprivation of the legally acknowledged right to pursue one's livelihood should not be imposed without the Staff having substantial reason to do so and explaining its reasons in advance and in some detail; LBP-09-24, 70 NRC 676 (2009)
the subject of an immediately effective enforcement order has the right to challenge the immediate effectiveness and the promise of an expedited hearing; LBP-09-24, 70 NRC 676 (2009)
to succeed in imposing pretrial detention because the accused is a danger to the community, the government must, among other things, prove in an adversary hearing by clear and convincing evidence that no conditions of release can reasonably assure the community's safety; LBP-09-24, 70 NRC 676 (2009)
IMMEDIATE EFFECTIVENESS REVIEW
to successfully challenge an enforcement order, the target must show that the order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error; LBP-09-24, 70 NRC 676 (2009)
INCORPORATION BY REFERENCE
a contention asserting that a combined license application is incomplete because it incorporates by reference a standard design certification and a pending application for a revision to that certified design is inadmissible; LBP-09-10, 70 NRC 51 (2009)
applicant for a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
INDEPENDENT SPENT FUEL STORAGE INSTALLATION
an ISFSI is essentially a passive structure rather than an operating facility, and there therefore is less chance of widespread radioactive release; LBP-09-20, 70 NRC 565 (2009)
the Commission declined to adopt a proximity presumption in an ISFSI license transfer proceeding, where the petitioner had not demonstrated that the mere transfer of the ISFSI somehow increases his risk of radiological harm; LBP-09-20, 70 NRC 565 (2009)
the Commission has issued a general license for the storage of spent fuel at an onsite ISFSI to all persons authorized to possess or operate nuclear power reactors under 10 C.F.R. Part 50 or Part 52; LBP-09-20, 70 NRC 565 (2009)
INITIAL DECISIONS
a licensing board decision directing issuance or amendment of a limited work authorization or an early site permit is immediately effective upon issuance unless the presiding officer finds that good cause has otherwise been shown by a party; LBP-09-19, 70 NRC 433 (2009)
licensing board decisions are not effective until they are reviewed by the Commission; LBP-09-19, 70 NRC 433 (2009)
See also Partial Initial Decisions

SUBJECT INDEX

INJURY IN FACT
- a board's determination of standing does not depend on whether the cause of the injury flows directly from the challenged action, but whether the chain of causation is plausible; LBP-09-13, 70 NRC 168 (2009)
- a broadly stated interest in a problem is not sufficient by itself to render the organization so adversely affected or aggrieved that standing will be granted; LBP-09-13, 70 NRC 168 (2009)
- a nexus between the injury and the relief is required rather than a nexus between the claimed injury and the contention; LBP-09-16, 70 NRC 227 (2009)
- an alleged injury to health and safety, shared equally by many, can form the basis for standing; LBP-09-18, 70 NRC 385 (2009)
- an independent spent fuel storage installation is essentially a passive structure rather than an operating facility, and there therefore is less chance of widespread radioactive release; LBP-09-20, 70 NRC 565 (2009)
- an injury must go beyond generalized grievances to affect a petitioner in a personal and individual way; LBP-09-13, 70 NRC 168 (2009)
- 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; LBP-09-16, 70 NRC 227 (2009); LBP-09-20, 70 NRC 565 (2009)
- because NEPA is a procedural statute, petitioners need not show that favorable rulings on their NEPA contentions will require denial of the license, but rather that procedures intended for protection of their members' concrete interests will be observed; LBP-09-16, 70 NRC 227 (2009)
- in demonstrating that a proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences, petitioner cannot rely on conclusory allegations about potential radiological harm, but must show how these various harms might result from the proposed action; LBP-09-20, 70 NRC 565 (2009)
- in nonreactor cases, the potential for offsite consequences is not always clear, and thus the burden falls on petitioner to demonstrate that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-09-20, 70 NRC 565 (2009)
- injury-in-fact to establish standing requires more than a general interest in preserving of the environment; LBP-09-28, 70 NRC 1019 (2009)
- intervention petitioner must be able to show how it would have personally suffered or will suffer a distinct and palpable harm that constitutes injury in fact; LBP-09-18, 70 NRC 385 (2009)
- intervention petitioner must establish a concrete and particularized injury that is fairly traceable to the challenged action, is likely to be redressed by a favorable decision, and is arguably within the zone of interests protected by the governing statute; CLI-09-20, 70 NRC 911 (2009); LBP-09-28, 70 NRC 1019 (2009)
- once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing; LBP-09-16, 70 NRC 227 (2009)
- redressability requires petitioner to show that its alleged injury-in-fact could be cured or alleviated by some action of the tribunal; LBP-09-13, 70 NRC 168 (2009)
- standing generally has been denied when the threat of injury is not concrete and particularized; LBP-09-13, 70 NRC 168 (2009)
- the Commission declined to adopt a proximity presumption in an independent spent fuel storage installation license transfer proceeding, where the petitioner had not demonstrated that the mere transfer of the ISFSI somehow increased his risk of radiological harm; LBP-09-20, 70 NRC 565 (2009)
- the nontrivial increased risk of living within 50 miles of a proposed reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; CLI-09-20, 70 NRC 911 (2009); LBP-09-16, 70 NRC 227 (2009)
- the requisite injury to establish standing may be either actual or threatened but must nonetheless be concrete and particularized, not conjectural or hypothetical; LBP-09-28, 70 NRC 1019 (2009)
- the Supreme Court has defined "injury in fact" as an invasion of a legally protected interest that is concrete and particularized and actual or imminent; LBP-09-13, 70 NRC 168 (2009)

to assert an appropriate injury for organizational standing, an organization must demonstrate a palpable injury in fact to its organizational interests; LBP-09-13, 70 NRC 168 (2009)
to determine whether an interest is in the zone of interests of a statute, it is necessary first to discern the interests arguably to be protected by the statutory provision at issue, and then to inquire whether petitioner's interests affected by the agency action are among them; LBP-09-13, 70 NRC 168 (2009)
to establish organizational standing, the injury must be more than a mere interest in a problem, no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem; LBP-09-13, 70 NRC 168 (2009)
when denial of a license would alleviate a petitioner's asserted potential injury, any admissible contention with such a result can be prosecuted by a petitioner, regardless of whether that contention is directly related to that petitioner's articulated injury; LBP-09-16, 70 NRC 227 (2009)
See also Economic Injury
INTERESTED GOVERNMENTAL ENTITY
although interested governmental entities would not have a formal role in a proceeding absent the admission of parties and contentions, boards expect that such entities would be kept appropriately apprised of the other participants' settlement efforts; LBP-09-23, 70 NRC 659 (2009)
states do not need to address standing requirements if the facility is located within their boundaries; CLI-09-15, 70 NRC 1 (2009)
See also Local Governmental Bodies
INTERESTED STATE PARTICIPATION
licensing boards have granted state agencies the right to participate in NRC proceedings as the state's representative; LBP-09-16, 70 NRC 227 (2009)
nonparty interested state status has been granted to state utility commissions; LBP-09-16, 70 NRC 227 (2009)
the Commission has long recognized the benefits of participation in NRC proceedings by representatives of interested states; LBP-09-16, 70 NRC 227 (2009)
INTERVENTION
a state, county, municipality, federally recognized Indian tribe, or agencies thereof, may submit a petition to the Commission to participate as a party in a materials license proceeding; CLI-09-15, 70 NRC 1 (2009)
intervention petitioners who think an order modifying a license should not be sustained, but might want further corrective measures, are precluded from intervention; LBP-09-20, 70 NRC 565 (2009)
it is unlikely that petitioners will often obtain hearings on confirmatory enforcement orders because such orders presumably enhance rather than diminish public safety; LBP-09-20, 70 NRC 565 (2009)
NRC must provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-09-17, 70 NRC 311 (2009)
once parties demonstrate that they have standing, the parties will then be free to assert any contention, which, if proved, will afford them the relief they seek; LBP-09-10, 70 NRC 51 (2009)
petitioner must establish standing and proffer at least one admissible contention that meets the requirements of 10 C.F.R. 2.309(f)(1); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-26, 70 NRC 939 (2009)
petitioner must file a written petition for leave to intervene in accordance with the requirements of 10 C.F.R. 2.309; CLI-09-15, 70 NRC 1 (2009)
the Commission's power to define the scope of a proceeding will lead to the denial of intervention when the Commission amends a license to require additional or better safety measures; LBP-09-20, 70 NRC 565 (2009)
when deciding whether to grant standing, licensing boards shall consider the nature of petitioner's right under the Atomic Energy Act to be made a party, the nature and extent of petitioner's property, financial, or other interest in the proceeding, and the possible effect of any order that may be entered in the proceeding on petitioner's interest; LBP-09-17, 70 NRC 311 (2009)
where the notice of hearing limits the scope to whether the order should be sustained, petitioner's sole remedy is rescission of the order; LBP-09-20, 70 NRC 565 (2009)
INTERVENTION, DISCRETIONARY
in ruling on discretionary intervention requests, licensing boards will consider and balance enumerated factors weighing in favor of and against allowing intervention; LBP-09-23, 70 NRC 659 (2009)

SUBJECT INDEX

INTERVENTION PETITIONERS
licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing; LBP-09-18, 70 NRC 385 (2009)
pro se petitioners are held to a less rigorous standard; LBP-09-18, 70 NRC 385 (2009)
the benefit of the doubt should be given to the potential intervenor in order to prevent the dismissal of a petition due to inarticulate draftsmanship or procedural or pleading defects; LBP-09-18, 70 NRC 385 (2009)
INTERVENTION PETITIONS
a board may view petitioner's supporting information in a light favorable to petitioner, but petitioner (not the board) is required to supply all required elements; LBP-09-10, 70 NRC 51 (2009)
a petition for review and request for hearing must include a showing that the petitioner has standing; LBP-09-13, 70 NRC 168 (2009)
for a request for hearing and petition to intervene to be granted, petitioner must establish that it has standing and propose at least one admissible contention; LBP-09-18, 70 NRC 385 (2009); LBP-09-10, 70 NRC 51 (2009)
for an order issued under 10 C.F.R. 2.202, the time for filing a hearing request runs from the date of the order, not the date of publication of the order in the *Federal Register*; LBP-09-20, 70 NRC 565 (2009)
in addition to setting forth with particularity petitioner's interest in the proceeding and how that interest may be affected by the results of the proceeding, petitioner must also include at least one contention meeting the requirements of 10 C.F.R. 2.309(f)(1); CLI-09-15, 70 NRC 1 (2009)
licensing boards will determine whether petitioner has an interest affected by the proceeding; LBP-09-23, 70 NRC 659 (2009)
petitioner may in instances of exigent or unavoidable circumstances file a request for an extension of time to file an original hearing petition and contentions; LBP-09-17, 70 NRC 311 (2009)
petitioner must state the nature of its right under the Atomic Energy Act to be made a party to the proceeding, the nature and extent of its property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on its interest; LBP-09-20, 70 NRC 565 (2009)
INTERVENTION PETITIONS, LATE-FILED
a hearing request is timely when the petitioner lacks both actual and constructive notice of its opportunity to request a hearing as of the deadline specified by the agency, and the petitioner files the hearing request promptly upon receipt of actual notice; LBP-09-20, 70 NRC 565 (2009)
absent good cause, petitioner's demonstration on the other late-filing factors must be compelling; LBP-09-26, 70 NRC 939 (2009)
factors that must be addressed for nontimely intervention petitions, hearing requests, and contentions are set forth; LBP-09-20, 70 NRC 565 (2009)
good cause is the most significant of the late-filing factors in 10 C.F.R. 2.309(c); LBP-09-20, 70 NRC 565 (2009); LBP-09-26, 70 NRC 939 (2009)
nontimely petitions to intervene and contentions, amended petitions, and supplemental petitions will not be entertained absent a determination by the Commission, the licensing board, or a presiding officer that the petition should be granted and/or the contentions should be admitted based upon a balancing of eight factors; CLI-09-15, 70 NRC 1 (2009)
petitions and contentions filed after the initial 60-day deadline are admissible only upon a balancing of eight factors of 10 C.F.R. 2.309(c); LBP-09-26, 70 NRC 939 (2009)
INTERVENTION RULINGS
a standing ruling in one proceeding is not dispositive of a determination in another proceeding with the same petitioner because the ruling was not the subject of appellate review; LBP-09-18, 70 NRC 385 (2009)
an exception to the general policy limiting interlocutory review permits an appeal of a board's ruling on contention admissibility when a board grants a petition to intervene following consideration of the full petition; CLI-09-18, 70 NRC 859 (2009)
any appeal by petitioners of the admitted contentions must abide the end of the case, i.e., wait approximately 2 or 3 years until the Staff issues its safety and environmental documents and the final disposition of the evidentiary hearing on the three admitted contentions; LBP-09-10, 70 NRC 51 (2009)

boards should consider the nature of petitioner's right under the Atomic Energy Act or the National Environmental Policy Act to be made a party to the proceeding, the nature and extent of petitioner's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest; LBP-09-13, 70 NRC 168 (2009)
challenges to board rulings on late-filed contentions normally fall under the rules for interlocutory review; CLI-09-18, 70 NRC 859 (2009)
in assessing intervention petitions, licensing boards must determine whether standing elements are met even though there are no objections to petitioner's standing; LBP-09-23, 70 NRC 659 (2009)
in determining whether a petitioner has established standing, boards are to construe the petition in favor of the petitioner; LBP-09-18, 70 NRC 385 (2009)
in ruling on contention admissibility a board is not to look to the merits of the contention; LBP-09-17, 70 NRC 311 (2009)
in ruling on discretionary intervention requests, licensing boards will consider and balance enumerated factors weighing in favor of and against allowing intervention; LBP-09-23, 70 NRC 659 (2009)
petitioner is not required to prove its case at the contention admission stage; LBP-09-17, 70 NRC 311 (2009)
the Commission defers to a board's rulings on standing and contention admissibility unless the appeal points to an error of law or abuse of discretion; CLI-09-20, 70 NRC 911 (2009); CLI-09-22, 70 NRC 932 (2009)
the process of sifting and weighing participants' factual proffers often calls upon a board to make difficult choices, so that a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself; LBP-09-18, 70 NRC 385 (2009)
there is an automatic right to appeal a licensing board standing and contention admissibility decision on the issue of whether the request for hearing or petition to intervene should have been wholly denied; CLI-09-22, 70 NRC 932 (2009)
to be appealable, a disputed order must dispose of the entire petition so that a successful appeal by a nonpetitioner will terminate the proceeding as to the appellee petitioner; CLI-09-18, 70 NRC 859 (2009)
where intervenors have filed new contentions based on a supplement to a combined license application, in advance of a full board ruling on the original contentions, no appeal lies until the board acts on all contentions, both the original and the newly filed ones; CLI-09-18, 70 NRC 859 (2009)
with respect to an applicant's appeal, applicant must contend that, after considering all pending contentions, the board has erroneously granted a hearing to the petitioner; CLI-09-18, 70 NRC 859 (2009)
IRREPARABLE INJURY
party seeking a stay did not show an overwhelming probability of success on the merits of its appeal sufficient to overcome its lack of showing of irreparable harm; CLI-09-23, 70 NRC 935 (2009)
the possibility that the prevailing party would use the board's order in his favor to persuade a District Court to reconsider part of the penalty imposed on him in a parallel criminal proceeding did not constitute immediate, irreparable harm to the NRC Staff; CLI-09-23, 70 NRC 935 (2009)
whether the party seeking a stay faces potentially irreparable harm is the most important factor considered in the Commission's determination whether to grant a stay; CLI-09-23, 70 NRC 935 (2009)
JURISDICTION
the mootness doctrine derives from the Constitution's limitation of federal courts' jurisdiction to cases or controversies; LBP-09-15, 70 NRC 198 (2009)
when a claim becomes moot in federal court, the court loses jurisdiction to decide the merits of that claim; LBP-09-15, 70 NRC 198 (2009)
See also Licensing Boards, Jurisdiction; Nuclear Regulatory Commission, Jurisdiction
JURY INSTRUCTION
instruction to juries on deliberate ignorance or willful blindness can relieve the government of its constitutional obligation to prove the defendant's knowledge beyond a reasonable doubt; LBP-09-24, 70 NRC 676 (2009)
instruction to juries on deliberate ignorance or willful blindness should be used with caution to avoid the possibility that the jury convict on the lesser standard that the defendant should have known his conduct was illegal; LBP-09-24, 70 NRC 676 (2009)

the danger of instruction to juries on deliberate ignorance or willful blindness in an inappropriate case is that juries will convict on a basis akin to a standard of negligence; LBP-09-24, 70 NRC 676 (2009)
the deliberate ignorance instruction defines when an individual has sufficient information so that he can be deemed to know something; LBP-09-24, 70 NRC 676 (2009)
the warning to jurors that the added instruction on deliberate ignorance or willful blindness is not intended to allow them to base guilt on negligence or carelessness is sufficient to legitimize the instruction; LBP-09-24, 70 NRC 676 (2009)
JURY VERDICT
a fundamental tenet of the jury system assumes that the jury complies with the instructions provided by the trial court; LBP-09-24, 70 NRC 676 (2009)
a special verdict is one where the jury answers specific questions submitted to it, thus enabling the court to determine the theory underlying the conviction; LBP-09-24, 70 NRC 676 (2009)
LEAKAGE
early site permit applicants must submit a safety assessment that includes an analysis of a fission product release from an accident, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-19, 70 NRC 433 (2009)
LICENSE AMENDMENTS
if, at some point in the future, applicant were to decide to change the ownership structure and to enter into a joint venture with another entity, its license would have to be amended to reflect this change; LBP-09-18, 70 NRC 385 (2009)
LICENSE CONDITIONS
creditor regulations may be augmented by license conditions as necessary to allow ownership arrangements, such as sale and leaseback, provided it can be found that such arrangements are not inimical to the common defense and security of the United States; CLI-09-15, 70 NRC 1 (2009)
Part 70 financial criteria can be met by conditioning the materials license to require funding commitments to be in place prior to construction and operation; CLI-09-15, 70 NRC 1 (2009)
LICENSE RENEWAL APPLICATIONS
when an application is timely filed, the license is automatically extended by operation of law until final agency action is taken on the renewal request; LBP-09-13, 70 NRC 168 (2009)
LICENSE RENEWALS
new contention on the adequacy of consideration of the dissolved oxygen factor in the cumulative usage factor environmental analysis and use of inappropriate heat transfer equations was previously litigated and resolved and thus is not admissible; LBP-09-9, 70 NRC 41 (2009)
See also Materials License Renewal; Materials License Renewal Proceedings
LICENSE TRANSFERS
the Commission declined to adopt a proximity presumption in an independent spent fuel storage installation license transfer proceeding, where the petitioner had not demonstrated that the mere transfer of the ISFSI somehow increased his risk of radiological harm; LBP-09-20, 70 NRC 565 (2009)
LICENSEE EMPLOYEES
an employee who contributes to submission of information to the NRC that the employee knows is not complete or accurate in some material respect places the licensee in violation; LBP-09-24, 70 NRC 676 (2009)
deliberate submission to the NRC of information that an employee knows to be incomplete or inaccurate in some respect material to the NRC is a violation; LBP-09-24, 70 NRC 676 (2009)
LICENSEES
a licensee employee who contributes to submission of information to the NRC that the employee knows is not complete or accurate in some material respect places the licensee in violation; LBP-09-24, 70 NRC 676 (2009)
licensee remains authorized to own and possess the facility even after the operating license expires; LBP-09-17, 70 NRC 311 (2009)
LICENSES
See Combined Licenses; General Licenses; Materials Licenses; Operating Licenses; Senior Reactor Operator License

LICENSING BOARD DECISIONS
decisions have no precedential effect beyond the immediate proceeding in which they were issued; LBP-09-15, 70 NRC 198 (2009)
See also Initial Decisions
LICENSING BOARD ORDERS
the Commission gives substantial deference to a board's rulings on contention admissibility in the absence of clear error or abuse of discretion; CLI-09-16, 70 NRC 33 (2009)
LICENSING BOARDS
boards have an obligation to establish a case scheduling order, and to advise the Commission of any significant delay in meeting major activities set forth in the hearing schedule; CLI-09-17, 70 NRC 309 (2009)
LICENSING BOARDS, AUTHORITY
a board can only decide whether or not a current funding proposal fulfills NRC requirements; LBP-09-18, 70 NRC 385 (2009)
a board may impose sanctions including dismissal of the specific contentions, dismissal of the adjudication, or dismissal of the application for any continuing unexcused failure to make the required mandatory disclosures; LBP-09-30, 70 NRC 1039 (2009)
a board's role in an early site permit proceeding is to carefully probe Staff findings by asking appropriate questions and by requiring supplemental information when necessary, but Staff's underlying technical and factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient; LBP-09-19, 70 NRC 433 (2009)
although a board in another materials license renewal proceeding allowed an Indian organization to participate in that proceeding as an interested Indian tribe under 10 C.F.R. 2.315(c), that ruling is not binding on other boards; LBP-09-13, 70 NRC 168 (2009)
although boards are not required to narrow contentions to make them acceptable, they may do so; LBP-09-25, 70 NRC 867 (2009)
any supporting material provided by petitioner, including those portions of the material that are not relied upon, is subject to board scrutiny; LBP-09-26, 70 NRC 939 (2009)
authority to make findings on limited work authorizations is discussed; LBP-09-19, 70 NRC 433 (2009)
boards are authorized to restrict irrelevant, immaterial, unreliable, duplicative, or cumulative evidence; LBP-09-30, 70 NRC 1039 (2009)
boards have authority to narrow low-level radioactive waste contentions; LBP-09-16, 70 NRC 227 (2009)
boards have the duty to conduct a fair and impartial hearing according to law, to take appropriate action to control the prehearing and hearing process, to avoid delay, and to maintain order; LBP-09-22, 70 NRC 640 (2009)
boards lack the authority to require applicant to adopt additional mitigation measures for the protection of endangered or threatened species; LBP-09-16, 70 NRC 227 (2009)
boards may reformulate contentions to eliminate extraneous issues or to consolidate issues for a more efficient proceeding; LBP-09-16, 70 NRC 227 (2009)
boards review NRC Staff's enforcement order *de novo* to determine on the basis of the hearing record whether the charges are sustained and the sanction imposed is warranted; LBP-09-24, 70 NRC 676 (2009)
if petitioner neglects to provide the requisite support for its contentions, the board should not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-09-26, 70 NRC 939 (2009)
in a mandatory hearing, a board must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance; LBP-09-19, 70 NRC 433 (2009)
in an evidentiary hearing, the board may weigh competing evidence and expert opinion and may resolve/decide factual disputes, whereas this is not possible when ruling on motions for summary disposition, which are restricted to situations where there is no genuine issue as to any material fact; LBP-09-22, 70 NRC 640 (2009)

it is beyond board authority to require applicant to choose a particular method of decommissioning funding; LBP-09-15, 70 NRC 198 (2009)
licensing boards shall not entertain motions for summary disposition, unless the board finds that such motions, if granted, are likely to expedite the proceeding; LBP-09-22, 70 NRC 640 (2009)
questions over the equivalence of the "knowledge" standard that governed the jury and the standard applicable in the administrative proceeding can lead a board to exercise its discretion not to apply collateral estoppel; LBP-09-24, 70 NRC 676 (2009)
the role of a board is to decide whether an applicant has supplied the requisite information to the NRC, and whether the petitioners have identified any defect in that information; LBP-09-18, 70 NRC 385 (2009)
when an adjudicatory proceeding has been terminated before a licensing board pursuant to a settlement agreement, the board loses its jurisdiction over, and thus its authority to act with respect to, that licensing action; LBP-09-23, 70 NRC 659 (2009)
where all factors are met, the application of collateral estoppel by the subsequent tribunal is to some degree a discretionary matter; LBP-09-24, 70 NRC 676 (2009)
where the final environmental impact statement discussion of alternative sites was insufficient, the board independently reviewed the record on greenfield, competitors' brownfield, noncompetitors' brownfield, and applicant's other nuclear sites to conclude that the Staff's underlying alternative site review was adequate; LBP-09-19, 70 NRC 433 (2009)
LICENSING BOARDS, JURISDICTION
a notice of hearing having been issued by the Commission in a combined license proceeding, the board has jurisdiction to approve a settlement agreement; LBP-09-23, 70 NRC 659 (2009)
dismissal of one contention on mootness grounds would not terminate a case where the board had expressly retained jurisdiction to decide whether to admit another contention; LBP-09-27, 70 NRC 992 (2009)
given that the board recently issued an initial decision resolving all contentions in the case, the Commission can discern no compelling reason to take the extraordinary action of stepping in at this late stage to take up the case, but parties will have the opportunity to petition for review of the board's rulings; CLI-09-19, 70 NRC 864 (2009)
if a previously terminated contested hearing is subsequently renoticed, a new licensing board would need to be established to preside over the renoticed litigation; LBP-09-23, 70 NRC 659 (2009)
when an adjudicatory proceeding has been terminated before a licensing board pursuant to a settlement agreement, the board loses its jurisdiction over, and thus its authority to act with respect to, that licensing action; LBP-09-23, 70 NRC 659 (2009)
LICENSING PROCEEDINGS
although the Commission commonly looks to Article III concepts for guidance, it is not required to automatically follow them in all respects because NRC proceedings are not subject to Article III; LBP-09-15, 70 NRC 198 (2009)
FEMA's finding on emergency plans constitutes a rebuttable presumption on questions of adequacy and implementation capability in NRC licensing proceedings; LBP-09-19, 70 NRC 433 (2009)
See also Combined License Proceedings; Early Site Permit Proceedings; Materials License Proceedings; Materials License Renewal Proceedings; Uranium Enrichment Facility Proceedings
LIMITED APPEARANCE STATEMENTS
any person who does not wish, or is not qualified, to become a party to a materials license proceeding may request permission to make a limited appearance pursuant to the provisions of 10 C.F.R. 2.315(a); CLI-09-15, 70 NRC 1 (2009)
LIMITED WORK AUTHORIZATION
a site redress plan remains in effect for an early site permit applicant even if the ESP with which the LWA is issued is not referenced in a construction permit or combined license application during the period that the ESP remains valid; LBP-09-19, 70 NRC 433 (2009)
activities constituting construction, and thus requiring an LWA, are the driving of piles, subsurface preparation, placement of backfill, concrete, or permanent retaining walls within an excavation, installation of foundations, or in-place assembly, erection, fabrication, or testing that are for safety-related structures, systems, or component; LBP-09-16, 70 NRC 227 (2009); LBP-09-19, 70 NRC 433 (2009)

although a presiding officer should issue a separate partial initial decision regarding a limited work authorization request, the board finds no practical or logical basis for separating its consideration of the adequacy of the LWA request from its determination regarding the early site permit with which it is associated; LBP-09-19, 70 NRC 433 (2009)
an early site permit applicant may request that an LWA be issued in conjunction with the early site permit; LBP-09-19, 70 NRC 433 (2009)
an initial decision directing the issuance or amendment of a LWA or an early site permit is immediately effective upon issuance unless the presiding officer finds that good cause has otherwise been shown by a party; LBP-09-19, 70 NRC 433 (2009)
an LWA authorizes activities for which either a construction permit or combined license is otherwise required, but the LWA application must include a plan for site redress that provides for restoration if the project is cancelled, the LWA is revoked, or a construction permit or COL is denied; LBP-09-19, 70 NRC 433 (2009)
any activities undertaken under an LWA are entirely at the risk of the applicant; LBP-09-19, 70 NRC 433 (2009)
applicant must submit, as part of the safety analysis report for the LWA, design information related to activities within the scope of the requested LWA; LBP-09-19, 70 NRC 433 (2009)
board authority to make findings on LWAs is discussed; LBP-09-19, 70 NRC 433 (2009)
boards are to determine whether the site redress plan will adequately redress the activities should the activities be terminated by either the holder of the LWA or by Commission denial of any corresponding early site permit or combined license; LBP-09-19, 70 NRC 433 (2009)
construction activities allowed under an LWA are discussed; LBP-09-19, 70 NRC 433 (2009)
construction activities associated with onsite emergency facilities necessary to comply with 10 C.F.R. 50.47 and 10 C.F.R. Part 50, Appendix E are included; LBP-09-19, 70 NRC 433 (2009)
if LWA activities are approved by NRC in conjunction with an early site permit, the ESP as issued shall specify those authorized activities; LBP-09-19, 70 NRC 433 (2009)
preconstruction activities that do not require NRC approval are discussed; LBP-09-19, 70 NRC 433 (2009)
when an early site permit is issued with an associated LWA, the board must find relative to the LWA that any significant adverse environmental impact resulting from activities requested under 10 C.F.R. 52.17(c) can be redressed; LBP-09-19, 70 NRC 433 (2009)
LOCAL GOVERNMENTAL BODIES
an entity wishing to participate as a governmental body must demonstrate that it goes beyond an advisory role and exercises executive or legislative responsibilities; LBP-09-13, 70 NRC 168 (2009)
if applicant chooses to submit a complete and integrated emergency plan at the early site permit stage, applicant also is required to make a good-faith effort to obtain a certification from federal, state, and local governmental agencies with emergency planning responsibilities; LBP-09-19, 70 NRC 433 (2009)
not all entities with governmental ties are entitled to participate in licensing proceedings as local governmental bodies; LBP-09-13, 70 NRC 168 (2009)
the fact that an ancestor of a member of the Oglala Delegation of the Great Sioux Nation Treaty Council signed several treaties with the United States more than 100 years ago does not establish that the delegation is a current and official successor to the delegation that signed such treaties, or that the delegation is a local governmental entity that currently exercises executive function; LBP-09-13, 70 NRC 168 (2009)
See also Interested Governmental Entity
LOW-INCOME POPULATIONS
to qualify as an environmental justice contention, the contention must show that the affected local population qualifies as a minority or low-income population; LBP-09-18, 70 NRC 385 (2009)
MANDATORY HEARINGS
a board's role in an early site permit proceeding is to carefully probe Staff findings by asking appropriate questions and by requiring supplemental information when necessary, but Staff's underlying technical and factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient; LBP-09-19, 70 NRC 433 (2009)

a decision dismissing the contested adjudication relating to a combined license has no impact on the subsequent need to conduct a mandatory hearing relating to the COL application, over which the Commission would preside; LBP-09-23, 70 NRC 659 (2009)
a licensing board must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance; LBP-09-19, 70 NRC 433 (2009)
early site permit applications, as partial construction permit applications, are subject to the Atomic Energy Act hearing requirement, as well as all procedural requirements in 10 C.F.R. Part 2; LBP-09-19, 70 NRC 433 (2009)
for purposes of the mandatory/uncontested portion of an ESP proceeding, the board takes official notice of publicly available documents associated with the Staff's safety and environmental reviews; LBP-09-19, 70 NRC 433 (2009)
in uncontested proceedings, licensing boards do not conduct a *de novo* review of the application; CLI-09-15, 70 NRC 1 (2009)
in uranium enrichment facility proceedings, a licensing board must determine in its initial decision whether the requirements of section 102(2)(A), (C), and (E) of the National Environmental Policy Act have been complied with in the proceeding; CLI-09-15, 70 NRC 1 (2009)
in uranium enrichment facility proceedings, licensing boards must determine whether the review conducted by the NRC Staff pursuant to 10 C.F.R. Part 51 has been adequate; CLI-09-15, 70 NRC 1 (2009)
licensing boards must determine whether the applicant and record of the proceeding contain sufficient information to support license issuance; CLI-09-15, 70 NRC 1 (2009)
matters of fact and law to be considered in a uranium enrichment facility licensing proceeding are whether the application satisfies the applicable standards in 10 C.F.R. Parts 30, 40, and 70, and whether the requirements of the National Environmental Policy Act and the NRC's implementing regulations in 10 C.F.R. Part 51 have been met; CLI-09-15, 70 NRC 1 (2009)
safety findings that a board must make for issuance of an early site permit are clarified; LBP-09-19, 70 NRC 433 (2009)
the Commission shall hold a hearing on each application under the Atomic Energy Act, 42 U.S.C. 2133 or 2134(b), for a construction permit for a facility; LBP-09-19, 70 NRC 433 (2009)
when an early site permit is issued with an associated limited work authorization, the board must find relative to the LWA that any significant adverse environmental impact resulting from activities requested under 10 C.F.R. 52.17(c) can be redressed; LBP-09-19, 70 NRC 433 (2009)
when reviewing an early site permit application in an uncontested proceeding, licensing boards are to conduct a simple sufficiency review rather than a *de novo* review on both Atomic Energy Act and National Environmental Policy Act issues; LBP-09-19, 70 NRC 433 (2009)
with respect to certain NEPA findings, boards in early site permit proceedings are to make independent environmental judgments, though they need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities; LBP-09-19, 70 NRC 433 (2009)
MATERIAL FALSE STATEMENTS
a person is proscribed from deliberately submitting to the NRC information that the person knows to be incomplete or inaccurate in some respect material to the NRC; LBP-09-24, 70 NRC 676 (2009)
MATERIAL MISREPRESENTATIONS
a licensee employee who contributes to submission of information to the NRC that the employee knows is not complete or accurate in some material respect places the licensee in violation; LBP-09-24, 70 NRC 676 (2009)
engaging in deliberate misconduct that caused inaccurate and incomplete information to be provided to the NRC concerning conditions at a reactor resulted in debarment from licensed activities for 5 years; LBP-09-11, 70 NRC 151 (2009)
ethics rules in most jurisdictions require, and the board expects, that counsel will promptly correct statements of material fact that are no longer true; LBP-09-28, 70 NRC 1019 (2009)
for the decisions of the agency's dedicated regulators to be effective in protecting the public health and safety, there is no room for the submission of falsified information; LBP-09-24, 70 NRC 676 (2009)
information submitted to an NRC inspector that was not complete and accurate in all material respects is a violation; LBP-09-12, 70 NRC 159 (2009)

SUBJECT INDEX

MATERIALITY
a genuine material dispute is one that could lead to a different conclusion on potential cost-beneficial severe accident mitigation alternatives; LBP-09-26, 70 NRC 939 (2009)
an admissible contention must show that the alleged error or omission is of possible significance to the result of the proceeding; LBP-09-26, 70 NRC 939 (2009)
by complying with the six contention requirements, an admissible contention must raise an issue that is both within the scope of the proceeding (normally defined by the hearing notice) and material to the findings the NRC must make to support the action involved; LBP-09-18, 70 NRC 385 (2009)
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; LBP-09-16, 70 NRC 227 (2009)
petitioner must 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; LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-25, 70 NRC 867 (2009)
petitioner must show that the subject matter of the contention would impact the grant or denial of the license application at issue in the proceeding; CLI-09-15, 70 NRC 1 (2009); LBP-09-26, 70 NRC 939 (2009); LBP-09-27, 70 NRC 992 (2009)
petitioner must show why the alleged error or omission is of possible significance to the result of the proceeding; LBP-09-27, 70 NRC 992 (2009)
section 2.309(f)(1)(vi) is not a second hurdle of materiality that an intervenor must meet, but rather requires that intervenor identify the specific parts of the combined license application that it disputes and show that resolution of those disputes is material to the licensing decision; LBP-09-27, 70 NRC 992 (2009)
the decision as to whether an alleged environmental impact or alternative is significant or reasonable is the merits of a NEPA contention and should not be adjudicated at the contention admissibility stage under the guise of materiality or scope; LBP-09-10, 70 NRC 51 (2009)
the financial test for a parent company guarantee is a material issue because the Staff must decide whether the test is satisfied in order to grant the combined license; LBP-09-15, 70 NRC 198 (2009)
there must be some significant link between the deficiency claimed in a contention and the agency's ultimate determination whether the license applicant will adequately protect the health and safety of the public and the environment; LBP-09-26, 70 NRC 939 (2009); LBP-09-27, 70 NRC 992 (2009)
MATERIALS LICENSE APPLICATIONS
an environmental report and an environmental impact statement must include a statement on the alternatives to the proposed action, including a discussion of the no-action alternative; CLI-09-15, 70 NRC 1 (2009)
MATERIALS LICENSE PROCEEDINGS
a state, county, municipality, federally recognized Indian tribe, or agencies thereof, may submit a petition to the Commission to participate as a party in a uranium enrichment facility proceeding; CLI-09-15, 70 NRC 1 (2009)
MATERIALS LICENSE RENEWAL
when a renewal application is timely filed, the license is automatically extended by operation of law until final agency action is taken on the renewal request; LBP-09-13, 70 NRC 168 (2009)
MATERIALS LICENSE RENEWAL PROCEEDINGS
although a board in another materials license renewal proceeding allowed an Indian organization to participate in that proceeding as an interested Indian tribe under 10 C.F.R. 2.315(c), that ruling is not binding on other boards; LBP-09-13, 70 NRC 168 (2009)
in source materials cases, petitioner has the burden to show a specific and plausible means of how proposed license activities may affect him or her; LBP-09-13, 70 NRC 168 (2009)
standing based on proximity does not apply in source materials cases; LBP-09-13, 70 NRC 168 (2009)
MATERIALS LICENSES
creditor regulations may be augmented by license conditions as necessary to allow ownership arrangements, such as sale and leaseback, provided it can be found that such arrangements are not inimical to the common defense and security of the United States; CLI-09-15, 70 NRC 1 (2009)
Part 70 financial criteria can be met by conditioning the license to require funding commitments to be in place prior to construction and operation; CLI-09-15, 70 NRC 1 (2009)

METAL FATIGUE
if the cumulative usage factor environmental analysis produces a value of greater than unity, then the analysis indicates that the component would be likely to develop metal fatigue cracks that might affect their function during the 20-year license renewal period of extended operation, and thus requires an aging management program; LBP-09-9, 70 NRC 41 (2009)
new contention on the adequacy of consideration of the dissolved oxygen factor in the cumulative usage factor environmental analysis and use of inappropriate heat transfer equations was previously litigated and resolved and thus is not admissible; LBP-09-9, 70 NRC 41 (2009)
METEOROLOGICAL FACTORS
the site safety analysis report submitted with an early site permit application must contain the seismic, meteorological, hydrologic, and geologic characteristics of the proposed site; LBP-09-19, 70 NRC 433 (2009)
MINING ACTIVITIES
a contention concerning environmental impacts of offsite mining is rejected because petitioner failed to support the allegations with information indicating that such impacts are even plausibly significant; LBP-09-10, 70 NRC 51 (2009)
controls other countries may impose on mining and milling, and the impacts of such activities, are outside the scope of a combined license proceeding; LBP-09-17, 70 NRC 311 (2009)
if the environmental impact of mining activities is potentially significant, then the failure of the environmental report for a combined license application to disclose the location of the offsite mine does not immunize it from being the subject of a legitimate contention; LBP-09-10, 70 NRC 51 (2009)
MINORITIES
to qualify as an environmental justice contention, the contention must show that the affected local population qualifies as a minority or low-income population; LBP-09-18, 70 NRC 385 (2009)
MISCONDUCT
See Deliberate Misconduct; Material Misrepresentations
MODIFICATION ORDER
intervention petitioners who think an order modifying a license should not be sustained, but might want further corrective measures, are precluded from intervention; LBP-09-20, 70 NRC 565 (2009)
the Commission's power to define the scope of a proceeding will lead to the denial of intervention when the Commission amends a license to require additional or better safety measures; LBP-09-20, 70 NRC 565 (2009)
twenty days in which to request a hearing is the minimum required by the agency's regulations for orders issued under 10 C.F.R. 2.202(a); LBP-09-20, 70 NRC 565 (2009)
when issuing an order modifying a license, the agency is required to inform the licensee or any other person adversely affected by the order of his or her right, within 20 days of the date of the order, or such other time as may be specified in the order, to demand a hearing; LBP-09-20, 70 NRC 565 (2009)
where the notice of hearing limits the scope to whether the order should be sustained, petitioner's sole remedy is rescission of the order; LBP-09-20, 70 NRC 565 (2009)
with respect to orders modifying a license, petitioner must always request a remedy that falls within the scope of the proceeding, as articulated in the notice of hearing; LBP-09-20, 70 NRC 565 (2009)
MOOTNESS
a contention alleging that a license application omits material information becomes moot when the applicant cures the omission; LBP-09-15, 70 NRC 198 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-27, 70 NRC 992 (2009)
although the Commission is not strictly bound by the mootness doctrine, the agency's adjudicatory tribunals have generally adhered to the principle; LBP-09-15, 70 NRC 198 (2009)
an appeal is moot where no effective relief can be granted to petitioners even if they were to prevail on their claim; LBP-09-14, 70 NRC 193 (2009)
because NRC is not subject to the jurisdictional limitations placed on the federal courts by the case or controversy provision in Article III of the Constitution, there is no insuperable barrier to its rendition of an advisory opinion on issues that have been indisputably mooted by events occurring subsequent to a licensing board decision; LBP-09-15, 70 NRC 198 (2009)

boards may consider the merits of a contention that has become moot to the extent doing so will promote the fair and expeditious resolution of the case and there are no significant countervailing concerns; LBP-09-15, 70 NRC 198 (2009)
despite not being constitutionally limited by the case or controversy requirement of Article III, common sense counsels against proceeding with an adjudication where no effective relief can be granted; LBP-09-14, 70 NRC 193 (2009)
dismissal of one contention on mootness grounds would not terminate a case where the board had expressly retained jurisdiction to decide whether to admit another contention; LBP-09-27, 70 NRC 992 (2009)
the case or controversy jurisdictional limitation restricts the business of federal courts to questions presented in an adversary context and in a form historically viewed as capable of resolution through the judicial process; LBP-09-14, 70 NRC 193 (2009)
the executive branch is not bound by the same constitutional constraints as Article III courts, but it has consistently followed the same principles of declining to consider moot cases, in the interest of administrative economy; LBP-09-14, 70 NRC 193 (2009)
the mootness doctrine derives from the Constitution's limitation of federal courts' jurisdiction to cases or controversies; LBP-09-15, 70 NRC 198 (2009)
when a claim becomes moot, a decision on the merits may be appropriate if the same basic dispute is likely to recur in the future, unless it seems sufficient to await the event or better to defer to another court; LBP-09-15, 70 NRC 198 (2009)
when a claim becomes moot in federal court, the court loses jurisdiction to decide the merits of that claim; LBP-09-15, 70 NRC 198 (2009)
when a federal court dismisses a claim as moot and avoids any further consideration of the merits of that claim, it does so because the claim no longer satisfies the case or controversy requirement of Article III; LBP-09-15, 70 NRC 198 (2009)
MOTIONS
if the attorney or representative of a party is contacted pursuant to the consultation requirement, then that person (or his or her alternate) must make a sincere effort to make himself or herself available to listen and to respond to the moving party's explanation, and to resolve the factual and legal issues raised in the motion; LBP-09-22, 70 NRC 640 (2009)
it is inconsistent with dispute avoidance/resolution purposes, and thus insufficient, for a contacted attorney or representative to fail or refuse to consider the substance of the consultation attempt, or for the party to respond that it takes no position on the motion (or issues) and that it reserves the right to file a response to the motion when it is filed; LBP-09-22, 70 NRC 640 (2009)
motions will be rejected if they do not include certification by the attorney or representative of the moving party that they have made a sincere effort to contact the other parties in this proceeding, to explain to them the factual and legal issues raised in the motion, and to resolve those issues; LBP-09-22, 70 NRC 640 (2009)
no later than 30 days after service of materials, all parties shall file any motions or requests to permit that party to conduct cross-examination of a specified witness or witnesses, together with the associated cross-examination plans; LBP-09-22, 70 NRC 640 (2009)
to be sincere, movant should contact other parties sufficiently in advance to provide enough time for the possible resolution of the matter or issues in question; LBP-09-22, 70 NRC 640 (2009)
MOTIONS TO COMPEL
challenges regarding the adequacy of any mandatory disclosure or hearing file, redactions, or the validity of any claim that a document is privileged or protected shall be filed within 10 days after the occurrence or circumstance from which the motion arises; LBP-09-22, 70 NRC 640 (2009)
NATIONAL ENVIRONMENTAL POLICY ACT
a rule of reason governs the agency's duty to identify and consider all reasonable alternatives; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
abdicating water quality effects entirely to other agencies' certifications subverts the special purpose of NEPA; LBP-09-16, 70 NRC 227 (2009)
accuracy of an applicant's cost estimate is not material to the findings the NRC must make under NEPA; LBP-09-16, 70 NRC 227 (2009)

agencies are required to consider measures to mitigate environmental impacts; LBP-09-19, 70 NRC 433 (2009)
agencies are required to exercise a degree of skepticism in dealing with self-serving statements from the prime beneficiary of a project and to look at the general goal of the project, rather than only those alternatives by which a particular applicant can reach its own specific goals; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
agencies are required to study, develop, and describe appropriate alternatives to recommended courses of action in any proposal that involves unresolved conflicts concerning alternative uses of available resources and include a detailed statement of the alternatives to the proposed action in its environmental impact statement; LBP-09-10, 70 NRC 51 (2009)
although analysis of aircraft impact is required, reactors whose construction permits were issued prior to July 13, 2009, are excluded, and the rule is not NEPA-based; LBP-09-26, 70 NRC 939 (2009)
although applicant's goals are given substantial weight, applicant is not allowed to define its goals so narrowly as to unreasonably circumscribe the range of alternatives that must be considered; LBP-09-17, 70 NRC 311 (2009)
although construction of the provisions of 10 C.F.R. Part 51 mandating the contents of applicant's environmental report may be informed by consideration of general NEPA principles, the Commission must look to the wording of the Part 51 regulations to determine if an ER is satisfactory or deficient; LBP-09-10, 70 NRC 51 (2009)
although the methodology is available to provide the required analysis, neither NEPA nor NRC regulations require that the analysis under 10 C.F.R. 51.45(c) be performed using that methodology; LBP-09-26, 70 NRC 939 (2009)
an agency cannot redefine the applicant's goals, and the EIS alternatives analysis should be based around the applicant's goals, including its economic goals; LBP-09-17, 70 NRC 311 (2009)
an environmental impact statement must address alternatives to the proposed action; LBP-09-19, 70 NRC 433 (2009)
an environmental impact statement must provide a detailed statement concerning the environmental impact of the proposed action, any adverse environmental effects that cannot be avoided should the proposal be implemented, and any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented; LBP-09-16, 70 NRC 227 (2009)
an environmental report and an environmental impact statement for a materials license must include a statement on the alternatives to the proposed action, including a discussion of the no-action alternative; CLI-09-15, 70 NRC 1 (2009)
an otherwise reasonable alternative will not be excluded from discussion in an environmental impact statement solely on the ground that it is not within the jurisdiction of the NRC; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
applicant is only required to provide an analysis that considers and balances alternatives available for reducing or avoiding adverse environmental effects; LBP-09-26, 70 NRC 939 (2009)
applicant may not define the objectives of its action in terms so unreasonably narrow that only one alternative would accomplish the applicant's goals because this would make the agency's EIS alternatives analysis a foreordained formality; LBP-09-10, 70 NRC 51 (2009)
applicants are not required to eliminate adverse environmental impacts; LBP-09-16, 70 NRC 227 (2009)
applicants' assertion that low-level radioactive waste could be transferred to another licensee or that some other arrangement might be established in the future is not sufficient to erase the requirement that reasonably foreseeable environmental impacts be assessed in an environmental report; CLI-09-20, 70 NRC 911 (2009)
applicant's environmental report is required to analyze the alternatives available for reducing or avoiding adverse environmental effects; LBP-09-10, 70 NRC 51 (2009)
applicants or licensees are not required to consider terrorist attacks as part of their environmental reviews; LBP-09-26, 70 NRC 939 (2009)
because NEPA is a procedural statute, petitioners need not show that favorable rulings on their NEPA contentions will require denial of the license, but rather that procedures intended for protection of their members' concrete interests will be observed; LBP-09-16, 70 NRC 227 (2009)
because the environmental report is the only environmental document available when NRC issues its notice of opportunity to request a hearing, all initial contentions necessarily focus on the adequacy of

the applicant's ER, but the public will have a new opportunity to file environmental contentions when the NRC Staff issues the environmental impact statement or environmental analysis; LBP-09-10, 70 NRC 51 (2009)
courts have consistently interpreted NEPA as a procedural statute that requires disclosure and analysis of environmental impacts, not one that imposes substantive obligations for the protection of natural resources; LBP-09-16, 70 NRC 227 (2009)
environmental reports and environmental impact statements must include an assessment of all environmental impacts and alternatives, even though NRC has no jurisdiction to regulate such impacts or jurisdiction to impose such alternatives; LBP-09-10, 70 NRC 51 (2009)
federal agencies are required to take a hard look at the environmental consequences of their actions; LBP-09-16, 70 NRC 227 (2009)
findings that a board must make to authorize issuance of an early site permit are described; LBP-09-19, 70 NRC 433 (2009)
focus of this statute is on assessment, not regulation; LBP-09-10, 70 NRC 51 (2009)
for licensing decisions involving facilities located within the jurisdictional boundaries of the U.S. Court of Appeals for the Ninth Circuit, the NRC Staff will consider, as part of its NEPA analysis, the potential environmental consequences, if any, of a terrorist attack on the proposed facility; CLI-09-15, 70 NRC 1 (2009)
goals of a project's sponsor are given substantial weight in determining whether a NEPA alternative is reasonable; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
if a NEPA contention alleges that impacts or alternatives that are patently outside the realm of reason must be considered, then the contention should be denied for failure to demonstrate that the issue raised is within the legitimate scope of NEPA; LBP-09-10, 70 NRC 51 (2009)
if the accident sought to be considered is sufficiently unlikely that it can be characterized fairly as remote and speculative, then consideration under NEPA is not required as a matter of law; LBP-09-26, 70 NRC 939 (2009)
if the adverse environmental impacts of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs; LBP-09-16, 70 NRC 227 (2009)
if the proposed siting of a plant slated for an early site permit involves unresolved conflicts concerning alternative uses of available resources, then this discussion must be sufficiently complete to allow the Staff to develop and to explore appropriate alternatives to the ESP pursuant to NEPA § 102(2)(E); LBP-09-19, 70 NRC 433 (2009)
in implementing NEPA, the NRC uses certain of the definitions provided in Council on Environmental Quality regulations; LBP-09-19, 70 NRC 433 (2009)
in ruling on petitioner's standing, boards should consider the nature of petitioner's right under the Atomic Energy Act or NEPA to be made a party to the proceeding, the nature and extent of petitioner's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest; LBP-09-13, 70 NRC 168 (2009)
in uranium enrichment facility proceedings, a licensing board must determine in its initial decision, whether the requirements of section 102(2)(A), (C), and (E) have been complied with; CLI-09-15, 70 NRC 1 (2009)
licensing boards are required to apply the Commission's directive that outside the Ninth Circuit, NEPA does not require the evaluation of the impact of terrorist attacks by aircraft or other means; LBP-09-10, 70 NRC 51 (2009); LBP-09-18, 70 NRC 385 (2009)
low probability is the key to applying NEPA's rule-of-reason test to contentions that allege that a specified accident scenario presents a significant environmental impact that must be evaluated; LBP-09-26, 70 NRC 939 (2009)
NEPA is the only legal grounds for an admissible contention relating to environmental justice issues; LBP-09-18, 70 NRC 385 (2009)
NEPA itself does not mandate particular results, but simply prescribes the necessary process; LBP-09-25, 70 NRC 867 (2009)
nothing in NEPA shall be deemed to authorize any federal agency to review any effluent limitation or other requirement established pursuant to the Clean Water Act or to authorize any such agency to

impose any effluent limitation other than those set by the Environmental Protection Agency or a state agency that has been delegated such authority; LBP-09-25, 70 NRC 867 (2009)
NRC is obligated to study matters that may be far afield of its primary mission, including the environmental impacts related to the permits and licenses issued by other governmental agencies; LBP-09-21, 70 NRC 581 (2009)
NRC is required to consider measures to mitigate the environmental impacts of the project; LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009)
on baseline issues in early site permit cases, boards must reach their own independent determination, but should do so without second-guessing underlying technical or factual findings by the NRC Staff; LBP-09-19, 70 NRC 433 (2009)
reasonable alternatives under NEPA do not include alternatives that are impractical, that present unique problems, or that cause extraordinary costs; LBP-09-16, 70 NRC 227 (2009)
severe accident mitigation alternatives analysis must be site specific and given careful consideration in order to comply with environmental requirements; LBP-09-10, 70 NRC 51 (2009)
the alternatives analysis is the heart of the environmental impact statement; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)
the alternatives discussion in the environmental report or environmental impact statement need not include every possible alternative, but every reasonable alternative; LBP-09-16, 70 NRC 227 (2009); LBP-09-21, 70 NRC 581 (2009)
the Commission may have more to offer regarding the need for a NEPA carbon footprint analysis in new reactor licensing proceedings; LBP-09-19, 70 NRC 433 (2009)
the concept of alternatives must be bounded by some notion of feasibility; LBP-09-17, 70 NRC 311 (2009)
the decision as to whether an alleged environmental impact or alternative is significant or reasonable is the merits of a NEPA contention and should not be adjudicated at the contention admissibility stage under the guise of materiality or scope; LBP-09-10, 70 NRC 51 (2009)
the environmental baseline reflects the effects of all currently existing pollution sources in the relevant watershed, including contributions of all nuclear power plants, and petitioners failed to provide information indicating that this aggregate analysis was insufficient; LBP-09-16, 70 NRC 227 (2009)
the environmental report is required to address a list of environmental considerations that correspond to the environmental considerations that NEPA § 102(2)(C)(i)-(v) requires the agency to address in the environmental impact statement; LBP-09-16, 70 NRC 227 (2009)
the environmental report's impact analysis must include sufficient data and the alternatives analysis must be sufficiently complete to aid the Commission in preparing the environmental impact statement; LBP-09-10, 70 NRC 51 (2009)
the requirement to discuss alternatives in the environmental report parallels NEPA's requirement that an environmental impact statement provide a detailed statement of reasonable alternatives to a proposed action; LBP-09-16, 70 NRC 227 (2009)
the requirements of NEPA and, by extension, NRC's regulations implementing NEPA are subject to a rule of reason, and only reasonably foreseeable environmental impacts must be addressed; LBP-09-26, 70 NRC 939 (2009)
the statute applies to agencies of the federal government, not to private parties such as applicants for NRC licenses; LBP-09-10, 70 NRC 51 (2009)
the statute has only a limited role to play in interpreting 10 C.F.R. Part 51's requirements for the environmental report; LBP-09-16, 70 NRC 227 (2009)
uncertainties are dealt with by inclusion in an environmental impact statement of a summary of existing credible scientific evidence relevant to evaluating the reasonably foreseeable significant adverse impacts regarding those events with potential catastrophic consequences even if their probability is low; LBP-09-26, 70 NRC 939 (2009)
under NEPA the Commission looks to the reasonably foreseeable impacts of simply licensing the facility, not the reasonably foreseeable effects of a successful terrorist attack; LBP-09-26, 70 NRC 939 (2009)
with respect to certain NEPA findings, boards in early site permit proceedings are to make independent environmental judgments, though they need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities; LBP-09-19, 70 NRC 433 (2009)

SUBJECT INDEX

NATIONAL HISTORIC PRESERVATION ACT
only Indian tribes that appear on the Department of the Interior's list of recognized tribes have consultation rights under the National Historic Preservation Act; LBP-09-13, 70 NRC 168 (2009)
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT
the Commission has previously rejected claims that NRC regulations require discharge permits of their licensees; LBP-09-25, 70 NRC 867 (2009)
NATIVE AMERICANS
a "federally recognized Indian tribe" is one that is included on the Bureau of Indian Affairs' list of federally recognized Indian Tribes published in the *Federal Register*; LBP-09-13, 70 NRC 168 (2009)
a Native American group that has failed to establish that it is a federally recognized Indian tribe is denied standing based on its tribal status; LBP-09-13, 70 NRC 168 (2009)
although a board in another materials license renewal proceeding allowed an Indian organization to participate in that proceeding as an interested Indian Tribe under 10 C.F.R. 2.315(c), that ruling is not binding on other boards; LBP-09-13, 70 NRC 168 (2009)
Congress's plenary power with respect to Native Americans entitles it to abrogate treaties with Native American nations; LBP-09-13, 70 NRC 168 (2009)
federal recognition by the Bureau of Indian Affairs is a formal political act confirming a tribe's existence as a distinct political society, and institutionalizing the government-to-government relationship between the tribe and the federal government; LBP-09-13, 70 NRC 168 (2009)
federally recognized Indian tribes do not need to address standing requirements if the facility is located within their boundaries; CLI-09-15, 70 NRC 1 (2009)
"Indian tribe" is defined as an Indian or Alaska Native tribe, band, nation, pueblo, village, or community that the Secretary of the Interior acknowledges to exist as an Indian tribe pursuant to the Federally Recognized Indian Tribe List Act of 1994; LBP-09-13, 70 NRC 168 (2009)
membership of a petitioning Indian group must be composed principally of persons who are not members of any other acknowledged North American Indian tribe; LBP-09-13, 70 NRC 168 (2009)
only Indian tribes that appear on the Department of the Interior's list of recognized tribes have consultation rights under the National Historic Preservation Act; LBP-09-13, 70 NRC 168 (2009)
plenary authority over the tribal relations of the Indians has been exercised by Congress from the beginning, and the power has always been deemed a political one, not subject to be controlled by the judicial department of the government; LBP-09-13, 70 NRC 168 (2009)
the fact that an ancestor of a member of the Oglala Delegation of the Great Sioux Nation Treaty Council signed several treaties with the United States more than 100 years ago does not establish that the delegation is a current and official successor of the delegation that signed such treaties, or that the delegation is a local governmental entity that currently exercises executive or; LBP-09-13, 70 NRC 168 (2009)
the Trust Responsibility requires federal agencies to take actions or refrain from taking actions in fulfillment of Congress's duty to protect the Indians; LBP-09-13, 70 NRC 168 (2009)
the United States is no longer bound by the terms of the 1868 Fort Laramie Treaty; LBP-09-13, 70 NRC 168 (2009)
to qualify for recognition on the Bureau of Indian Affairs' list as an Indian tribe, a petitioning group must establish that it has historically been recognized as an American Indian entity since 1900, that it is composed of a cohesive group of individuals that share a distinct community and an autonomous government, and that its members are descended from a historic Indian tribe or tribes; LBP-09-13, 70 NRC 168 (2009)
NEED FOR POWER
NRC must analyze the need for additional power when it relies upon a benefit in performing the balancing of benefits and costs; LBP-09-16, 70 NRC 227 (2009)
NEED TO KNOW
content of a statement that explains an individual's "need to know" safeguards information is described; CLI-09-15, 70 NRC 1 (2009)
NEGLIGENCE
a "negligent defendant" is one who should have had suspicions but, in fact, did not; LBP-09-24, 70 NRC 676 (2009)

the danger of instruction to juries on deliberate ignorance or willful blindness in an inappropriate case is that juries will convict on a basis akin to a standard of negligence; LBP-09-24, 70 NRC 676 (2009)
NOTICE OF HEARING
agency notices must provide at least 15 days before the opportunity for a hearing is forfeited unless a shorter period is reasonable; LBP-09-20, 70 NRC 565 (2009)
an opportunity for hearing will be provided in the *Federal Register* notice of fuel loading, regarding whether inspections, tests, or analyses that have not been found to have been met under 10 C.F.R. 52.97(a)(2) prior to issuance of the combined license; LBP-09-19, 70 NRC 433 (2009)
if applicant requests a Commission finding on the completion of inspections, tests, analyses, and acceptance criteria needed for issuance of a combined license, the Commission is required to identify these ITAAC in the notice of hearing published in the *Federal Register* for the COL proceeding; LBP-09-19, 70 NRC 433 (2009)
the scope of a proceeding is defined in the Commission's initial hearing notice and order referring the proceeding to the licensing board; LBP-09-25, 70 NRC 867 (2009); LBP-09-26, 70 NRC 939 (2009)
when a hearing notice has been issued, withdrawal of an application would be subject to such terms as the presiding officer may prescribe; LBP-09-23, 70 NRC 659 (2009)
when issuing an order modifying a license, the agency is required to inform the licensee or any other person adversely affected by the order of his or her right, within 20 days of the date of the order, or such other time as may be specified in the order, to demand a hearing; LBP-09-20, 70 NRC 565 (2009)
where the notice of hearing limits the scope to whether the order should be sustained, petitioner's sole remedy is rescission of the order; LBP-09-20, 70 NRC 565 (2009)
with respect to orders modifying a license, petitioner must always request a remedy that falls within the scope of the proceeding, as articulated in the notice of hearing; LBP-09-20, 70 NRC 565 (2009)
NOTIFICATION
a hearing request is timely when the petitioner lacks both actual and constructive notice of its opportunity to request a hearing as of the deadline specified by the agency, and the petitioner files the hearing request promptly upon receipt of actual notice; LBP-09-20, 70 NRC 565 (2009)
at appropriate intervals during the time between issuance of a combined license and the last date for submission of requests for hearing under 10 C.F.R. 52.103(a), NRC shall publish notices in the *Federal Register* of NRC Staff's determination of the successful completion of inspections, tests, and analyses; LBP-09-19, 70 NRC 433 (2009)
emergency action levels are the criteria used to determine the notifications that need to be made to federal, state, and local authorities and to determine the appropriate protective responses to a particular set of emergency conditions; LBP-09-19, 70 NRC 433 (2009)
even in the absence of constructive notice, the possibility remains that a petitioner had actual notice of the right to request a hearing; LBP-09-20, 70 NRC 565 (2009)
prior to operation under a combined license, a notice of intended operation will be published in the *Federal Register* not less than 180 days before the date scheduled for initial loading of fuel; LBP-09-19, 70 NRC 433 (2009)
publication in the *Federal Register* is legally sufficient notice to all interested or affected persons regardless of actual knowledge or hardship resulting from ignorance, except those who are legally entitled to personal notice; LBP-09-20, 70 NRC 565 (2009)
See also Emergency Notification System
NRC GUIDANCE DOCUMENTS
although the severe accident mitigation alternatives methodology is available to provide the required analysis, neither NEPA nor NRC regulations require that the analysis under 10 C.F.R. 51.45(c) be performed using that methodology; LBP-09-26, 70 NRC 939 (2009)
NRC provides detailed guidance for Staff personnel reviewing the safety aspects of early site permit applications; LBP-09-19, 70 NRC 433 (2009)
NUREGs are guidance documents, with no binding effect, but are entitled to special weight, such that they are appropriate to consider in evaluating contentions; LBP-09-17, 70 NRC 311 (2009)
NRC REVIEW
the agency's environmental review need only account for those impacts that have some likelihood of occurring or are reasonably foreseeable; LBP-09-26, 70 NRC 939 (2009)

SUBJECT INDEX

NRC STAFF
in Subpart L proceedings, Staff must produce a hearing file and make it available to all parties; LBP-09-22, 70 NRC 640 (2009)
Staff has a continuing duty to update the hearing file; LBP-09-22, 70 NRC 640 (2009)
Staff's role in an enforcement proceeding is akin to that of a prosecutor, and it has the burden to prove its allegations by a preponderance of the reliable, probative, and substantial evidence; LBP-09-24, 70 NRC 676 (2009)
NRC STAFF REVIEW
a board's role in an early site permit proceeding is to carefully probe Staff findings by asking appropriate questions and by requiring supplemental information when necessary, but Staff's underlying technical and factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient; LBP-09-19, 70 NRC 433 (2009)
although the draft environmental impact statement may rely in part on applicant's environmental report, Staff must independently evaluate and be responsible for the reliability of all information used in the DEIS; LBP-09-19, 70 NRC 433 (2009)
analysis of compliance with section 103d of the Atomic Energy Act is a function performed by the NRC Staff as part of its evaluation of the combined license application; CLI-09-20, 70 NRC 911 (2009)
at appropriate intervals during the time between issuance of a combined license and the last date for submission of requests for hearing under section 52.103(a), NRC shall publish notices in the *Federal Register* of NRC Staff's determination of the successful completion of inspections, tests, and analyses; LBP-09-19, 70 NRC 433 (2009)
factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 433 (2009)
if applicant submits a complete and integrated emergency plan in conjunction with an early site permit application, NRC Staff must find that the emergency plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency; LBP-09-19, 70 NRC 433 (2009)
in a mandatory hearing, a licensing board must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance; LBP-09-19, 70 NRC 433 (2009)
in evaluating early site permit applications, where detailed design information is not available, the Commission may defer resolution of severe accident mitigation alternatives until the construction permit or combined license stage; LBP-09-19, 70 NRC 433 (2009)
in its review of early site permit applications, Staff must consider physical characteristics of the site, specifically noting that factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 433 (2009)
in its review of emergency plans, NRC Staff must take into account FEMA's findings; LBP-09-19, 70 NRC 433 (2009)
NRC provides detailed guidance for Staff personnel reviewing the safety aspects of early site permit applications; LBP-09-19, 70 NRC 433 (2009)
on baseline NEPA issues in early site permit cases, boards must reach their own independent determination, but should do so without second-guessing underlying technical or factual findings by the NRC Staff; LBP-09-19, 70 NRC 433 (2009)
review of an integrated emergency plan focuses primarily on the applicant-prepared onsite provisions of the plans, which include the evacuation time estimate provided by applicant, and the inspections, tests, analyses, and acceptance criteria; LBP-09-19, 70 NRC 433 (2009)
Staff is required to prepare an environmental impact statement in connection with issuance of an early site permit; LBP-09-19, 70 NRC 433 (2009)
Staff is to review early site permit applications according to the applicable standards set out in 10 C.F.R. Part 50 and its appendices and 10 C.F.R. Part 100; LBP-09-19, 70 NRC 433 (2009)
the draft environmental impact statement is distributed for public comment and, based on the comments received, a review of information provided by the applicant, and supplemental independent information and analysis, the Staff prepares and issues a final EIS; LBP-09-19, 70 NRC 433 (2009)

where the final environmental impact statement discussion of alternative sites was insufficient, the board independently reviewed the record on greenfield, competitors' brownfield, noncompetitors' brownfield, and applicant's other nuclear sites to conclude that the Staff's underlying alternative site review was adequate; LBP-09-19, 70 NRC 433 (2009)
with regard to alternative sites for an early site permit, NRC Staff must evaluate both the process (i.e., methodology) used by the applicant and the reasonableness of the product (e.g., potential sites) identified by that process; LBP-09-19, 70 NRC 433 (2009)
NUCLEAR POWER PLANTS
existence of another independent nuclear power plant within the 10-mile-radius emergency planning zone of a proposed new nuclear power plant is a significant factor for purposes of emergency planning for the new reactor; LBP-09-10, 70 NRC 51 (2009)
NUCLEAR REGULATORY COMMISSION
NEPA applies only to NRC and not to the applicant; LBP-09-10, 70 NRC 51 (2009)
NUCLEAR REGULATORY COMMISSION, AUTHORITY
an administrative agency may establish administrative standing criteria that are less rigorous than those for judicial standing; CLI-09-20, 70 NRC 911 (2009)
an agency cannot redefine the applicant's goals, and the EIS alternatives analysis should be based around the applicant's goals, including its economic goals; LBP-09-17, 70 NRC 311 (2009)
even if NRC's proximity presumption is viewed as more lenient than judicial standing requirements, NRC may choose to retain it; CLI-09-20, 70 NRC 911 (2009)
given that the board recently issued an initial decision resolving all contentions, the Commission can discern no compelling reason to take the extraordinary action of stepping in at this late stage to take up the case, but parties will have the opportunity to petition for review of the board's rulings; CLI-09-19, 70 NRC 864 (2009)
nothing in the National Environmental Policy Act shall be deemed to authorize any federal agency to review any effluent limitation or other requirement established pursuant to the Clean Water Act or to authorize any such agency to impose any effluent limitation other than those set by the Environmental Protection Agency or a state agency that has been delegated such authority; LBP-09-25, 70 NRC 867 (2009)
the Commission retains its inherent supervisory authority over the uranium enrichment facility proceeding to provide additional guidance to the licensing board and participants and to resolve any matter in controversy itself; CLI-09-15, 70 NRC 1 (2009)
the Commission, rather than petitioner, holds the authority to define the scope of a proceeding; LBP-09-20, 70 NRC 565 (2009)
when water quality decisions have been made by a state pursuant to the Clean Water Act and these decisions are raised in NRC licensing proceedings, the NRC is bound to take the Environmental Protection Agency's considered decisions at face value; LBP-09-25, 70 NRC 867 (2009)
NUCLEAR REGULATORY COMMISSION, JURISDICTION
although the Commission commonly looks to Article III concepts for guidance, it is not required to automatically follow them in all respects because NRC proceedings are not subject to Article III; LBP-09-15, 70 NRC 198 (2009)
an otherwise reasonable alternative will not be excluded from discussion in the environmental impact statement solely on the ground that it is not within the jurisdiction of the NRC; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
because NRC is not subject to the jurisdictional limitations placed on the federal courts by the case or controversy provision in Article III of the Constitution, there is no insuperable barrier to its rendition of an advisory opinion on issues that have been indisputably mooted by events occurring subsequent to a licensing board decision; LBP-09-15, 70 NRC 198 (2009)
environmental reports and environmental impact statements must include an assessment of all environmental impacts and alternatives, even though NRC has no jurisdiction to regulate such impacts or jurisdiction to impose such alternatives; LBP-09-10, 70 NRC 51 (2009)
the fact that disposal of dredged or fill material in wetlands is regulated by the Environmental Protection Agency and the U.S. Army Corps of Engineers does not render a contention inadmissible; LBP-09-10, 70 NRC 51 (2009)

SUBJECT INDEX

OBJECTIONS
it is not a ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence; LBP-09-30, 70 NRC 1039 (2009)
unless and until a document or information is proffered into evidence, there is no basis for a party to object that the information it received in a mandatory disclosure was unreliable or otherwise not admissible as evidence; LBP-09-30, 70 NRC 1039 (2009)
OFFICIAL NOTICE
for purposes of the mandatory/uncontested portion of an ESP proceeding, the board takes official notice of publicly available documents associated with the Staff's safety and environmental reviews; LBP-09-19, 70 NRC 433 (2009)
OPERATING LICENSE APPLICATIONS
although analysis of aircraft impact is required, reactors whose construction permits were issued prior to July 13, 2009, are excluded, and the rule is not NEPA-based; LBP-09-26, 70 NRC 939 (2009)
applicant must submit a supplement to its environmental report at the operating license stage that discusses the same matters described in sections 51.45, 51.51, and 51.52, which would have been initially discussed in the environmental report at the construction permit stage, but only to the extent that those matters differ from those discussed or reflect new information; LBP-09-26, 70 NRC 939 (2009)
applicant must list all federal permits, licenses, approvals, and other entitlements that must be obtained in connection with the issuance of an operating license for a second nuclear reactor and adequately discuss the status of its compliance with them; LBP-09-26, 70 NRC 939 (2009)
OPERATING LICENSES
licensee remains authorized to own and possess the facility even after the operating license expires; LBP-09-17, 70 NRC 311 (2009)
ORDER
See Confirmatory Order; Enforcement Orders; Licensing Board Orders; Modification Order
OWNERSHIP
See Foreign Ownership; Transfer of Ownership
PARTIAL INITIAL DECISIONS
although a presiding officer should issue a separate partial initial decision regarding a limited work authorization request, the board finds no practical or logical basis for separating its consideration of the adequacy of the LWA request from its determination regarding the early site permit with which it is associated; LBP-09-19, 70 NRC 433 (2009)
PARTIES
a "potential party" is any person who intends or may intend to participate as a party by demonstrating standing and filing an admissible contention under 10 C.F.R. 2.309; CLI-09-15, 70 NRC 1 (2009)
parties and NRC Staff must provide a list of documents otherwise required to be disclosed for which a claim of privilege or protected status is being made, together with sufficient information for assessing the claim of privilege or protected status of the documents; LBP-09-22, 70 NRC 640 (2009)
parties and the NRC Staff have a continuing duty to update their mandatory disclosures; LBP-09-22, 70 NRC 640 (2009)
PENALTIES
engaging in deliberate misconduct that caused inaccurate and incomplete information to be provided to the NRC concerning conditions at a reactor resulted in debarment from licensed activities for 5 years; LBP-09-11, 70 NRC 151 (2009)
PERFORMANCE ASSESSMENT
a legal issue contention raises a genuine dispute with the application, because it challenges DOE's performance assessment for the post-10,000-year period; LBP-09-29, 70 NRC 1028 (2009)
contention that the high-level waste application inadequately addresses generalized corrosion because it relies on flawed experimental data raises a genuine, material dispute with the application by pointing to specific sections that allegedly fail to comply with the NRC's requirements for conducting a post-closure performance assessment; LBP-09-29, 70 NRC 1028 (2009)

PERMIT CONDITIONS
any imposed conditions that are not met before a combined license referencing the early site permit is issued will attach to the COL; LBP-09-19, 70 NRC 433 (2009)
PERMITS
an operating license application must list all federal permits, licenses, approvals, and other entitlements that must be obtained in connection with the issuance of an operating license for a second nuclear reactor and adequately discuss the status of its compliance with them; LBP-09-26, 70 NRC 939 (2009)
in the context of NEPA, NRC is obligated to study matters that may be far afield of its primary mission, including the environmental impacts related to the permits and licenses issued by other governmental agencies; LBP-09-21, 70 NRC 581 (2009)
whether other permits may be required from other agencies is outside the scope of NRC proceedings, and those concerns are properly raised before those respective permitting authorities; LBP-09-21, 70 NRC 581 (2009)
See also Construction Permits; Early Site Permits
PLEADINGS
more than mere notice pleading, which is a broad standard requiring only a short and plain statement of the claim, is required for contention admission; LBP-09-17, 70 NRC 311 (2009)
POLICY
an exception to the application of collateral estoppel occurs when broad public policy considerations or special public interest factors are involved such that an agency's need for flexibility outweighs the reasons underlying this repose doctrine so as to favor relitigation of a particular issue; LBP-09-24, 70 NRC 676 (2009)
NRC's adjudicatory process is not the proper venue for the evaluation of a petitioner's own view regarding the direction that regulatory policy should take; LBP-09-26, 70 NRC 939 (2009)
POTASSIUM IODIDE
distribution beyond the 10-mile emergency planning zone is not necessary; LBP-09-16, 70 NRC 227 (2009)
PRECEDENTIAL EFFECT
a standing ruling in one proceeding is not dispositive of a determination in another proceeding with the same petitioner because the ruling was not the subject of appellate review; LBP-09-18, 70 NRC 385 (2009)
although a board in another materials license renewal proceeding allowed an Indian organization to participate in that proceeding as an interested Indian tribe under 10 C.F.R. 2.315(c), that ruling is not binding on other boards; LBP-09-13, 70 NRC 168 (2009)
licensing board decisions have no precedential effect beyond the immediate proceeding in which they were issued; LBP-09-15, 70 NRC 198 (2009)
PREJUDICE
where the impact of delay is a concern, the desirability of avoiding any further delay in reaching a final merits determination can be a key discretionary factor counseling nonreliance upon the collateral estoppel principle even if that doctrine otherwise appears applicable; LBP-09-24, 70 NRC 676 (2009)
PRESIDING OFFICER, AUTHORITY
although a presiding officer should issue a separate partial initial decision regarding a limited work authorization request, the board finds no practical or logical basis for separating its consideration of the adequacy of the LWA request from its determination regarding the early site permit with which it is associated; LBP-09-19, 70 NRC 433 (2009)
when a hearing notice has been issued, withdrawal of an application would be subject to such terms as the presiding officer may prescribe; LBP-09-23, 70 NRC 659 (2009)
PRIVILEGE LOG
parties and NRC Staff must provide a list of documents otherwise required to be disclosed for which a claim of privilege or protected status is being made, together with sufficient information for assessing the claim of privilege or protected status of the documents; LBP-09-22, 70 NRC 640 (2009)
PRIVILEGED INFORMATION
motions to compel or challenges regarding the adequacy of any mandatory disclosure or hearing file, redactions, or the validity of any claim that a document is privileged or protected shall be filed within

10 days after the occurrence or circumstance from which the motion arises; LBP-09-22, 70 NRC 640 (2009)
PRO SE LITIGANTS
boards hold *pro se* petitioners to a less rigorous standard; LBP-09-18, 70 NRC 385 (2009)
licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing; LBP-09-18, 70 NRC 385 (2009)
PROBABILISTIC RISK ASSESSMENT
contention asserting that DOE's description of its expert elicitation relating to a probabilistic volcanic hazard analysis update fails to comply with NRC regulations or the NRC guidance document that DOE formally committed to follow is admissible; LBP-09-29, 70 NRC 1028 (2009)
low probability is the key to applying NEPA's rule-of-reason test to contentions that allege that a specified accident scenario presents a significant environmental impact that must be evaluated; LBP-09-26, 70 NRC 939 (2009)
the safety analysis report component of an application for a Standard Design Certification must analyze and address the problem of extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products; LBP-09-10, 70 NRC 51 (2009)
PROOF
See Burden of Proof
PROXIMITY PRESUMPTION
a board is not at liberty to abandon the Commission's 50-mile proximity presumption; LBP-09-16, 70 NRC 227 (2009)
a significant pattern of regular contacts within the 50-mile radius around the plant is sufficient to establish proximity-based standing; LBP-09-18, 70 NRC 385 (2009)
even if NRC's proximity presumption is viewed as more lenient than judicial standing requirements, NRC may choose to retain it; CLI-09-20, 70 NRC 911 (2009)
in cases other than nuclear power reactor construction and operating licenses, licensing boards must address standing on a case-by-case basis, taking into account the nature of the proposed action and the significance of the radioactive source; LBP-09-28, 70 NRC 1019 (2009)
in construction permit and operating license proceedings for power reactors, petitioner is presumed to have standing to intervene if petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm; CLI-09-20, 70 NRC 911 (2009)
in proceedings other than for construction permits, operating licenses, or significant amendments thereto, the Commission decides on a case-by-case basis whether the proximity presumption should apply, taking into account any obvious potential for offsite radiological consequences, as well as the nature of the proposed action and the significance of the radioactive source; LBP-09-20, 70 NRC 565 (2009)
living within 50 miles from the plant is enough to confer standing on an individual or group in proceedings for construction permits, operating licenses, or significant amendments thereto without the need to specifically plead injury, causation, and redressability if the petitioner lives within 50 miles of the nuclear power reactor; LBP-09-10, 70 NRC 51 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009); LBP-09-28, 70 NRC 1019 (2009)
no obvious potential for offsite consequences sufficient to establish organizational standing was shown even though the organization's office was a mere 3 miles from the facility; LBP-09-28, 70 NRC 1019 (2009)
NRC's proximity presumption does not disregard contemporaneous judicial concepts of standing, but rather the Commission applied its expertise to determine that persons living within a 50-mile radius of a nuclear reactor face a realistic threat of harm if a release of radioactive material were to occur from the facility; LBP-09-16, 70 NRC 227 (2009)
petitioner's residence within a 50-mile radius of the proposed facility has established standing in his own right, and, accordingly, representational standing has been established through him; LBP-09-18, 70 NRC 385 (2009)
standing based of proximity does not apply in source materials cases; LBP-09-13, 70 NRC 168 (2009)
the nontrivial increased risk of living within 50 miles of a proposed reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either

denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; CLI-09-20, 70 NRC 911 (2009); LBP-09-16, 70 NRC 227 (2009)
the presumption of standing applies to combined license proceedings; LBP-09-16, 70 NRC 227 (2009)
the process of sifting and weighing participants' factual proffers often calls upon a board to make difficult choices, so that a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself; LBP-09-18, 70 NRC 385 (2009)
the proximity presumption applies in proceedings for nuclear power plant construction permits, operating licenses, or significant amendments thereto; LBP-09-26, 70 NRC 939 (2009)
there is no conflict between the basic requirements for standing, as applied in the federal courts, and the NRC's proximity presumption; CLI-09-22, 70 NRC 932 (2009)
PUBLIC INTEREST
an exception to the application of collateral estoppel occurs when broad public policy considerations or special public interest factors are involved such that an agency's need for flexibility outweighs the reasons underlying this repose doctrine so as to favor relitigation of a particular issue; LBP-09-24, 70 NRC 676 (2009)
RADIATION CONTROL PROGRAM
a combined license application must explain the kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in 10 C.F.R. Part 20; LBP-09-27, 70 NRC 992 (2009)
applicant is to describe equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences; LBP-09-19, 70 NRC 433 (2009)
applicant must describe equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences; LBP-09-19, 70 NRC 433 (2009)
COL applications must include information on kinds and quantities of materials expected to be produced during plant operation and the means for controlling and limiting radioactive effluents and radiation exposures to comply with Part 20 limits; CLI-09-16, 70 NRC 33 (2009)
for applications filed after January 2, 1971, applicant must identify design objectives and means to maintain levels of radioactive effluents as low as is reasonably achievable; LBP-09-19, 70 NRC 433 (2009)
licensee must use procedures and controls to reduce occupational doses and doses to members of the public to levels that are as low as reasonably achievable; CLI-09-16, 70 NRC 33 (2009)
RADIATION PROTECTION PROGRAM
a combined license application must include a description of equipment and measures taken to ensure that any exposures to radioactive materials such as low-level radioactive waste are kept as low as reasonably achievable, including a description of the provisions for storage of solid waste containing radioactive materials; LBP-09-10, 70 NRC 51 (2009)
applicant must explain how it intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20, including, but not limited to, low-level radioactive waste handling and storage; LBP-09-27, 70 NRC 992 (2009)
potassium iodide distribution beyond the 10-mile emergency planning zone is not necessary; LBP-09-16, 70 NRC 227 (2009)
RADIATION SHIELDING
adequacy of applicant's control room and equipment design for radiological protections, in light of the fact that the reactor is proposed to be located within the EPZ of an existing reactor, is an issue that is appropriate in a combined license or standard design certification proceeding; LBP-09-10, 70 NRC 51 (2009)
RADIOACTIVE EFFLUENTS
a challenge to applicant's site-specific measurements of adsorption and retention coefficients relative to hydrological radionuclide transport is an admissible contention; LBP-09-16, 70 NRC 227 (2009)
a combined license application must explain the kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and

radiation exposures within the limits set forth in 10 C.F.R. Part 20; CLI-09-16, 70 NRC 33 (2009); LBP-09-27, 70 NRC 992 (2009)
applicant is to describe equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences; LBP-09-19, 70 NRC 433 (2009)
for applications filed after January 2, 1971, applicant must identify design objectives and means to maintain levels of radioactive effluents as low as is reasonably achievable; LBP-09-19, 70 NRC 433 (2009)
Staff and applicant must address matters such as the environmental impacts of unregulated seepage into adjacent groundwater in their environmental impact statement and environmental report; LBP-09-25, 70 NRC 867 (2009)
Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and concludes that this kind of disposal will not result in the release of any significant effluent to the environment; LBP-09-16, 70 NRC 227 (2009)
RADIOACTIVE RELEASES
an independent spent fuel storage installation is essentially a passive structure rather than an operating facility, and there therefore is less chance of widespread radioactive release; LBP-09-20, 70 NRC 565 (2009)
analysis of a fission product release from an accident uses the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-19, 70 NRC 433 (2009)
early site permit applicants must perform an analysis of the postulated fission product release to evaluate the offsite radiological consequences; LBP-09-19, 70 NRC 433 (2009)
if chelating agents are to be comingled in radioactive waste liquids or used to mitigate an accidental release, then they have to be specifically accounted for in the dose analyses; LBP-09-19, 70 NRC 433 (2009)
in applicant's safety assessment, the fission product releases in question are associated with accidents that have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-19, 70 NRC 433 (2009)
individuals located at the boundary of the exclusion area cannot be exposed to more than 25 rem total effective dose equivalent in any 2-hour period, and any individual located at the outer boundary of the low population zone cannot be exposed to more than 25 rem TEDE during the entire period of any radioactive release; LBP-09-19, 70 NRC 433 (2009)
releases from the nuclear fuel cycle in general, incidences of childhood cancers near nuclear power plants, and a request for the NRC to address radioactive releases from the burning of coal at fossil fuel plants are outside the scope of a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
the fission product release assumed for the final safety analysis report is based on a major accident assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-10, 70 NRC 51 (2009)
the safety analysis report component of an application for a Standard Design Certification must analyze and address the problem of extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products; LBP-09-10, 70 NRC 51 (2009)
RADIOACTIVE WASTE
if chelating agents are to be comingled in radioactive waste liquids or used to mitigate an accidental release, then they have to be specifically accounted for in the dose analyses; LBP-09-19, 70 NRC 433 (2009)
RADIOACTIVE WASTE, HIGH-LEVEL
applicant is required to take Table S-3 as the basis for evaluating the contribution of the environmental effects of management of high-level wastes related to uranium fuel cycle activities; LBP-09-21, 70 NRC 581 (2009)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 227 (2009)
disposal of greater-than-Class-C waste is the responsibility of the federal government; LBP-09-16, 70 NRC 227 (2009)

even assuming arguendo that applicant might someday require a permit under Part 61 for a disposal facility, that issue is too speculative at the combined license stage and is therefore not material to the findings the NRC must make to support the action that is involved in the COL proceeding; LBP-09-27, 70 NRC 992 (2009)
Part 61 is inapplicable in a combined license proceeding because it applies only to land disposal facilities that receive waste from others, not to onsite facilities where licensee intends to store its own low-level radioactive waste; LBP-09-27, 70 NRC 992 (2009)
petitioners' assertion that applicant's environmental report fails to include an analysis of the impacts of a governmental entity managing long-term storage of high-level waste onsite and cost quantifications of such management fails to create a genuine dispute; LBP-09-21, 70 NRC 581 (2009)
there is reasonable assurance that a geologic repository will be available by 2025 and that sufficient repository capacity will be available within 30 years beyond the licensed life to dispose of high-level waste and spent fuel generated by any reactor up to that time; LBP-09-18, 70 NRC 385 (2009)
RADIOACTIVE WASTE, LOW-LEVEL
a combined license application must include a description of equipment and measures taken to ensure that any exposures to radioactive materials such as LLRW are kept as low as reasonably achievable, including a description of the provisions for storage of solid waste containing radioactive materials; LBP-09-10, 70 NRC 51 (2009)
a combined license application's lack of consideration of any alternative to offsite disposal of LLRW is a material issue for litigation; LBP-09-18, 70 NRC 385 (2009)
a contention is timely to the extent it challenges the adequacy of the new LLRW storage plan, but untimely as to those aspects of the contention that merely reargue issues already decided by the board, without identifying any new information relevant to those issues; LBP-09-27, 70 NRC 992 (2009)
applicant must explain how it intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20, including, but not limited to, LLRW handling and storage; LBP-09-27, 70 NRC 992 (2009)
applicant seeks an exemption from the disposal site requirements of 10 C.F.R. 30.3 and 70.3 to allow disposal of low-activity radioactive waste from the Hematite facility at a site near Grand View, Idaho, that is not licensed by the NRC; LBP-09-28, 70 NRC 1019 (2009)
applicants' assertion that LLRW could be transferred to another licensee or that some other arrangement might be established in the future is not sufficient to erase the requirement that reasonably foreseeable environmental impacts be assessed in an environmental report; CLI-09-20, 70 NRC 911 (2009)
arguments premised on the prediction that someday a nuclear plant site will become a permanent storage or disposal facility for low-level radioactive waste are too speculative and therefore not material to the findings the NRC must make to support the action that is involved in a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
boards have authority to narrow LLRW contentions; LBP-09-16, 70 NRC 227 (2009)
combined license applicants are to consider long-term onsite LLRW storage, but 10 C.F.R. 52.79(a)(3) sets no quantity or time restrictions relative to onsite storage of such waste; CLI-09-16, 70 NRC 33 (2009); LBP-09-27, 70 NRC 992 (2009)
combined license applicants should explain their current plan for management of LLRW, given the lack of an offsite disposal facility, and the potential environmental impact of retaining LLRW at the reactor site for an extended period; LBP-09-16, 70 NRC 227 (2009)
depleted uranium from an enrichment facility is appropriately classified as a low-level radioactive waste; CLI-09-15, 70 NRC 1 (2009)
licensee's onsite LLRW storage facility must comply with requirements for security, occupational and public dose limits, survey and monitoring, labeling, and reports and record retention; CLI-09-16, 70 NRC 33 (2009)
Part 61 is inapplicable in a combined license proceeding because it applies only to land disposal facilities that receive waste from others, not to onsite facilities where licensee intends to store its own low-level radioactive waste; LBP-09-10, 70 NRC 51 (2009); LBP-09-27, 70 NRC 992 (2009)
power reactor licensees have safely stored and managed LLRW under NRC oversight for years without the development of immediate safety problems or concerns; LBP-09-16, 70 NRC 227 (2009)
questions of the safety and environmental impacts of onsite LLRW storage are largely site- and design-specific and appropriately decided in an individual licensing proceeding, provided that litigants

proffer properly framed and supported contentions; CLI-09-16, 70 NRC 33 (2009); LBP-09-10, 70 NRC 51 (2009)
Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and concludes that this kind of disposal will not result in the release of any significant effluent to the environment; LBP-09-16, 70 NRC 227 (2009)
the licensing board did not commit reversible error by admitting a contention based on LLRW storage duration because the NRC Staff itself had issued a request for additional information on this very issue and thus this conflicted with Staff's argument that the issue is immaterial to the findings that must be made on the application; LBP-09-27, 70 NRC 992 (2009)
waste disposal contentions have been admitted when that issue was not sufficiently discussed in the applications and there was no mention of the closure of the Barnwell facility; LBP-09-18, 70 NRC 385 (2009)
RADIOACTIVE WASTE DISPOSAL
a combined license application's lack of consideration of any alternative to offsite disposal of low-level radioactive waste is a material issue for litigation; LBP-09-18, 70 NRC 385 (2009)
a facility that is licensed to receive only Class A low-level radioactive waste is not pertinent to a contention regarding Class B and C waste; LBP-09-18, 70 NRC 385 (2009)
an approach that is consistent with the USEC Privatization Act, such as transfer to DOE for disposal, constitutes a plausible strategy for disposition of depleted tails; CLI-09-15, 70 NRC 1 (2009)
applicant seeks an exemption from the disposal site requirements of 10 C.F.R. 30.3 and 70.3 to allow disposal of low-activity radioactive waste from the Hematite facility at a site near Grand View, Idaho, that is not licensed by the NRC; LBP-09-28, 70 NRC 1019 (2009)
applicants' assertion that low-level radioactive waste could be transferred to another licensee or that some other arrangement might be established in the future is not sufficient to erase the requirement that reasonably foreseeable environmental impacts be assessed in an environmental report; CLI-09-20, 70 NRC 911 (2009)
combined license applicants are to consider long-term onsite low-level radioactive waste storage, but 10 C.F.R. 52.79(a)(3) sets no quantity or time restrictions relative to onsite storage of such waste; CLI-09-16, 70 NRC 33 (2009)
contention in combined license proceeding focusing exclusively on regulations governing waste disposal is inadmissible; CLI-09-16, 70 NRC 33 (2009)
disposal of greater-than-Class-C waste is the responsibility of the federal government; LBP-09-16, 70 NRC 227 (2009)
if new information becomes available in the course of waste confidence rulemaking proceedings that contravenes a combined license application, petitioner may file a motion to admit a new or amended contention; LBP-09-18, 70 NRC 385 (2009)
low-level radioactive waste disposal contentions have been admitted when that issue was not sufficiently discussed in the applications and there was no mention of the closure of the Barnwell facility; LBP-09-18, 70 NRC 385 (2009)
Part 61 is inapplicable in a combined license proceeding because it applies only to land disposal facilities that receive waste from others, not to onsite facilities where licensee intends to store its own low-level radioactive waste; LBP-09-27, 70 NRC 992 (2009)
Table S-3 assumes that solid, low-level waste from reactors will be disposed of through shallow land burial, and concludes that this kind of disposal will not result in the release of any significant effluent to the environment; LBP-09-16, 70 NRC 227 (2009)
there is reasonable assurance that a geologic repository will be available by 2025 and that sufficient repository capacity will be available within 30 years beyond the licensed life to dispose of high-level waste and spent fuel generated by any reactor up to that time; LBP-09-18, 70 NRC 385 (2009)
RADIOACTIVE WASTE MANAGEMENT
applicant is required to take Table S-3 as the basis for evaluating the contribution of the environmental effects of management of high-level wastes related to uranium fuel cycle activities; LBP-09-21, 70 NRC 581 (2009)
applicant must explain how it intends, through its design, operational organization, and procedures, to comply with relevant substantive radiation protection requirements in 10 C.F.R. Part 20, including, but not limited to, low-level radioactive waste handling and storage; LBP-09-27, 70 NRC 992 (2009)

combined license applicants should explain their current plan for management of low-level radioactive waste, given the lack of an offsite disposal facility, and the potential environmental impact of retaining LLRW at the reactor site for an extended period; LBP-09-16, 70 NRC 227 (2009)
only the management of Class B and Class C wastes is properly the subject of a contention in a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
petitioners' assertion that applicant's environmental report fails to include an analysis of the impacts of a governmental entity managing long-term storage of high-level waste onsite and cost quantifications of such management fails to create a genuine dispute; LBP-09-21, 70 NRC 581 (2009)
RADIOACTIVE WASTE STORAGE
a contention is timely to the extent it challenges the adequacy of the new low-level radioactive waste storage plan, but untimely as to those aspects of the contention that merely reargue issues already decided by the board, without identifying any new information relevant to those issues; LBP-09-27, 70 NRC 992 (2009)
arguments premised on the prediction that someday a nuclear plant site will become a permanent storage or disposal facility for low-level radioactive waste are too speculative and therefore not material to the findings the NRC must make to support the action that is involved in a combined license proceeding; LBP-09-16, 70 NRC 227 (2009)
contentions on information a combined license applicant should supply in order to satisfy NRC regulations regarding the safety of long-term storage of low-level radioactive waste are application-specific and thus would benefit from further development by the board and the parties; CLI-09-16, 70 NRC 33 (2009)
even assuming arguendo that applicant might someday require a permit under Part 61 for a disposal facility, that issue is too speculative at the combined license stage and is therefore not material to the findings the NRC must make to support the action that is involved in the COL proceeding; LBP-09-27, 70 NRC 992 (2009)
licensee's onsite low-level radioactive waste storage facility must comply with requirements for security, occupational and public dose limits, survey and monitoring, labeling, and reports and record retention; CLI-09-16, 70 NRC 33 (2009)
NRC regulations set no quantity or time restrictions relative to onsite storage of low-level radioactive waste; LBP-09-27, 70 NRC 992 (2009)
Part 61 only applies to the land disposal of radioactive waste received from other persons and is therefore inapplicable to the issue of low-level waste generated and managed onsite at the nuclear power plant; LBP-09-10, 70 NRC 51 (2009)
power reactor licensees have safely stored and managed low-level radioactive waste under NRC oversight for years without the development of immediate safety problems or concerns; LBP-09-16, 70 NRC 227 (2009)
questions of the safety and environmental impacts of onsite low-level waste storage are largely site- and design-specific and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions; LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009)
spent fuel can be stored safely onsite for at least 30 years beyond a plant's licensed life for operation; LBP-09-17, 70 NRC 311 (2009)
the licensing board did not commit reversible error by admitting a contention based on low-level radioactive waste storage duration because the NRC Staff itself had issued a request for additional information on this very issue and thus this conflicted with Staff's argument that the issue is immaterial to the findings that must be made on the application; LBP-09-27, 70 NRC 992 (2009)
See also Dry Cask Storage
RADIOLOGICAL CONTAMINATION
a general assessment of radioactivity within waters of the Great Lakes Basin does not address specific issues with regard to the proposed reactor, and it does not provide any support for petitioners' assertions needed to advance an admissible contention; LBP-09-16, 70 NRC 227 (2009)
See also Groundwater Contamination
RADIOLOGICAL EXPOSURE
combined license applications must include information on kinds and quantities of materials expected to be produced during plant operation and the means for controlling and limiting radioactive effluents and

radiation exposures to comply with Part 20 limits; CLI-09-16, 70 NRC 33 (2009)
individuals located at the boundary of the exclusion area cannot be exposed to more than 25 rem total effective dose equivalent in any 2-hour period, and any individual located at the outer boundary of the low population zone cannot be exposed to more than 25 rem TEDE during the entire period of any radioactive release; LBP-09-19, 70 NRC 433 (2009)
licensees subject to the Environmental Protection Agency's generally applicable environmental radiation standards in 40 C.F.R. Part 190 shall comply with those standards; LBP-09-19, 70 NRC 433 (2009)
numerical limits for radiation exposure, including occupational dose limits and radiation dose limits for members of the public, are provided; LBP-09-19, 70 NRC 433 (2009)
petitioners' assertion that no exposure levels are safe is an impermissible challenge to the exposure limits set forth in the NRC's regulations; LBP-09-16, 70 NRC 227 (2009)
the Environmental Protection Agency has established radiation exposure standards under 40 C.F.R. Part 190, the applicability of which the Commission has acknowledged; LBP-09-19, 70 NRC 433 (2009)
RADIONUCLIDE TRANSPORT
factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 433 (2009)
in its review of early site permit applications, Staff must consider physical characteristics of the site, specifically noting that factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 433 (2009)
RATEMAKING PROCESS
ratepayer impacts are outside the scope of a combined license proceeding because the state, not the NRC, is charged with protecting ratepayers' interests; LBP-09-10, 70 NRC 51 (2009)
REACTOR CORE
in applicant's safety assessment, the fission product releases in question are associated with accidents that have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-19, 70 NRC 433 (2009)
REACTOR DESIGN
a license application will not be held in abeyance until the design certification rulemaking is completed; LBP-09-16, 70 NRC 227 (2009)
all environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's environmental assessment for a certified design are considered resolved; LBP-09-19, 70 NRC 433 (2009)
applicant for a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
at the combined license stage, applicant may reference both an early site permit and a standard design certification in its application; LBP-09-16, 70 NRC 227 (2009); LBP-09-19, 70 NRC 433 (2009)
design certification applicants are required to address severe accident mitigation design alternatives; LBP-09-19, 70 NRC 433 (2009)
if a contention concerning a certification application that has been docketed but not granted is otherwise admissible under 10 C.F.R. 2.309(f)(1), it might be held in abeyance and referred to the Staff; LBP-09-17, 70 NRC 311 (2009)
if the combined license application references an early site permit, applicant must demonstrate that the chosen design falls within the parameters specified in the ESP or, on the safety side, request a variance; LBP-09-19, 70 NRC 433 (2009)
nuclear reactors are required to be designed to withstand certain postulated events or accidents, which result in negligible offsite consequences because the reactor is designed to handle such events; LBP-09-10, 70 NRC 51 (2009)
request that a combined license application be held in abeyance until the design certification is completed must be denied; LBP-09-18, 70 NRC 385 (2009)
severe accident mitigation alternatives design analysis focuses on severe accident mitigation dealing with reactor design and hardware issues; LBP-09-10, 70 NRC 51 (2009)
severe accident mitigation design alternative issues are resolved for an application referencing a design control document if the specific site parameters are covered by the site parameters assumed in the DCD SAMDA analysis; LBP-09-19, 70 NRC 433 (2009)

until the reactor design is certified and the rulemaking proceeding concluded, the design continues to change, creating potentially new safety and environmental concerns; LBP-09-18, 70 NRC 385 (2009)
REACTOR TRIP
licensee's report to NRC of a manual reactor trip due to main turbine high vibrations included the details of the event, provided an analysis of the event, including estimated change in conditional core damage probability, and provided a list of corrective actions; DD-09-2, 70 NRC 899 (2009)
REBUTTABLE PRESUMPTION
FEMA's finding on emergency plans constitutes a rebuttable presumption on questions of adequacy and implementation capability in NRC licensing proceedings; LBP-09-19, 70 NRC 433 (2009)
RECORD OF DECISION
documents and information exchanged in the mandatory disclosures enter the adjudicatory record only if and when a party proffers the document or information as evidence for the evidentiary hearing; LBP-09-30, 70 NRC 1039 (2009)
REDRESSABILITY
a limited work authorization authorizes activities for which either a construction permit or combined license is otherwise required, but the LWA application must include a plan for site redress that provides for restoration if the project is cancelled, the LWA is revoked, or a construction permit or COL is denied; LBP-09-19, 70 NRC 433 (2009)
a site redress plan remains in effect for an early site permit applicant even if the ESP with which the LWA is issued is not referenced in a construction permit or COL application during the period that the ESP remains valid; LBP-09-19, 70 NRC 433 (2009)
as long as either denial of a license or issuance of a decision mandating compliance with legal requirements would alleviate a petitioner's potential injury, then under longstanding NRC jurisprudence the petitioner may prosecute any admissible contention that could result in the denial or in the compliance decision; CLI-09-20, 70 NRC 911 (2009)
boards are to determine whether the site redress plan will adequately redress the activities performed under a limited work authorization should the activities be terminated by either the holder of the LWA or by Commission denial of any corresponding early site permit or combined license; LBP-09-19, 70 NRC 433 (2009)
intervention petitioner must establish a concrete and particularized injury that is fairly traceable to the challenged action, is likely to be redressed by a favorable decision, and is arguably within the zone of interests protected by the governing statute; CLI-09-20, 70 NRC 911 (2009)
petitioner is required to show that its alleged injury-in-fact could be cured or alleviated by some action of the tribunal; LBP-09-13, 70 NRC 168 (2009)
REFERRAL OF RULING
a board ruling on a contention may be referred to the Commission if it raises significant and novel legal or policy issues or the referral would materially advance the orderly disposition of the proceeding; LBP-09-16, 70 NRC 227 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-26, 70 NRC 939 (2009)
contentions involving possible errors in Table S-3 have been referred to the Commission; LBP-09-21, 70 NRC 581 (2009)
REFERRED RULINGS
the Commission declined to review licensing board referred rulings because the contentions were rejected by the board due to legal insufficiency; CLI-09-21, 70 NRC 927 (2009)
the Commission will review referred rulings only if the referral raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; CLI-09-21, 70 NRC 927 (2009)
REGULATIONS
a contention that seeks to impose new requirements on applicants and licensees is an impermissible challenge to the agency's regulations; LBP-09-26, 70 NRC 939 (2009)
a licensing board may not admit a contention that directly or indirectly challenges Table S-3 of 10 C.F.R. 51.51; LBP-09-16, 70 NRC 227 (2009)
absent a waiver under 10 C.F.R. 2.335(b), contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications; CLI-09-20, 70 NRC 911 (2009); LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009)

although NRC does not consider Council on Environmental Quality regulations to be binding, they are entitled to substantial deference; LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)

applicant seeks an exemption from the disposal site requirements of 10 C.F.R. 30.3 and 70.3 to allow disposal of low-activity radioactive waste from the Hematite facility at a site near Grand View, Idaho, that is not licensed by the NRC; LBP-09-28, 70 NRC 1019 (2009)

challenges to the Commission regulations regarding the design certification process are inadmissible; LBP-09-18, 70 NRC 385 (2009)

contentions involving possible errors in Table S-3 have been referred to the Commission; LBP-09-21, 70 NRC 581 (2009)

decommissioning rules are designed to minimize the administrative effort of licensees and the Commission and to provide reasonable assurance that funds will be available to carry out decommissioning in a manner that protects public health and safety; LBP-09-21, 70 NRC 581 (2009)

in implementing NEPA, the NRC uses certain of the definitions provided in Council on Environmental Quality regulations; LBP-09-19, 70 NRC 433 (2009)

Part 51 does not authorize NRC to regulate or enforce compliance with all other environmental laws and regulations; LBP-09-10, 70 NRC 51 (2009)

Staff is to review early site permit applications according to the applicable standards set out in 10 C.F.R. Part 50 and its appendices and 10 C.F.R. Part 100; LBP-09-19, 70 NRC 433 (2009)

to challenge a regulation, petitioner must submit a supporting affidavit setting forth with particularity the special circumstances that justify the waiver or exception requested; LBP-09-18, 70 NRC 385 (2009)

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; LBP-09-16, 70 NRC 227 (2009)

See also Rules of Practice

REGULATIONS, INTERPRETATION

although administrative history and other available guidance may be consulted for background information and the resolution of ambiguities in a regulation's language, its interpretation may not conflict with the plain meaning of the wording used in that regulation; LBP-09-15, 70 NRC 198 (2009)

"any reactor" in 10 C.F.R. 51.23(a) applies to new reactors; LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)

because a combined license is, in part, an operating license, 10 C.F.R. § 50.33(f) also applies to an application for a combined license; LBP-09-10, 70 NRC 51 (2009)

constructive knowledge is knowledge of facts sufficient to prompt an inquiry that would have uncovered misrepresentations and is not actual knowledge; LBP-09-24, 70 NRC 676 (2009)

courts must construe regulations in light of the statutes they implement, keeping in mind that where there is an interpretation of an ambiguous regulation that is reasonable and consistent with the statute, that interpretation is to be preferred; LBP-09-16, 70 NRC 227 (2009)

"deliberate misconduct" within the meaning 10 C.F.R. 50.5(a)(2) refers to an intentional act or omission that the person knows would cause a licensee to be in violation of any rule; LBP-09-24, 70 NRC 676 (2009)

even if the term "contention," as used in 10 C.F.R. 2.336(a)(1) must be read as pertaining only to formal contentions admitted under section 2.309(f)(1), the term "claim," is not so constrained, and can only be read in its normal sense; LBP-09-30, 70 NRC 1039 (2009)

interpretation must begin with the language and structure of the provision itself; LBP-09-15, 70 NRC 198 (2009)

NEPA has only a limited role to play in interpreting Part 51's requirements for the environmental report; LBP-09-16, 70 NRC 227 (2009)

not only the bare meaning of the word but also its placement and purpose in the statutory scheme are considered; LBP-09-15, 70 NRC 198 (2009)

organizations seeking to challenge regulations of a government agency failed to demonstrate standing where they did not demonstrate a concrete application of the regulations that threatened imminent harm to their interests; CLI-09-20, 70 NRC 911 (2009)

Part 61 is inapplicable in a combined license proceeding because it applies only to land disposal facilities that receive waste from others, not to onsite facilities where licensee intends to store its own low-level radioactive waste; LBP-09-10, 70 NRC 51 (2009); LBP-09-27, 70 NRC 992 (2009)
section 2.309(f)(1)(vi) is not a second hurdle of materiality that an intervenor must meet, but rather requires that intervenor identify the specific parts of the combined license application that it disputes and show that resolution of those disputes is material to the licensing decision; LBP-09-27, 70 NRC 992 (2009)
section 52.79(a)(3) sets no quantity or time restrictions relative to onsite storage of low level radioactive waste; LBP-09-27, 70 NRC 992 (2009)
the "deliberate ignorance" theory is not embraced within the "deliberate misconduct" standard that governs NRC proceedings; LBP-09-24, 70 NRC 676 (2009)
the entirety of the provision must be given effect; LBP-09-15, 70 NRC 198 (2009)
the fact that the Commission included language deferring the obligation that would otherwise apply to COL applicants in 10 C.F.R. 50.75(b)(4), but included no equivalent provision in section 50.75(b)(3), confirms that the Commission did not intend to defer the requirement of section 50.75(b)(3) until after the license is issued; LBP-09-15, 70 NRC 198 (2009)
the most natural way to read a provision that sets forth a general obligation followed by a set of specific requirements is that the specific requirements provide the details necessary to fulfilling the general obligation; LBP-09-15, 70 NRC 198 (2009)
the plain language of 10 C.F.R. 2.336(a)(1) makes it clear that it applies to all parties; LBP-09-30, 70 NRC 1039 (2009)
the requirement that the designated amount of financial assurance be covered by an acceptable method arises concurrently with the requirement that the applicant submit a decommissioning report to NRC; LBP-09-15, 70 NRC 198 (2009)
the statement of considerations should be given special weight; LBP-09-15, 70 NRC 198 (2009)
the term "contention" in 10 C.F.R. 2.336(a)(1) means simply a point or argument asserted or advanced by any party; LBP-09-30, 70 NRC 1039 (2009)
under 10 C.F.R. 2.336(a)(1), intervenors' expert is not required to create a written analysis, but only disclose the written analysis or other documentary authority, if any, that exists and is reasonably available at the time of the disclosure; LBP-09-30, 70 NRC 1039 (2009)
REGULATORY GUIDES
NRC guidelines and regulatory guides are not legally binding on the Staff, the board, or the Commission; LBP-09-10, 70 NRC 51 (2009)
REPLY BRIEFS
a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)
although a licensing board will take into account any information from reply briefs that legitimately amplifies issues presented in the original petitions, it will not consider instances of what essentially constitute untimely attempts to amend the original petitions; LBP-09-17, 70 NRC 311 (2009)
although NRC's rules of practice regarding motions do not provide for reply pleadings, the board presumes that for a reply to be timely it would have to be filed within 7 days of the date of service of the response it is intended to address; LBP-09-22, 70 NRC 640 (2009)
filings that raise new issues must address the nontimely filing and new-contention factors in 10 C.F.R. 2.309(c) or (f)(2); LBP-09-17, 70 NRC 311 (2009)
in an abundance of caution and in order to give petitioners every benefit of the doubt, the board considers whether any of the material at issue in a reply brief that would not constitute legitimate amplification might be admissible under the criteria of section 2.309(c) or (f)(2); LBP-09-17, 70 NRC 311 (2009)
replies may provide only legitimate amplifications of the original contentions or a logical/legal response to the answers of the Staff and applicant; LBP-09-17, 70 NRC 311 (2009)
REPLY TO ANSWER TO MOTION
except for a motion to file a new or amended contention, or where there are compelling circumstances, movant has no right to reply to an answer or respond to a motion; LBP-09-22, 70 NRC 640 (2009)

within 25 days after service of a motion and proposed contention, any other party may file an answer responding to all elements of the motion and contention, and within 7 days of service of the answer, the movant may file a reply; LBP-09-22, 70 NRC 640 (2009)
REPORTING REQUIREMENTS
licensee's report to NRC of a manual reactor trip due to main turbine high vibrations included the details of the event, provided an analysis of the event, including estimated change in conditional core damage probability, and provided a list of corrective actions; DD-09-2, 70 NRC 899 (2009)
REQUEST FOR ACTION
petitioner's request that NRC issue a demand for information to licensee regarding vibration levels prior to restart is denied; DD-09-2, 70 NRC 899 (2009)
REQUEST FOR ADDITIONAL INFORMATION
NRC Staff issuance of an RAI does not alone establish deficiencies in an application, and intervention petitioner must do more than merely quote an RAI to justify admission of a contention; CLI-09-16, 70 NRC 33 (2009); LBP-09-10, 70 NRC 51 (2009); LBP-09-16, 70 NRC 227 (2009)
petitioners who base their contentions on RAIs must provide analysis, discussion, or information of their own on the issues raised; LBP-09-16, 70 NRC 227 (2009)
the fact that Staff issues an RAI does not immunize the combined license application from challenge or bar the admission of a new contention on the same subject, provided the contention satisfies the criteria of 10 C.F.R. 2.309(f)(1)(i)-(vi) and (f)(2) or (c); LBP-09-10, 70 NRC 51 (2009)
the licensing board did not commit reversible error by admitting a contention based on low-level radioactive waste storage duration because the NRC Staff itself had issued a request for additional information on this very issue and thus this conflicted with Staff's argument that the issue is immaterial to the findings that must be made on the application; LBP-09-27, 70 NRC 992 (2009)
RESPONSES TO PETITIONS
an answer supporting or opposing a motion for summary disposition or other dispositive motion shall be filed within 20 days after service of the motion; LBP-09-22, 70 NRC 640 (2009)
no later than 20 days after service of materials, the parties and the NRC Staff shall file their written responses, rebuttal testimony with supporting affidavits, and rebuttal exhibits, on a contention-by-contention basis; LBP-09-22, 70 NRC 640 (2009)
within 25 days after service of a motion and proposed contention, any other party may file an answer responding to all elements of the motion and contention, and within 7 days of service of the answer, the movant may file a reply; LBP-09-22, 70 NRC 640 (2009)
RESTART
petitioner's request that NRC issue a demand for information to licensee regarding vibration levels prior to restart is denied; DD-09-2, 70 NRC 899 (2009)
REVIEW
a requester may challenge an adverse determination with respect to access to safeguards information by filing a request for review pursuant to 10 C.F.R. 2.311; CLI-09-15, 70 NRC 1 (2009)
all decisions on questions of classification or declassification of information shall be made by appropriate classification officials in the NRC and are not subject to *de novo* review; CLI-09-15, 70 NRC 1 (2009)
See also Antitrust Review; Appellate Review; Immediate Effectiveness Review; NRC Staff Review; Safety Review; Standard of Review
REVIEW, INTERLOCUTORY
an exception to the general policy limiting interlocutory review permits an appeal of a board's ruling on contention admissibility when a board grants a petition to intervene following consideration of the full petition; CLI-09-18, 70 NRC 859 (2009)
challenges to board rulings on late-filed contentions normally fall under the rules for interlocutory review; CLI-09-18, 70 NRC 859 (2009)
See also Appeals, Interlocutory
REVIEW, SUA SPONTE
the section 2.341(a)(2) process that applies to a licensing board determination approving a settlement agreement affords the Commission the opportunity to correct any participant or board misapprehensions regarding the items contemplated in the settlement agreement; LBP-09-23, 70 NRC 659 (2009)

SUBJECT INDEX

RULE OF REASON
all significant environmental impacts and all reasonable alternatives should be considered for a combined license, but these are governed by the rule of reason; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009)
goals of the project sponsor are given substantial weight in determining whether an alternative is reasonable; LBP-09-10, 70 NRC 51 (2009)
if a NEPA contention alleges that impacts or alternatives that are patently outside the realm of reason must be considered, then the contention should be denied for failure to demonstrate that the issue raised is within the legitimate scope of NEPA; LBP-09-10, 70 NRC 51 (2009)
low probability is the key to applying NEPA's rule-of-reason test to contentions that allege that a specified accident scenario presents a significant environmental impact that must be evaluated; LBP-09-26, 70 NRC 939 (2009)
the environmental impact statement need not consider an infinite range of alternatives, only reasonable or feasible ones; LBP-09-21, 70 NRC 581 (2009)
the requirements of NEPA and, by extension, NRC's regulations implementing NEPA are subject to a rule of reason, and only reasonably foreseeable environmental impacts must be addressed; LBP-09-26, 70 NRC 939 (2009)
RULEMAKING
a license application will not be held in abeyance until the design certification rulemaking is completed; LBP-09-16, 70 NRC 227 (2009)
if new information becomes available in the course of waste confidence rulemaking proceedings that contravenes a combined license application, petitioner may file a motion to admit a new or amended contention; LBP-09-18, 70 NRC 385 (2009)
if petitioners are dissatisfied with NRC's generic approach to a problem, their remedy lies in the rulemaking process, not in adjudication; LBP-09-16, 70 NRC 227 (2009); LBP-09-18, 70 NRC 385 (2009)
issuance of a proposed rulemaking and requests for comments does not, in itself, constitute information not previously available that entitles a party to file a new contention; LBP-09-10, 70 NRC 51 (2009)
licensing boards should not accept in individual license proceedings contentions which are, or are about to become, the subject of general rulemaking by the Commission; LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009)
to the extent that petitioners argue that the provisions of 10 C.F.R. 50.54(hh) should be applied to dry cask storage, they may file a rulemaking petition with the Commission; LBP-09-17, 70 NRC 311 (2009)
RULES OF PRACTICE
a board is not at liberty to abandon the Commission's 50-mile proximity presumption; LBP-09-16, 70 NRC 227 (2009)
a board ruling on a contention may be referred to the Commission if it raises significant and novel legal or policy issues or the referral would materially advance the orderly disposition of the proceeding; LBP-09-26, 70 NRC 939 (2009)
a board's determination of standing does not depend on whether the cause of the injury flows directly from the challenged action, but whether the chain of causation is plausible; LBP-09-13, 70 NRC 168 (2009)
a brief explanation of the basis for the contention is required as a prerequisite to its admissibility; LBP-09-26, 70 NRC 939 (2009)
a broadly stated interest in a problem is not sufficient by itself to render an organization so adversely affected or aggrieved that standing will be granted; LBP-09-13, 70 NRC 168 (2009)
a contention can be one of omission as well as one of inadequacy when it alleges that the environmental report is insufficient because it fails to discuss all aspects of the topic adequately; LBP-09-10, 70 NRC 51 (2009)
a contention is admissible if it raises a genuine dispute that is material to the findings the NRC must make to support the action involved; LBP-09-25, 70 NRC 867 (2009)
a contention is material if it shows that some significant link exists between the claimed deficiency and either the health and safety of the public, or the environment; LBP-09-26, 70 NRC 939 (2009)

SUBJECT INDEX

a contention is not admissible if it is not plausibly explained or supported by alleged facts; LBP-09-21, 70 NRC 581 (2009)

a contention must explain why the application is deficient through reference to specific portions of the application, and it must directly controvert a position taken by the applicant in the application; LBP-09-17, 70 NRC 311 (2009)

a contention must show that a genuine dispute exists on a material issue of law or fact with regard to the license application, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute; LBP-09-26, 70 NRC 939 (2009)

a 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 the petitioner's belief; LBP-09-16, 70 NRC 227 (2009); LBP-09-27, 70 NRC 992 (2009)

a contention that seeks to impose new requirements on applicants and licensees is an impermissible challenge to the agency's regulations; LBP-09-26, 70 NRC 939 (2009)

a decision may be referred to the Commission if it raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; LBP-09-18, 70 NRC 385 (2009)

a finding that applicant has cured an omission does not preclude litigation concerning the adequacy of the information the applicant has supplied and intervenors must timely file a new or amended contention that addresses the factors in 10 C.F.R. 2.309(f)(1); LBP-09-15, 70 NRC 198 (2009)

a genuine material dispute is one that could lead to a different conclusion on potential cost-beneficial severe accident mitigation alternatives; LBP-09-26, 70 NRC 939 (2009)

a hearing request is timely when petitioner lacks both actual and constructive notice of its opportunity to request a hearing as of the deadline specified by the agency, and the petitioner files the hearing request promptly upon receipt of actual notice; LBP-09-20, 70 NRC 565 (2009)

a hearing request must state the name, address, and telephone number of the requestor, the nature of the requestor's right under the governing statutes to be made a party to the proceeding, the nature and extent of the requestor's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on the requestor's interest; LBP-09-28, 70 NRC 1019 (2009)

a lack of specificity will be sufficient to reject a claim of standing; LBP-09-18, 70 NRC 385 (2009)

a legal issue contention need not satisfy all the contention admissibility criteria; LBP-09-29, 70 NRC 1028 (2009)

a licensing board may not admit a contention that directly or indirectly challenges Table S-3 of 10 C.F.R. 51.51; LBP-09-16, 70 NRC 227 (2009)

a motion and proposed contention filed later than 30 days after the date when the new and material information on which it is based first becomes available shall be deemed untimely; LBP-09-22, 70 NRC 640 (2009)

a motion for leave to file a new contention, accompanied by the proposed contention, shall be deemed timely if filed within 30 days of the date when the new and material information on which it is based first became available; LBP-09-29, 70 NRC 1028 (2009)

a motion for summary disposition must be granted if the filings in the proceeding together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-09-15, 70 NRC 198 (2009)

a Native American group that has failed to establish that it is a federally recognized Indian tribe is denied standing based on its tribal status; LBP-09-13, 70 NRC 168 (2009)

a new contention may be filed after the initial docketing with leave of the presiding officer upon a showing that the information upon which it is based was not previously available, is materially different than information previously available, and has been submitted in a timely fashion based on the availability of the subsequent information; LBP-09-27, 70 NRC 992 (2009)

a nexus between the injury and the relief is required rather than a nexus between the claimed injury and the contention; LBP-09-16, 70 NRC 227 (2009)

a party cannot satisfy the "not previously available" standard of 10 C.F.R. 2.309(f)(2)(i) by showing that, as a subjective matter, he or she only recently became aware of, or realized the significance of, public information that was previously available to all; LBP-09-10, 70 NRC 51 (2009)

SUBJECT INDEX

a party seeking a stay must show that it faces imminent, irreparable harm that is both certain and great; CLI-09-23, 70 NRC 935 (2009)

a petition for review and request for hearing must include a showing that the petitioner has standing; LBP-09-13, 70 NRC 168 (2009)

a properly pleaded contention of omission must challenge a specific portion of the application and provide a basis for demonstrating the alleged deficiency; LBP-09-26, 70 NRC 939 (2009)

a proposed contention that fails to directly controvert the application or that mistakenly asserts the application does not address a relevant issue is subject to dismissal; LBP-09-27, 70 NRC 992 (2009)

a reply may not be used as a vehicle to introduce new arguments or support, may not expand the scope of arguments set forth in the original petition, and may not attempt to cure an otherwise deficient contention; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)

a significant pattern of regular contacts within the 50-mile radius around the plant is sufficient to establish proximity-based standing; LBP-09-18, 70 NRC 385 (2009)

a standing ruling in one proceeding is not dispositive of a determination in another proceeding with the same petitioner because the ruling was not the subject of appellate review; LBP-09-18, 70 NRC 385 (2009)

absent a waiver under 10 C.F.R. 2.335(b), contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-21, 70 NRC 581 (2009)

absent an obvious potential for harm, it is a petitioner's burden to show how harm will or may occur; LBP-09-28, 70 NRC 1019 (2009)

absent good cause, petitioner's demonstration on the other late-filing factors must be compelling; LBP-09-26, 70 NRC 939 (2009)

admissible contentions 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; LBP-09-21, 70 NRC 581 (2009)

admissible contentions must provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact; CLI-09-15, 70 NRC 1 (2009); LBP-09-21, 70 NRC 581 (2009)

although a board may appropriately view petitioners' support for its contention in a light that is favorable to the petitioner, the petitioner must provide some support for his or her contention, in either the form of facts or expert testimony; LBP-09-26, 70 NRC 939 (2009)

although a board may deny certain portions of a multipart contention as outside of the scope or too attenuated, applying all six criteria of 10 C.F.R. 2.309(f)(1) to each subpart of the contention is inappropriate; LBP-09-10, 70 NRC 51 (2009)

although a licensing board will take into account any information from reply briefs that legitimately amplifies issues presented in the original petitions, it will not consider instances of what essentially constitutes untimely attempts to amend the original petitions; LBP-09-17, 70 NRC 311 (2009)

although a petitioner does not have to prove its contention at the admissibility stage, mere notice pleading is insufficient; LBP-09-18, 70 NRC 385 (2009)

although NRC does not consider Council on Environmental Quality regulations to be binding, they are entitled to substantial deference; LBP-09-10, 70 NRC 51 (2009)

although the Commission commonly looks to Article III concepts for guidance, it is not required to automatically follow them in all respects because NRC proceedings are not subject to Article III; LBP-09-15, 70 NRC 198 (2009)

although the Commission is not strictly bound by the mootness doctrine, the agency's adjudicatory tribunals have generally adhered to the principle; LBP-09-15, 70 NRC 198 (2009)

although the contention admissibility rule imposes on a petitioner the burden of going forward with a sufficient factual basis, it does not shift the ultimate burden of proof from the applicant to the petitioner; LBP-09-27, 70 NRC 992 (2009)

an alleged injury to health and safety, shared equally by many, can form the basis for standing; LBP-09-18, 70 NRC 385 (2009)

an amended or new contention must be submitted in a timely fashion based on the availability of the subsequent information; LBP-09-27, 70 NRC 992 (2009)
an entity wishing to participate as a governmental body must demonstrate that it goes beyond an advisory role and exercises executive or legislative responsibilities; LBP-09-13, 70 NRC 168 (2009)
an exception to the general policy limiting interlocutory review permits an appeal of a board's ruling on contention admissibility when a board grants a petition to intervene following consideration of the full petition; CLI-09-18, 70 NRC 859 (2009)
an expert opinion that merely states a conclusion (e.g., the application is deficient, inadequate, or wrong) without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; LBP-09-16, 70 NRC 227 (2009)
an injury in fact must go beyond generalized grievances to affect a petitioner in a personal and individual way; LBP-09-13, 70 NRC 168 (2009)
an organization asserting representational standing must demonstrate that the interest of at least one of its members will be harmed, demonstrate that the member would have standing in his or her own right, identify that member by name and address, and demonstrate that the organization is authorized to request a hearing on behalf of that member; LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009)
any appeal by petitioners of the admitted contentions must abide the end of the case, i.e., wait approximately 2 or 3 years until the Staff issues the FSER and FEIS and the final disposition of the evidentiary hearing on the three admitted contentions; LBP-09-10, 70 NRC 51 (2009)
any contention that fails to controvert the application directly, or that mistakenly asserts the application fails to address an issue that the application does address, is defective; LBP-09-18, 70 NRC 385 (2009); LBP-09-26, 70 NRC 939 (2009)
any material provided by petitioner in support of its contention, including those portions of the material that are not relied upon, is subject to board scrutiny; LBP-09-17, 70 NRC 311 (2009); LBP-09-26, 70 NRC 939 (2009)
anyone who wishes to request a hearing concerning a proposed licensing action must establish standing and proffer at least one admissible contention; LBP-09-28, 70 NRC 1019 (2009)
at the admission stage of the proceedings, boards admit contentions, not bases; LBP-09-26, 70 NRC 939 (2009)
at the contention admissibility stage, all that is required is that the petitioner provide an expert opinion or some alleged fact, or facts, in support of its position; LBP-09-26, 70 NRC 939 (2009)
bare assertions without the requisite support for claims are inadequate to support the admission of a contention; LBP-09-16, 70 NRC 227 (2009)
because agencies are not constrained by Article III of the Constitution, nor are they governed by judicially created standing doctrines restricting access to federal courts, the criteria for establishing administrative standing may permissibly be less demanding than the criteria for judicial standing; LBP-09-18, 70 NRC 385 (2009)
because NEPA is a procedural statute, petitioners need not show that favorable rulings on their NEPA contentions will require denial of the license, but rather that procedures intended for protection of their members' concrete interests will be observed; LBP-09-16, 70 NRC 227 (2009)
because the reach of a contention necessarily hinges upon its terms and its stated bases, the brief explanation helps define the scope of the contention; LBP-09-26, 70 NRC 939 (2009)
before the board can consider a new contention, petitioner must show that it is based on information that was not previously available, is based on information that is materially different than information previously available, and has been submitted in a timely fashion; LBP-09-29, 70 NRC 1028 (2009)
boards may allow parties to conduct cross-examination in Subpart L proceedings; LBP-09-22, 70 NRC 640 (2009)
boards may appropriately view petitioners' support for their contentions in a light favorable to petitioners, but it is petitioners' burden to establish the admissibility of a contention; LBP-09-17, 70 NRC 311 (2009)
boards may consider the merits of a contention that has become moot to the extent doing so will promote the fair and expeditious resolution of the case and there are no significant countervailing concerns; LBP-09-15, 70 NRC 198 (2009)

boards must exercise their discretion and select the hearing procedure most appropriate for newly admitted contentions; LBP-09-10, 70 NRC 51 (2009)
by complying with the six contention requirements, an admissible contention must raise an issue that is both within the scope of the proceeding (normally defined by the hearing notice) and material to the findings the NRC must make to support the action involved; LBP-09-18, 70 NRC 385 (2009)
by definition, contentions admitted under 10 C.F.R. 2.309(f)(2)(i)-(iii) are timely because they are founded on material new information that was not available at the time when the petition was initially due; LBP-09-10, 70 NRC 51 (2009)
challenges to board rulings on late-filed contentions normally fall under the rules for interlocutory review; CLI-09-18, 70 NRC 859 (2009)
circumstances in which a particular hearing procedure is required are specified in 10 C.F.R. 2.310(b)-(k); LBP-09-10, 70 NRC 51 (2009)
Commission rules bar contentions where petitioners have only what amounts to generalized suspicions, hoping to substantiate them later; LBP-09-18, 70 NRC 385 (2009)
contention admissibility requirements are deliberately strict and any contention that does not satisfy the requirements of 10 C.F.R. 2.309(f)(1) will be rejected; CLI-09-20, 70 NRC 911 (2009); LBP-09-10, 70 NRC 51 (2009); LBP-09-26, 70 NRC 939 (2009)
contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications; LBP-09-16, 70 NRC 227 (2009)
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-17, 70 NRC 311 (2009)
contentions may be filed after the initial 60-day deadline if the petitioner shows that the information on which the amended or new contention is based was not previously available and is materially different than information previously available; and the amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information; LBP-09-26, 70 NRC 939 (2009)
contentions must be accompanied by a concise statement of the alleged facts or expert opinions that support the requestor's/petitioner's position on the issue together with references to the specific sources and documents on which it intends to rely to support its position; LBP-09-10, 70 NRC 51 (2009); LBP-09-26, 70 NRC 939 (2009)
contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register,* unless a longer period is therein specified, an extension is granted, or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time; LBP-09-17, 70 NRC 311 (2009)
contentions of omission must describe the information that should have been included in the environmental report and provide the legal basis that requires the omitted information to be included; LBP-09-16, 70 NRC 227 (2009)
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 385 (2009)
contentions that attack applicable statutory requirements, challenge the basic structure of the NRC's regulatory process, or merely express generalized policy grievances are not appropriate for a licensing board hearing; LBP-09-18, 70 NRC 385 (2009)
contentions that fall outside the scope of the proceeding must be rejected; LBP-09-26, 70 NRC 939 (2009)
cross-examination occurs virtually automatically in Subpart G hearings, subject to normal judicial management and the requirement to file a cross-examination plan; LBP-09-10, 70 NRC 51 (2009)
despite not being constitutionally limited by the case or controversy requirement of Article III, common sense counsels against proceeding with an adjudication where no effective relief can be granted; LBP-09-14, 70 NRC 193 (2009)
determining whether the contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-09-26, 70 NRC 939 (2009)
early site permit applications, as partial construction permit applications, are subject to the Atomic Energy Act hearing requirement, as well as all procedural requirements in 10 C.F.R. Part 2; LBP-09-19, 70 NRC 433 (2009)
even if NRC's proximity presumption is viewed as more lenient than judicial standing requirements, NRC may choose to retain it; CLI-09-20, 70 NRC 911 (2009)

every petitioner bears the burden of demonstrating standing in order to participate in hearings before a licensing board; LBP-09-18, 70 NRC 385 (2009)
except for a motion to file a new or amended contention, or where there are compelling circumstances, movant has no right to reply to an answer or respond to a motion; LBP-09-22, 70 NRC 640 (2009)
factors that must be addressed for nontimely intervention petitions, hearing requests, and contentions are set forth; LBP-09-20, 70 NRC 565 (2009)
failure of a contention to meet any of the pleading requirements of 10 C.F.R. 2.309(f)(1)(i)-(vi) precludes its admission; CLI-09-15, 70 NRC 1 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009)
for a contention of omission, petitioner's burden is to show the facts necessary to establish that the application omits information that should have been included; LBP-09-16, 70 NRC 227 (2009)
for a contention to be admissible, it must meet the six criteria of 10 C.F.R. 2.309(f)(1)(i)-(vi); LBP-09-26, 70 NRC 939 (2009)
for an admissible contention, petitioner must provide a concise statement of the alleged facts or expert opinion that support the petitioner's position; LBP-09-10, 70 NRC 51 (2009)
for an order issued under 10 C.F.R. 2.202, the time for filing a hearing request runs from the date of the order, not the date of publication of the order in the *Federal Register*; LBP-09-20, 70 NRC 565 (2009)
for an organization to establish standing, it must show either immediate or threatened injury to its organizational interests or to the interests of identified members; LBP-09-17, 70 NRC 311 (2009)
for factual disputes, petitioner need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion, but must present sufficient information to show a genuine dispute and reasonably indicating that a further inquiry is appropriate; LBP-09-16, 70 NRC 227 (2009); LBP-09-27, 70 NRC 992 (2009)
for organizational standing, the organization must, in its own right, satisfy the same requirements of injury, causation, and redressability as an individual; LBP-09-28, 70 NRC 1019 (2009)
for representational standing, an organization must demonstrate that the licensing action will affect at least one of its members, identify that member by name and address, show that it is authorized by that member to request a hearing on his or her behalf, demonstrate that the member would qualify for standing in his or her own right, show that the interests the organization seeks to protect are germane to its own purpose, and show that neither the proffered contentions nor the requested relief would require an individual member to participate in the proceeding; LBP-09-28, 70 NRC 1019 (2009)
for Subpart G proceedings, each expert witness is required to create, sign, and submit a written expert report; LBP-09-30, 70 NRC 1039 (2009)
for timely new or amended contentions, the pleading shall include a motion for leave to file the contention showing that it satisfies 10 C.F.R. 2.309(f)(1); LBP-09-22, 70 NRC 640 (2009)
for untimely new or amended contentions, the pleading shall include a motion for leave to file the contention and the support for the proposed new or amended contention showing that it satisfies 10 C.F.R. 2.309(f)(1); LBP-09-22, 70 NRC 640 (2009)
general environmental and policy interests are insufficient for organizational standing; LBP-09-20, 70 NRC 565 (2009)
good cause is the most significant of the late-filing factors in 10 C.F.R. 2.309(c); LBP-09-20, 70 NRC 565 (2009); LBP-09-26, 70 NRC 939 (2009)
having established proximity standing, petitioner need not separately establish the requisite injury, causation, and redressability elements; LBP-09-10, 70 NRC 51 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009)
if a combined license application is amended or material new information subsequently becomes available, petitioners must be given a fair opportunity to file new or amended contentions challenging these changes; LBP-09-10, 70 NRC 51 (2009)
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; LBP-09-16, 70 NRC 227 (2009)
if a contention satisfies the timeliness requirement of 10 C.F.R. 2.309(f)(2)(iii), then, by definition, it is not subject to 10 C.F.R. 2.309(c), which specifically applies to nontimely filings; LBP-09-27, 70 NRC 992 (2009)

if a NEPA contention alleges that impacts or alternatives that are patently outside the realm of reason must be considered, then the contention should be denied for failure to demonstrate that the issue raised is within the legitimate scope of NEPA; LBP-09-10, 70 NRC 51 (2009)
if a party files a new contention within 30 days of the availability of the information new to that party, the contention will generally be considered timely; LBP-09-17, 70 NRC 311 (2009)
if an organization seeks to intervene as a representative of its members, it must identify at least one member by name and address, show that member would have standing in his or her own right, and demonstrate that the member has authorized the organization to intervene on his or her behalf; LBP-09-26, 70 NRC 939 (2009)
if no expert opinion or supporting relevant documents are submitted with a contention, any fact-based argument that is provided must be reasonably specific, coherent, and logical, sufficient to show such a dispute and indicate the appropriateness of further inquiry; LBP-09-17, 70 NRC 311 (2009)
if no particular procedure is required, then the board may conduct the proceeding for a particular contention under Subpart L; LBP-09-10, 70 NRC 51 (2009)
if petitioner fails to provide the requisite support for its contentions, the board may not make assumptions of fact that favor the petitioner or supply information that is lacking; LBP-09-18, 70 NRC 385 (2009); LBP-09-26, 70 NRC 939 (2009)
if the attorney or representative of a party is contacted pursuant to the consultation requirement, then that person (or his or her alternate) must make a sincere effort to make himself or herself available to listen and to respond to the moving party's explanation, and to resolve the factual and legal issues raised in the motion; LBP-09-22, 70 NRC 640 (2009)
in a contested uranium enrichment facility proceeding, the licensing board shall make findings of fact and conclusions of law on admitted contentions; CLI-09-15, 70 NRC 1 (2009)
in a Subpart L evidentiary hearing, the board may ask witnesses to appear in person and answer questions; LBP-09-22, 70 NRC 640 (2009)
in assessing whether petitioner has standing, NRC has long applied contemporaneous judicial concepts of standing; CLI-09-20, 70 NRC 911 (2009)
in construction permit and operating license proceedings for power reactors, petitioner is presumed to have standing to intervene if petitioner lives within, or otherwise has frequent contacts with, the zone of possible harm; CLI-09-20, 70 NRC 911 (2009)
in deciding whether to grant a stay, the Commission considers whether the moving party has made a strong showing that it is likely to prevail on the merits, whether the party will be irreparably injured unless a stay is granted, whether the granting of a stay would harm the other parties, and where the public interest lies; CLI-09-23, 70 NRC 935 (2009)
in demonstrating that a proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences, petitioner cannot rely on conclusory allegations about potential radiological harm, but must show how these various harms might result from the proposed action; LBP-09-20, 70 NRC 565 (2009)
in determining whether a petitioner has established standing, boards are to construe the petition in favor of the petitioner; LBP-09-18, 70 NRC 385 (2009); LBP-09-21, 70 NRC 581 (2009)
in determining whether intervention petitioner has established the necessary interest, licensing boards follow the guidance found in judicial concepts of standing, as stated in federal court case law; LBP-09-17, 70 NRC 311 (2009)
in determining whether petitioner is an "interested person" for the purposes of a standing determination, NRC is not strictly bound by judicial standing doctrines; CLI-09-20, 70 NRC 911 (2009)
in nonreactor cases, the potential for offsite consequences is not always clear, and thus the burden falls on petitioner to demonstrate that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-09-20, 70 NRC 565 (2009)
in proceedings involving nuclear power reactors, petitioner is presumed to have standing to intervene without the need to specifically plead injury, causation, and redressability if the petitioner lives within 50 miles of the nuclear power reactor; LBP-09-10, 70 NRC 51 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009)

in proceedings other than for construction permits, operating licenses, or significant amendments thereto, the Commission decides on a case-by-case basis whether the proximity presumption should apply, taking into account any obvious potential for offsite radiological consequences, as well as the nature of the proposed action and the significance of the radioactive source; LBP-09-20, 70 NRC 565 (2009); LBP-09-28, 70 NRC 1019 (2009)
in ruling on contention admissibility a board is not to look to the merits of the contention; LBP-09-17, 70 NRC 311 (2009)
information upon which an amended or new contention is based must not have been previously available; LBP-09-27, 70 NRC 992 (2009)
information upon which a amended or new contention is based must be materially different than information previously available; LBP-09-27, 70 NRC 992 (2009)
information, facts, and expert opinions provided by petitioner will be examined by the board to confirm that the petitioner does indeed supply adequate support for the contention; LBP-09-26, 70 NRC 939 (2009)
injury-in-fact to establish standing requires more than a general interest in preserving the environment; LBP-09-28, 70 NRC 1019 (2009)
integration, consolidation, restatement, or collection of previously available information into a new document does not convert it into information that was not previously available within the meaning of 10 C.F.R. 2.309(f)(2)(i); LBP-09-10, 70 NRC 51 (2009)
interests that a 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-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009)
intervenors' expert is not required to create a written analysis, but only disclose the written analysis or other documentary authority, if any, that exists and is reasonably available at the time of the disclosure; LBP-09-30, 70 NRC 1039 (2009)
intervention petitioner must be able to show how it would have personally suffered or will suffer a distinct and palpable harm that constitutes injury in fact; LBP-09-18, 70 NRC 385 (2009)
intervention petitioner must establish a concrete and particularized injury that is fairly traceable to the challenged action, is likely to be redressed by a favorable decision, and is arguably within the zone of interests protected by the governing statute; CLI-09-20, 70 NRC 911 (2009); LBP-09-28, 70 NRC 1019 (2009)
intervention petitioner must state the nature of its right to be made a party to the proceeding, the nature and extent of its property, financial, or other interest in the proceeding, and the possible effect of any decision or order that might be issued in the proceeding on its interest; LBP-09-26, 70 NRC 939 (2009)
intervention petitions must set forth with particularity petitioner's interest in the proceeding and how that interest may be affected by the results of the proceeding, and must also include at least one contention meeting the requirements of 10 C.F.R. 2.309(f)(1); CLI-09-15, 70 NRC 1 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
issuance of a proposed rulemaking and requests for comments does not, in itself, constitute information not previously available that entitles a party to file a new contention; LBP-09-10, 70 NRC 51 (2009)
it is a fundamental principle of statutory construction that the meaning of a word cannot be determined in isolation, but must be drawn from the context in which it is used; LBP-09-15, 70 NRC 198 (2009)
it is inconsistent with the dispute avoidance/resolution purposes of a section, and thus insufficient, for the contacted attorney or representative to fail or refuse to consider the substance of the consultation attempt, or for the party to respond that it takes no position on the motion (or issues and that it reserves the right to file a response to the motion when it is filed; LBP-09-22, 70 NRC 640 (2009)
judicial concepts of standing require that a petitioner establish that it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute, that the injury can fairly be traced to the challenged action, and that the injury is likely to be redressed by a favorable decision; LBP-09-18, 70 NRC 385 (2009)
judicial standing concepts are applied in NRC licensing proceedings; LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-26, 70 NRC 939 (2009); LBP-09-28, 70 NRC 1019 (2009)

licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing; LBP-09-18, 70 NRC 385 (2009)
licensing boards may not admit contentions that directly or indirectly challenges Table S-3; LBP-09-18, 70 NRC 385 (2009)
licensing boards must consider the nature of petitioner's right under the Atomic Energy Act or the National Environmental Policy Act to be made a party to the proceeding, the nature and extent of the petitioner's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued on the petitioner's interest; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009)
licensing boards should not accept in individual license proceedings contentions which are, or are about to become, the subject of general rulemaking by the Commission; LBP-09-21, 70 NRC 581 (2009)
mandatory disclosures required by 10 C.F.R. 2.336 consist of an exchange of prescribed information and documents between the litigants, and do not need to be submitted to the board; LBP-09-30, 70 NRC 1039 (2009)
materiality requires a showing that the alleged error or omission is of possible significance to the result of the proceeding; LBP-09-26, 70 NRC 939 (2009)
mere mention of a document without providing its contents or an explanation of its significance cannot support admissibility of the contention; LBP-09-21, 70 NRC 581 (2009)
mere statements of government officials are insufficient to overturn 10 C.F.R. § 51.23; LBP-09-21, 70 NRC 581 (2009)
more than mere notice pleading, which is a broad standard requiring only a short and plain statement of the claim, is required for contention admission; LBP-09-17, 70 NRC 311 (2009)
motions will be rejected if they do not include certification by the attorney or representative of the moving party that they have made a sincere effort to contact the other parties in this proceeding, to explain to them the factual and legal issues raised in the motion, and to resolve those issues; LBP-09-22, 70 NRC 640 (2009)
no obvious potential for offsite consequences sufficient to establish organizational standing was shown even though the organization's office was a mere 3 miles from the facility; LBP-09-28, 70 NRC 1019 (2009)
no proximity presumption applies in source materials cases; LBP-09-13, 70 NRC 168 (2009)
nontimely petitions to intervene and contentions, amended petitions, and supplemental petitions will not be entertained absent a determination by the Commission, the licensing board, or a presiding officer that the petition should be granted and/or the contentions should be admitted based upon a balancing of eight factors; CLI-09-15, 70 NRC 1 (2009)
not all entities with governmental ties are entitled to participate in licensing proceedings as local governmental bodies; LBP-09-13, 70 NRC 168 (2009)
nothing in the NRC case law or regulations requires, at the contention admissibility stage, that a contention be supported by an expert opinion, substantive affidavits, or evidence; LBP-09-10, 70 NRC 51 (2009)
NRC guidelines and regulatory guides are not legally binding on the Staff, the board, or the Commission; LBP-09-10, 70 NRC 51 (2009)
NRC's adjudicatory process is not the proper venue for the evaluation of a petitioner's own view regarding the direction that regulatory policy should take; LBP-09-26, 70 NRC 939 (2009)
NRC's proximity presumption does not disregard contemporaneous judicial concepts of standing, but rather the Commission applied its expertise to determine that persons living within a 50-mile radius of a nuclear reactor face a realistic threat of harm if a release of radioactive material were to occur from the facility; LBP-09-16, 70 NRC 227 (2009)
once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing; LBP-09-16, 70 NRC 227 (2009); LBP-09-21, 70 NRC 581 (2009)
organizational standing requires the party to demonstrate a palpable injury in fact to its organizational interests that is within the zone of interests protected by the Atomic Energy Act or the National Environmental Policy Act; LBP-09-21, 70 NRC 581 (2009)

organizations may demonstrate standing in either an organizational or a representational capacity; LBP-09-28, 70 NRC 1019 (2009)
persons who reside or frequent the area within a 50-mile radius of the reactor are presumed to have standing to participate in a proceeding involving that reactor; LBP-09-17, 70 NRC 311 (2009)
petitioner does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that a dispute exists, but must make a minimal showing that material facts are in dispute, thereby demonstrating that an inquiry in depth is appropriate; LBP-09-17, 70 NRC 311 (2009)
petitioner does not have to prove its contention at the admissibility stage; LBP-09-26, 70 NRC 939 (2009)
petitioner has an affirmative duty to demonstrate that it has standing in each proceeding in which it seeks to participate because a petitioner's status can change over time and the bases for its standing in an earlier proceeding may no longer apply; LBP-09-18, 70 NRC 385 (2009)
petitioner is not required to prove its case at the contention admission stage; LBP-09-17, 70 NRC 311 (2009)
petitioner is obligated to read the pertinent portions of the license application, state the applicant's position and the petitioner's opposing view, and explain why it disagrees with the applicant; LBP-09-25, 70 NRC 867 (2009)
petitioner is required merely to provide a simple nexus between the contention and the referenced factual or legal support; LBP-09-21, 70 NRC 581 (2009); LBP-09-25, 70 NRC 867 (2009)
petitioner may have standing based on its geographic proximity to the proposed facility; LBP-09-18, 70 NRC 385 (2009)
petitioner may in instances of exigent or unavoidable circumstances file a request for an extension of time to file an original hearing petition and contentions; LBP-09-17, 70 NRC 311 (2009)
petitioner must allege a particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-09-13, 70 NRC 168 (2009); LBP-09-26, 70 NRC 939 (2009)
petitioner must demonstrate that its contention is within the scope of the proceeding; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)
petitioner must 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; LBP-09-17, 70 NRC 311 (2009); LBP-09-21, 70 NRC 581 (2009)
petitioner must include sufficient information in its contention to show that a genuine dispute exists with the applicant/licensee on a material issue of fact; LBP-09-10, 70 NRC 51 (2009); LBP-09-27, 70 NRC 992 (2009)
petitioner must provide a brief explanation of the basis for the contention; LBP-09-21, 70 NRC 581 (2009)
petitioner must provide a concise statement of the alleged facts or expert opinions that support its position on the issue and on which it intends to rely at hearing, together with references to the specific sources and documents on which it intends to rely to support its position on the issue; LBP-09-16, 70 NRC 227 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-27, 70 NRC 992 (2009)
petitioner must provide a specific statement of the issue of law or fact to be raised or controverted; LBP-09-21, 70 NRC 581 (2009)
petitioner must read the pertinent portions of the license application, including the safety analysis report and the environmental report, state the applicant's position and the petitioner's opposing view, and explain why petitioner disagrees with the applicant; LBP-09-17, 70 NRC 311 (2009)
petitioner must show that the subject matter of the contention would impact the grant or denial of the license application at issue in the proceeding; LBP-09-26, 70 NRC 939 (2009)
petitioner who might have had standing in an earlier proceeding will not automatically be granted standing in subsequent proceedings; LBP-09-18, 70 NRC 385 (2009)
petitioner's issue will be ruled inadmissible if petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-09-15, 70 NRC 198 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-26, 70 NRC 939 (2009)
petitioner's residence within a 50-mile radius of the proposed facility has established standing in his own right, and, accordingly, representational standing has been established through him; LBP-09-18, 70 NRC 385 (2009)

petitions and contentions filed after the initial 60-day deadline are admissible only upon a balancing of eight factors of 10 C.F.R. 2.309(c); LBP-09-26, 70 NRC 939 (2009)
pleading requirements call for a recitation of facts or expert opinion supporting the issue raised, but are inapplicable to a contention of omission beyond identifying the regulatively required missing information; LBP-09-16, 70 NRC 227 (2009)
providing any material or document as the foundation for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of a contention; LBP-09-26, 70 NRC 939 (2009)
redressability requires petitioner to show that its alleged injury-in-fact could be cured or alleviated by some action of the tribunal; LBP-09-13, 70 NRC 168 (2009)
replies may provide only legitimate amplifications of the original contentions or a logical/legal response to the answers of the Staff and applicant; LBP-09-17, 70 NRC 311 (2009)
reply briefs that raise new issues must address the late-filing and new-contention factors in 10 C.F.R. 2.309(c) or (f)(2); LBP-09-17, 70 NRC 311 (2009)
representational standing will not be granted where petitioner has provided no supporting affidavits or other evidence that any member has authorized it to represent their interests in the proceeding; LBP-09-28, 70 NRC 1019 (2009)
requirements for filing both new and nontimely contentions are stringent; LBP-09-27, 70 NRC 992 (2009)
rulings may be referred to the Commission if they raise significant and novel legal or policy issues, the resolution of which would materially advance the orderly disposition of the proceeding; LBP-09-16, 70 NRC 227 (2009)
selection of hearing procedures for contentions at the outset of a proceeding is not immutable, because the availability of Subpart G procedures depends critically on the credibility of eyewitnesses, and the identity of such witnesses may not be known until after the contentions are admitted; LBP-09-10, 70 NRC 51 (2009)
simply attaching materials or documents, without explaining their significance, is insufficient support for contention admission; LBP-09-18, 70 NRC 385 (2009)
standards for the admissibility of contentions originally came into being in 1989, when the Commission amended its rules to raise the threshold for the admission of contentions; LBP-09-17, 70 NRC 311 (2009)
standing cannot be based on unfounded conjecture; LBP-09-28, 70 NRC 1019 (2009)
stating that an allegation that some aspect of a license application is inadequate or unacceptable does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect; LBP-09-18, 70 NRC 385 (2009)
substantial deference is given to boards' determinations on threshold issues, such as standing and contention admissibility; CLI-09-20, 70 NRC 911 (2009)
technical perfection is not an essential element of contention pleading, but the rules have nonetheless been held to bar contentions where petitioners have only what amounts to generalized suspicions, hoping to substantiate them later; LBP-09-17, 70 NRC 311 (2009)
the benefit of the doubt should be given to the potential intervenor in order to prevent the dismissal of a petition due to inarticulate draftsmanship or procedural or pleading defects; LBP-09-18, 70 NRC 385 (2009)
the better practice for an intervention petitioner is to submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings; LBP-09-18, 70 NRC 385 (2009)
the Commission defers to a board's rulings on standing unless the appeal points to an error of law or abuse of discretion; CLI-09-20, 70 NRC 911 (2009); CLI-09-22, 70 NRC 932 (2009)
the Commission recognizes a 50-mile proximity presumption to establish standing in proceedings concerning nuclear power reactor construction and operating licenses; LBP-09-28, 70 NRC 1019 (2009)
the Commission will review referred rulings only if the referral raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; CLI-09-21, 70 NRC 927 (2009)

the Commission's power to define the scope of a proceeding will lead to the denial of intervention when the Commission amends a license to require additional or better safety measures; LBP-09-20, 70 NRC 565 (2009)
the contention admissibility decision sometimes turns on a determination about when, as a cumulative matter, separate pieces of the information puzzle were sufficiently in place to make the particular concerns reasonably apparent; LBP-09-10, 70 NRC 51 (2009)
the contention admissibility rule does not require a petitioner to prove its case at the contention stage; LBP-09-27, 70 NRC 992 (2009)
the contention admissibility threshold is less than is required at the summary disposition stage; LBP-09-26, 70 NRC 939 (2009)
the contention requirements were never intended to be turned into a fortress to deny intervention; LBP-09-21, 70 NRC 581 (2009)
the contention rule is strict by design, having been toughened in 1989 because in prior years licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation; LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009)
the decision as to whether an alleged environmental impact or alternative is significant or reasonable is the merits of a NEPA contention and should not be adjudicated at the contention admissibility stage under the guise of materiality or scope; LBP-09-10, 70 NRC 51 (2009)
the fact that NRC Staff issues a request for additional information does not, per se, demonstrate that the combined license application is incomplete or ensure the admission of a new contention; LBP-09-10, 70 NRC 51 (2009)
the fact that Staff issues a request for additional information does not immunize the combined license application from challenge or bar the admission of a new contention on the same subject, provided the contention satisfies the criteria of 10 C.F.R. 2.309(f)(1)(i)-(vi) and (f)(2) or (c); LBP-09-10, 70 NRC 51 (2009)
the filing of new or amended contentions based on new information is permitted if sufficient justification is provided; LBP-09-15, 70 NRC 198 (2009)
the first step in assessing the admissibility of a new contention is to determine if it is timely under 10 C.F.R. 2.309(f)(2)(iii) or nontimely under section 2.309(c); LBP-09-10, 70 NRC 51 (2009)
the injury-in-fact necessary to establish organizational standing must be more than a mere interest in a problem, no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem; LBP-09-13, 70 NRC 168 (2009)
the interests that a 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-09-16, 70 NRC 227 (2009)
the issue that generally arises under 10 C.F.R. 2.309(f)(1)(i) is whether a contention is stated with sufficient specificity; LBP-09-17, 70 NRC 311 (2009)
the most natural way to read a provision that sets forth a general obligation followed by a set of specific requirements is that the specific requirements provide the details necessary to fulfilling the general obligation; LBP-09-15, 70 NRC 198 (2009)
the nontrivial increased risk of living within 50 miles of a proposed reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; CLI-09-20, 70 NRC 911 (2009); LBP-09-16, 70 NRC 227 (2009)
the possibility that the prevailing party would use the board's order in his favor to persuade a District Court to reconsider part of the penalty imposed on him in a parallel criminal proceeding did not constitute immediate, irreparable harm to the NRC Staff; CLI-09-23, 70 NRC 935 (2009)
the process of sifting and weighing participants' factual proffers often calls upon a board to make difficult choices, so that a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself; LBP-09-18, 70 NRC 385 (2009)
the proximity presumption applies in proceedings for nuclear power plant construction permits, operating licenses, or significant amendments thereto; LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-26, 70 NRC 939 (2009)

the purpose of the contention admissibility rules is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-09-26, 70 NRC 939 (2009)
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 requires an explanation of the rationale or theory of the contention; LBP-09-10, 70 NRC 51 (2009)
the requisite injury to establish standing may be either actual or threatened but must nonetheless be concrete and particularized, not conjectural or hypothetical; LBP-09-28, 70 NRC 1019 (2009)
the scope of a proceeding is defined in the Commission's initial hearing notice and order referring the proceeding to the licensing board; LBP-09-26, 70 NRC 939 (2009)
the scope of an adjudicatory proceeding is specified by the Notice of Hearing; LBP-09-25, 70 NRC 867 (2009)
the six criteria that govern the admissibility of contentions are discussed; LBP-09-21, 70 NRC 581 (2009)
the standard for amendment of a contention is whether the information was available to the public, not whether the petitioner has recently found it; LBP-09-26, 70 NRC 939 (2009)
the strict contention rule serves multiple interests; LBP-09-17, 70 NRC 311 (2009)
the subject matter of a contention must impact the grant or denial of a pending license application; LBP-09-27, 70 NRC 992 (2009)
the substantive standard for allowing parties to conduct cross-examination is the same under 10 C.F.R. Part 2, Subparts G and L; LBP-09-10, 70 NRC 51 (2009)
there is an automatic right to appeal a licensing board standing and contention admissibility decision on the issue of whether the request for hearing or petition to intervene should have been wholly denied; CLI-09-22, 70 NRC 932 (2009)
there is no conflict between the basic requirements for standing, as applied in the federal courts, and the NRC's proximity presumption; CLI-09-22, 70 NRC 932 (2009)
to amend a contention, petitioner must demonstrate that the information upon which the amended contention is based was not previously available and is materially different from information previously available, and that the amended contention has been submitted in a timely fashion; LBP-09-26, 70 NRC 939 (2009)
to assert an appropriate injury for organizational standing, an organization must demonstrate a palpable injury in fact to its organizational interests; LBP-09-13, 70 NRC 168 (2009)
to be admissible, a contention must assert 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-09-26, 70 NRC 939 (2009)
to be appealable, a disputed order must dispose of the entire petition so that a successful appeal by a nonpetitioner will terminate the proceeding as to the appellee petitioner; CLI-09-18, 70 NRC 859 (2009)
to be sincere, movant should contact other parties sufficiently in advance to provide enough time for the possible resolution of the matter or issues in question; LBP-09-22, 70 NRC 640 (2009)
to challenge a regulation, petitioner must submit a supporting affidavit setting forth with particularity the special circumstances that justify the waiver or exception requested; LBP-09-18, 70 NRC 385 (2009)
to demonstrate standing to intervene, petitioner must state, and boards must assess, the nature of petitioner's right under the governing statutes to be made a party, the nature and extent of petitioner's property, financial, or other interest, and the possible effect of the outcome of the proceeding on petitioner's interest; CLI-09-20, 70 NRC 911 (2009)
to demonstrate standing, an organization seeking to intervene in a proceeding must allege that the challenged action will cause a cognizable injury to the organization's interests or to the interests of its members; LBP-09-26, 70 NRC 939 (2009)
to establish causation, petitioner must show that there is a causal connection between the injury-in-fact and the conduct complained of; LBP-09-13, 70 NRC 168 (2009)
to establish organizational standing, an organization must demonstrate that the action at issue will cause an injury-in-fact to the organization's interests or the interests of its members and that the injury is within the zone of interests protected by the National Environmental Policy Act or the Atomic Energy Act; LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-20, 70 NRC 565 (2009)

to establish 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-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-20, 70 NRC 565 (2009)
to establish standing, petitioner's claimed injury must be arguably within the zone of interests protected by the governing statute in the proceeding; LBP-09-13, 70 NRC 168 (2009)
to intervene in NRC proceedings, petitioner must file a written petition for leave to intervene in accordance with the requirements of 10 C.F.R. 2.309; CLI-09-15, 70 NRC 1 (2009)
to participate as a party in a licensing proceeding, 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)(1); LBP-09-16, 70 NRC 227 (2009); LBP-09-26, 70 NRC 939 (2009)
to support their contentions, petitioners need not proffer facts in formal affidavit or evidentiary form, sufficient to withstand a summary disposition motion; LBP-09-17, 70 NRC 311 (2009)
under 10 C.F.R. 2.309(g) and 2.310, the board determines which hearing procedure will be used (Subpart G or L) on a contention-by-contention basis; LBP-09-10, 70 NRC 51 (2009)
under Subpart L, a party seeking to conduct cross-examination must file a written motion and obtain leave from the board; LBP-09-10, 70 NRC 51 (2009)
when a claim becomes moot, a decision on the merits may be appropriate if the same basic dispute is likely to recur in the future, unless it seems sufficient to await the event or better to defer to another court; LBP-09-15, 70 NRC 198 (2009)
when a federal court dismisses a claim as moot and avoids any further consideration of the merits of that claim, it does so because the claim no longer satisfies the case or controversy requirement of Article III; LBP-09-15, 70 NRC 198 (2009)
when denial of a license would alleviate a petitioner's asserted potential injury, any admissible contention with such a result can be prosecuted by a petitioner, regardless of whether that contention is directly related to that petitioner's articulated injury; LBP-09-16, 70 NRC 227 (2009)
when information becomes available piecemeal over time, and the foundation for a new contention does not become reasonably apparent until the last piece of information becomes available and falls into place, the test for good cause for late filing may be met; LBP-09-10, 70 NRC 51 (2009)
when NRC issues the environmental impact statement, petitioners have the opportunity to file a second wave of environmental contentions, which focus on the adequacy of the NRC Staff's EIS (or EA) under NEPA; LBP-09-25, 70 NRC 867 (2009)
where a contention alleges the omission of particular information or an issue from an application, and the information is later supplied by the applicant or considered by the Staff in a draft EIS, intervenors must timely file a new or amended contention that addresses the factors in section 2.714(b) in order to raise specific challenges regarding the new information; LBP-09-27, 70 NRC 992 (2009)
where intervenors have filed new contentions based on a supplement to the combined license application, in advance of a full board ruling on the original contentions, no appeal lies until the board acts on all contentions, both the original and the newly filed ones; CLI-09-18, 70 NRC 859 (2009)
where petitioners failed to file on time or seek an extension because they had not yet decided whether to seek to intervene, such indecision does not constitute good cause; LBP-09-26, 70 NRC 939 (2009)
whether the party seeking a stay faces potentially irreparable harm is the most important factor considered in the Commission's determination whether to grant a stay; CLI-09-23, 70 NRC 935 (2009)
with limited exceptions, no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-09-26, 70 NRC 939 (2009)
with respect to an applicant's appeal, applicant must contend that, after considering all pending contentions, the board has erroneously granted a hearing to the petitioner; CLI-09-18, 70 NRC 859 (2009)
with respect to orders modifying a license, petitioner must always request a remedy that falls within the scope of the proceeding, as articulated in the notice of hearing; LBP-09-20, 70 NRC 565 (2009)
within 25 days after service of a motion and proposed contention, any other party may file an answer responding to all elements of the motion and contention, and within 7 days of service of the answer, the movant may file a reply; LBP-09-22, 70 NRC 640 (2009)
RULES OF PROCEDURE
in Subpart L proceedings, NRC Staff must produce a hearing file and make it available to all parties; LBP-09-22, 70 NRC 640 (2009)

parties and the NRC Staff have a continuing duty to update their mandatory disclosures; LBP-09-22, 70 NRC 640 (2009)
scheduling orders are to include provisions for disclosure of electronically stored information; LBP-09-22, 70 NRC 640 (2009)
Subpart G procedures focus on issues where the credibility of an eyewitness and/or issues of motive or intent of the party or eyewitness may reasonably be expected to be at issue; LBP-09-22, 70 NRC 640 (2009)
See also Subpart G Procedures; Subpart L Procedures
SAFEGUARDS INFORMATION
a completed Form FD-258 (fingerprint card), signed in original ink, and submitted in accordance with 10 C.F.R. 73.57(d) is required for access to SGI; CLI-09-15, 70 NRC 1 (2009)
a completed Form SF-85, "Questionnaire for Non-Sensitive Positions" is required for each individual who would have access to SGI; CLI-09-15, 70 NRC 1 (2009)
a requester may challenge an adverse determination with respect to access to safeguards information by filing a request for review; CLI-09-15, 70 NRC 1 (2009)
before an adverse determination on trustworthiness and reliability for access to SGI is made, the proposed recipient must be provided any records that were considered in the determination and given an opportunity to correct or explain the information; CLI-09-15, 70 NRC 1 (2009)
content of a statement that explains an individual's "need to know" safeguards information is described; CLI-09-15, 70 NRC 1 (2009)
if NRC Staff determines that the requestor has satisfied its requirements, the Office of Administration will then determine, based upon completion of the background check, whether the proposed recipient is trustworthy and reliable; CLI-09-15, 70 NRC 1 (2009)
individuals requesting access to safeguards information who believe they belong to one or more of the categories of individuals that are exempt from the criminal history records check and background check requirements should specifically state which exemption the requestor is invoking and explaining the requestor's basis for believing that the exemption is applicable; CLI-09-15, 70 NRC 1 (2009)
prior to providing safeguards information to a requestor, the NRC Staff will conduct an inspection to confirm that the recipient's information protection system is sufficient to satisfy the requirements of this section; CLI-09-15, 70 NRC 1 (2009)
SAFETY
severe accident mitigation alternatives analysis must be site specific and given careful consideration in order to comply with the Atomic Energy Act; LBP-09-10, 70 NRC 51 (2009)
SAFETY ANALYSIS
early site permit applicants must submit a safety assessment that includes an analysis of a fission product release from an accident, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-19, 70 NRC 433 (2009)
fission product releases are associated with accidents that have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products; LBP-09-19, 70 NRC 433 (2009)
SAFETY ANALYSIS REPORT
a limited work authorization applicant must submit design information related to activities within the scope of the requested LWA; LBP-09-19, 70 NRC 433 (2009)
the SAR component of an application for a standard design certification must analyze and address the problem of extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products; LBP-09-10, 70 NRC 51 (2009)
the site SAR submitted with an early site permit application must contain the seismic, meteorological, hydrologic, and geologic characteristics of the proposed site; LBP-09-19, 70 NRC 433 (2009)
See also Final Safety Analysis Report
SAFETY EVALUATION
early site permit applicants must perform an evaluation and analysis of the postulated fission product release to evaluate the offsite radiological consequences; LBP-09-19, 70 NRC 433 (2009)

SUBJECT INDEX

SAFETY EVALUATION REPORT
for purposes of the mandatory/uncontested portion of an ESP proceeding, the board takes official notice of publicly available documents associated with the Staff's safety and environmental reviews; LBP-09-19, 70 NRC 433 (2009)
SAFETY INFORMATION
early site permit applications must contain a description and safety assessment of the site that includes an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under radiological consequence evaluation factors; LBP-09-19, 70 NRC 433 (2009)
SAFETY ISSUES
a new safety contention can be filed, with leave of the board, on a showing that the new contention is based on information that was not previously available and is materially different from previously available information, and the new contention has been submitted in a timely fashion based on the availability of the subsequent information; LBP-09-9, 70 NRC 41 (2009)
power reactor licensees have safely stored and managed low-level radioactive waste under NRC oversight for years without the development of immediate safety problems or concerns; LBP-09-16, 70 NRC 227 (2009)
SAFETY-RELATED
the design basis flood is the magnitude of the flood event that is used to evaluate safety structures, systems, and components important to safety during facility design; LBP-09-25, 70 NRC 867 (2009)
SAFETY REVIEW
findings that a board must make for issuance of an early site permit are clarified; LBP-09-19, 70 NRC 433 (2009)
NRC provides detailed guidance for Staff personnel reviewing the safety aspects of early site permit applications; LBP-09-19, 70 NRC 433 (2009)
SANCTIONS
a board may impose sanctions including dismissal of the specific contentions, dismissal of the adjudication, or dismissal of the application for any continuing unexcused failure to make the required mandatory disclosures; LBP-09-30, 70 NRC 1039 (2009)
a key factor in establishing the length of a potential employment ban is whether the subject has taken responsibility for his actions and expressed the appropriate remorse; LBP-09-24, 70 NRC 676 (2009)
a single charge, if serious enough, could justify a 5-year employment ban; LBP-09-24, 70 NRC 676 (2009)
carefully crafted restraints in the Constitution preserve freedom by curbing the exercise of power; LBP-09-24, 70 NRC 676 (2009)
courts have been careful to strictly limit the exercise of summary contempt power to cases in which it was clear that all of the elements of misconduct were personally observed by the judge; LBP-09-24, 70 NRC 676 (2009)
exercise of the power of compulsory process must be carefully circumscribed when the investigative process tends to impinge upon such highly sensitive areas as freedom of speech or press, freedom of political association, and freedom of communication of ideas; LBP-09-24, 70 NRC 676 (2009)
immediately effective deprivation of the legally acknowledged right to pursue one's livelihood should not be imposed without the Staff having substantial reason to do so and explaining its reasons in advance and in some detail; LBP-09-24, 70 NRC 676 (2009)
states can be required to tailor carefully the means of satisfying a legitimate state interest when fundamental liberties and rights are threatened; LBP-09-24, 70 NRC 676 (2009)
the appropriateness of a 5-year employment ban may not depend on a board's upholding all of the several charges and then imposing a multiyear ban on a sort of "1 year for each violation" approach; LBP-09-24, 70 NRC 676 (2009)
the target of an immediately effective enforcement order has the right to challenge the immediate effectiveness and the promise of an expedited hearing; LBP-09-24, 70 NRC 676 (2009)
to succeed in imposing pretrial detention because the accused is a danger to the community, the government must, among other things, prove in an adversary hearing by clear and convincing evidence that no conditions of release can reasonably ensure the community's safety; LBP-09-24, 70 NRC 676 (2009)

where the government has deprived an individual of a property interest without a hearing, the government must be prepared to show an important government interest, accompanied by a substantial assurance that the deprivation is not baseless or unwarranted; LBP-09-24, 70 NRC 676 (2009)
SCHEDULE, BRIEFING
allowing discovery or an evidentiary hearing with respect to safety-related issues to proceed before the final safety evaluation report is issued will serve to further the Commission's objective to ensure a fair, prompt, and efficient resolution of contested issues; CLI-09-15, 70 NRC 1 (2009)
SCHEDULING
an initial scheduling order is designed to ensure proper case management of the proceeding; LBP-09-22, 70 NRC 640 (2009)
boards have an obligation to establish a case scheduling order, and to advise the Commission of any significant delay in meeting major activities set forth in the hearing schedule; CLI-09-17, 70 NRC 309 (2009)
no later than 1 year after issuance of the combined license or at the start of construction, whichever is later, the COL licensee must submit its schedule for completing the inspections, tests, or analyses and provide schedule updates; LBP-09-19, 70 NRC 433 (2009)
orders are to include provisions for disclosure of electronically stored information; LBP-09-22, 70 NRC 640 (2009)
the initial scheduling order is to be issued within 55 days of the board decision granting intervention and admitting contentions; LBP-09-22, 70 NRC 640 (2009)
SECURITY
See Common Defense and Security
SEISMIC ANALYSIS
applicant's site safety analysis report must include seismic and geologic characteristics of the proposed site with appropriate consideration of the most severe historical natural phenomena that have been reported for the site; LBP-09-19, 70 NRC 433 (2009)
in providing information on seismic and geologic characteristics of a proposed site, applicants must conform to the requirements of 10 C.F.R. 100.23; LBP-09-19, 70 NRC 433 (2009)
the site safety analysis report submitted with an early site permit application must contain the seismic, meteorological, hydrologic, and geologic characteristics of the proposed site; LBP-09-19, 70 NRC 433 (2009)
SENIOR REACTOR OPERATOR LICENSE
license automatically expires upon termination of employment with the facility licensee; LBP-09-14, 70 NRC 193 (2009)
license is limited to the facility for which it is issued; LBP-09-14, 70 NRC 193 (2009)
no license that petitioner might be awarded could be active because (not having been at the facility for more than 6 months) petitioner could not have performed the functions of an operator or senior operator for the necessary minimum number of hours during each calendar quarter; LBP-09-14, 70 NRC 193 (2009)
where applicant had proposed that a senior reactor operator license be both issued and cancelled retroactively, the Commission declined to engage in such an empty exercise; LBP-09-14, 70 NRC 193 (2009)
SETTLEMENT AGREEMENTS
a clause in a settlement agreement regarding standing does not apply to NRC Staff, nor would it bind a future licensing board to make any particular determination regarding whether any of the petitioners has established its standing, either as of right or as a matter of discretion; LBP-09-23, 70 NRC 659 (2009)
a notice of hearing having been issued by the Commission in a COL proceeding, the board has jurisdiction to approve a settlement agreement; LBP-09-23, 70 NRC 659 (2009)
finding that a settlement agreement is consistent with the content and form requirements and is in the public interest, the board approves the agreement and terminates this contested hearing; LBP-09-23, 70 NRC 659 (2009)
licensing boards must be satisfied that the terms of a proposed agreement reflect a fair and reasonable resolution of the matter at hand, are in keeping with the objectives of NRC's enforcement policy, and satisfy the requirements of 10 C.F.R. 2.338(g) and (h); LBP-09-11, 70 NRC 151 (2009); LBP-09-12, 70 NRC 159 (2009)

the agreement becomes effective upon its execution by both parties, but the agreement is contingent upon approval by the board; LBP-09-12, 70 NRC 159 (2009)
the section 2.341(a)(2) sua sponte review process that applies to a licensing board determination approving a settlement agreement affords the Commission the opportunity to correct any participant or board misapprehensions regarding the items contemplated in the settlement agreement; LBP-09-23, 70 NRC 659 (2009)
upon submitting for approval to work under a reciprocity agreement licensee will send a copy of the board order confirming the settlement agreement to the regulator processing the reciprocity application at least 2 weeks prior to engaging in activity authorized by the reciprocity agreement; LBP-09-12, 70 NRC 159 (2009)
when an adjudicatory proceeding has been terminated before a licensing board pursuant to a settlement agreement, the board loses its jurisdiction over, and thus its authority to act with respect to, that licensing action; LBP-09-23, 70 NRC 659 (2009)
SETTLEMENT NEGOTIATIONS
although interested governmental entities would not have a formal role in a proceeding absent the admission of parties and contentions, boards expect that such entities would be kept appropriately apprised of the other participants' settlement efforts; LBP-09-23, 70 NRC 659 (2009)
SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS
a contention that fails to provide even a ballpark figure for the cost of implementing any proposed SAMAs is inadmissible because it is difficult to assess whether a SAMA may be cost-beneficial and thus warrant serious consideration; LBP-09-26, 70 NRC 939 (2009)
although the methodology is available to provide the required analysis, neither NEPA nor NRC regulations require that the analysis under 10 C.F.R. 51.45(c) be performed using that methodology; LBP-09-26, 70 NRC 939 (2009)
analyses must be site specific and given careful consideration in order to comply with safety and environmental requirements; LBP-09-10, 70 NRC 51 (2009)
applicant's environmental report is required to analyze the alternatives available for reducing or avoiding adverse environmental effects; LBP-09-10, 70 NRC 51 (2009); LBP-09-19, 70 NRC 433 (2009); LBP-09-26, 70 NRC 939 (2009)
existence of another independent nuclear power plant within the 10-mile-radius emergency planning zone of a proposed new nuclear power plant is a significant factor for purposes of emergency planning for the new reactor; LBP-09-10, 70 NRC 51 (2009)
if the accident sought to be considered is sufficiently unlikely that it can be characterized fairly as remote and speculative, then consideration under NEPA is not required as a matter of law; LBP-09-26, 70 NRC 939 (2009)
in evaluating early site permit applications, where detailed design information is not available, the Commission may defer resolution of SAMAs until the construction permit or combined license stage; LBP-09-19, 70 NRC 433 (2009)
low probability is the key to applying NEPA's rule-of-reason test to contentions that allege that a specified accident scenario presents a significant environmental impact that must be evaluated; LBP-09-26, 70 NRC 939 (2009)
NEPA implicitly requires agencies to consider measures to mitigate environmental impacts; LBP-09-10, 70 NRC 51 (2009); LBP-09-19, 70 NRC 433 (2009)
NEPA requires dealing with uncertainties by inclusion in an environmental impact statement of a summary of existing credible scientific evidence relevant to evaluating the reasonably foreseeable significant adverse impacts regarding those events with potential catastrophic consequences even if their probability is low; LBP-09-26, 70 NRC 939 (2009)
potential plant modifications as well as plant procedural changes or training program changes that can reduce the risks of severe accidents are considered; LBP-09-19, 70 NRC 433 (2009)
the analysis of reasonably foreseeable significant adverse impacts regarding those events with potential catastrophic consequences must be supported by credible scientific evidence, must not be not based on pure conjecture, and must be within the rule of reason; LBP-09-26, 70 NRC 939 (2009)
SEVERE ACCIDENT MITIGATION ALTERNATIVES DESIGN ANALYSIS
all environmental issues concerning SAMDAs associated with the information in the NRC's environmental assessment for a certified design are considered resolved; LBP-09-19, 70 NRC 433 (2009)

design certification applicants are required to address SAMDAs; LBP-09-19, 70 NRC 433 (2009)
early site permit applicants must submit a safety assessment that includes an analysis of a fission product release from an accident, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents; LBP-09-19, 70 NRC 433 (2009)
if a combined license application references a design certification, then the presiding officer shall not admit contentions concerning SAMDAs unless the contention demonstrates that the site characteristics fall outside of the site parameters in the standard design certification; LBP-09-10, 70 NRC 51 (2009)
issues are resolved for an application referencing a design control document if the specific site parameters are covered by the site parameters assumed in the DCD SAMDA analysis; LBP-09-19, 70 NRC 433 (2009)
the environmental report associated with each application for a standard design certification must address the costs and benefits of SAMDAs; LBP-09-10, 70 NRC 51 (2009)
this analysis focuses on severe accident mitigation dealing with reactor design and hardware issues; LBP-09-10, 70 NRC 51 (2009)
SITE CHARACTERIZATION
applicant's site safety analysis report must include seismic and geologic characteristics of the proposed site with appropriate consideration of the most severe historical natural phenomena that have been reported for the site; LBP-09-19, 70 NRC 433 (2009)
in providing information on seismic and geologic characteristics of a proposed site, applicants must conform to the requirements of 10 C.F.R. 100.23; LBP-09-19, 70 NRC 433 (2009)
the site safety analysis report submitted with an early site permit application must contain the seismic, meteorological, hydrologic, and geologic characteristics of the proposed site; LBP-09-19, 70 NRC 433 (2009)
SITE HYDROLOGY
factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 433 (2009)
in its review of early site permit applications, Staff must consider physical characteristics of the site, specifically noting that factors important to hydrological radionuclide transport must be obtained from onsite measurements; LBP-09-19, 70 NRC 433 (2009)
the site safety analysis report submitted with an early site permit application must contain the seismic, meteorological, hydrologic, and geologic characteristics of the proposed site; LBP-09-19, 70 NRC 433 (2009)
SITE REMEDIATION
boards are to determine whether the site redress plan will adequately redress the activities performed under a limited work authorization should the activities be terminated by either the holder of the LWA or by Commission denial of any corresponding early site permit or combined license; LBP-09-19, 70 NRC 433 (2009)
SITE RESTORATION
a limited work authorization authorizes activities for which either a construction permit or combined license is otherwise required, but the LWA application must include a plan for site redress that provides for restoration if the project is cancelled, the LWA is revoked, or a construction permit or COL is denied; LBP-09-19, 70 NRC 433 (2009)
a site redress plan remains in effect for an early site permit applicant even if the ESP with which the LWA is issued is not referenced in a construction permit or COL application during the period that the ESP remains valid; LBP-09-19, 70 NRC 433 (2009)
SITE SAFETY ANALYSIS REPORT
a combined license application reference to an early site permit must include an SSAR that either includes or incorporates by reference the ESP site safety analysis report and that contains additional information and analyses sufficient to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the ESP; LBP-09-19, 70 NRC 433 (2009)
applicant must include seismic and geologic characteristics of the proposed site with appropriate consideration of the most severe historical natural phenomena that have been reported for the site; LBP-09-19, 70 NRC 433 (2009)

in providing information on seismic and geologic characteristics of a proposed site, applicants must conform to the requirements of 10 C.F.R. 100.23; LBP-09-19, 70 NRC 433 (2009)
the SSAR filed with an early site permit application must include information that identifies physical characteristics of the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans; LBP-09-19, 70 NRC 433 (2009)
SITE SELECTION
all reasonable alternatives to the site proposed for the early site permit are to be identified; LBP-09-19, 70 NRC 433 (2009)
applicant's initial consideration of DOE's Portsmouth, Ohio, and SRS sites as alternative sites was reasonable as part of its alternative site analysis for an early site permit; LBP-09-19, 70 NRC 433 (2009)
brownfield sites owned by companies other than the applicant may reasonably be excluded as alternative sites; LBP-09-19, 70 NRC 433 (2009)
exclusion of DOE sites in alternative sites analysis that are far outside applicant's region of interest is reasonable; LBP-09-19, 70 NRC 433 (2009)
SITE SUITABILITY
existence of another independent nuclear power plant within the 10-mile-radius emergency planning zone of a proposed new nuclear power plant is a significant factor for purposes of emergency planning for the new reactor; LBP-09-10, 70 NRC 51 (2009)
with regard to alternative sites for an early site permit, NRC Staff must evaluate both the process (i.e., methodology) used by the applicant and the reasonableness of the product (e.g., potential sites) identified by that process; LBP-09-19, 70 NRC 433 (2009)
SPENT FUEL
there is reasonable assurance that a geologic repository will be available by 2025 and that sufficient repository capacity will be available within 30 years beyond the licensed life to dispose of high-level waste and spent fuel generated by any reactor up to that time; LBP-09-18, 70 NRC 385 (2009)
SPENT FUEL STORAGE
contentions on the environmental impacts of spent fuel storage are inadmissible; LBP-09-18, 70 NRC 385 (2009)
no discussion of any environmental impact of spent fuel storage for the period following the term of the reactor combined license is required in any environmental report or environmental impact statement prepared in connection with the requested action; LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
petitioner's inaccurate reading and presentation of applicant's spent fuel storage plan cannot serve as a litigable basis for a contention; LBP-09-27, 70 NRC 992 (2009)
spent fuel can be stored safely onsite for at least 30 years beyond a plant's licensed life for operation; LBP-09-17, 70 NRC 311 (2009)
the Commission has issued a general license for the storage of spent fuel at an onsite independent spent fuel storage installation to all persons authorized to possess or operate nuclear power reactors under 10 C.F.R. Part 50 or Part 52; LBP-09-20, 70 NRC 565 (2009)
the environmental impacts related to storage of spent fuel under Part 72 have been generically evaluated under two previous rulemakings and the Commission's waste confidence proceedings, and thus need not be reassessed; LBP-09-21, 70 NRC 581 (2009)
the Waste Confidence Rule covers the storage of spent fuel in new or existing facilities; LBP-09-10, 70 NRC 51 (2009)
to the extent that petitioners argue that the provisions of 10 C.F.R. 50.54(hh) should be applied to dry cask storage, they may file a rulemaking petition with the Commission; LBP-09-17, 70 NRC 311 (2009)
See also Independent Spent Fuel Storage Installation
STANDARD OF PROOF
constructive knowledge is knowledge of facts sufficient to prompt an inquiry that would have uncovered misrepresentations and is not actual knowledge; LBP-09-24, 70 NRC 676 (2009)

instruction to juries on deliberate ignorance or willful blindness can relieve the government of its constitutional obligation to prove the defendant's knowledge beyond a reasonable doubt; LBP-09-24, 70 NRC 676 (2009)
instruction to juries on deliberate ignorance or willful blindness should be used with caution to avoid the possibility that the jury convicts on the lesser standard that the defendant should have known his conduct was illegal; LBP-09-24, 70 NRC 676 (2009)
the danger of instruction to juries on deliberate ignorance or willful blindness in an inappropriate case is that juries will convict on a basis akin to a standard of negligence; LBP-09-24, 70 NRC 676 (2009)
the warning to jurors that the added instruction on deliberate ignorance or willful blindness is not intended to allow them to base guilt on negligence or carelessness is sufficient to legitimize the instruction; LBP-09-24, 70 NRC 676 (2009)
to prevail in establishing that the accused's actions constituted a violation, Staff must demonstrate by a preponderance of the evidence that the accused had actual knowledge of the information associated with his actions and that he deliberately acted contrary to that knowledge; LBP-09-24, 70 NRC 676 (2009)
to succeed in imposing pretrial detention because the accused is a danger to the community, the government must, among other things, prove in an adversary hearing by clear and convincing evidence that no conditions of release can reasonably ensure the community's safety; LBP-09-24, 70 NRC 676 (2009)
where the record in an enforcement proceeding may be devoid of direct evidence to establish knowledge, the Staff may have to build its case upon circumstantial evidence alone; LBP-09-24, 70 NRC 676 (2009)
STANDARD OF REVIEW
a board's role in an early site permit proceeding is to carefully probe Staff findings by asking appropriate questions and by requiring supplemental information when necessary, but Staff's underlying technical and factual findings are not open to board reconsideration unless, after a review of the record, the board finds the NRC Staff review inadequate or its findings insufficient; LBP-09-19, 70 NRC 433 (2009)
in a mandatory hearing, a licensing board must narrow its inquiry to those topics or sections in Staff documents that it deems most important and should concentrate on portions of the documents that do not on their face adequately explain the logic, underlying facts, and applicable regulations and guidance; LBP-09-19, 70 NRC 433 (2009)
in evaluating a petitioner's standing, boards are to construe the petition in favor of the petitioner; LBP-09-21, 70 NRC 581 (2009)
licensing boards review NRC Staff's enforcement orders *de novo* to determine on the basis of the hearing record whether the charges are sustained and the sanction imposed is warranted; LBP-09-24, 70 NRC 676 (2009)
on baseline NEPA issues in early site permit cases, boards must reach their own independent determination, but should do so without second-guessing underlying technical or factual findings by the NRC Staff; LBP-09-19, 70 NRC 433 (2009)
petitioners may request, and the Commission, in its discretion, may grant interlocutory review if it is shown that the issue threatens petitioners with immediate and serious irreparable impacts or affects the basic structure of the proceeding in a pervasive manner; LBP-09-10, 70 NRC 51 (2009)
reports before a board are subject to scrutiny both as to those portions that support an intervenor's assertion and those that do not; LBP-09-21, 70 NRC 581 (2009)
the Commission declined to review licensing board referred rulings because the contentions were rejected by the board due to legal insufficiency; CLI-09-21, 70 NRC 927 (2009)
the Commission gives substantial deference to a board's rulings on contention admissibility in the absence of clear error or abuse of discretion; CLI-09-16, 70 NRC 33 (2009); CLI-09-22, 70 NRC 932 (2009)
the Commission will review referred rulings only if the referral raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding; CLI-09-21, 70 NRC 927 (2009)
the scope of early review of an enforcement order is severely limited and the order's immediate effectiveness depriving the accused of the freedom to work pending trial is presumptively valid, placing the burden on the accused to demonstrate its invalidity; LBP-09-24, 70 NRC 676 (2009)

when reviewing an early site permit application in an uncontested proceeding, licensing boards are to conduct a simple sufficiency review rather than a *de novo* review on both Atomic Energy Act and National Environmental Policy Act issues; LBP-09-19, 70 NRC 433 (2009)
where the final environmental impact statement discussion of alternative sites was insufficient, the board independently reviewed the record on greenfield, competitors' brownfield, noncompetitors' brownfield, and applicant's other nuclear sites to conclude that the Staff's underlying alternative site review was adequate; LBP-09-19, 70 NRC 433 (2009)
with respect to certain NEPA findings, boards in early site permit proceedings are to make independent environmental judgments, though they need not rethink or redo every aspect of the NRC Staff's environmental findings or undertake their own fact-finding activities; LBP-09-19, 70 NRC 433 (2009)
STANDING TO INTERVENE
a board is not at liberty to abandon the Commission's 50-mile proximity presumption; LBP-09-16, 70 NRC 227 (2009)
a board's determination of standing does not depend on whether the cause of the injury flows directly from the challenged action, but whether the chain of causation is plausible; LBP-09-13, 70 NRC 168 (2009)
a clause in a settlement agreement regarding standing does not apply to NRC Staff, nor would it bind a future licensing board to make any particular determination regarding whether any of the petitioners has established its standing, either as of right or as a matter of discretion; LBP-09-23, 70 NRC 659 (2009)
a lack of specificity will be sufficient to reject a claim of standing; LBP-09-18, 70 NRC 385 (2009)
a petition for review and request for hearing must include a showing that the petitioner has standing; LBP-09-13, 70 NRC 168 (2009)
a significant pattern of regular contacts within the 50-mile radius around the plant is sufficient to establish proximity-based standing; LBP-09-18, 70 NRC 385 (2009)
a standing ruling in one proceeding is not dispositive of a determination in another proceeding with the same petitioner because the ruling was not the subject of appellate review; LBP-09-18, 70 NRC 385 (2009)
absent an obvious potential for harm, it is a petitioner's burden to show how harm will or may occur; LBP-09-28, 70 NRC 1019 (2009)
although a board in another materials license renewal proceeding allowed an Indian organization to participate in that proceeding as an interested Indian tribe under 10 C.F.R. 2.315(c), that ruling is not binding on other boards; LBP-09-13, 70 NRC 168 (2009)
an administrative agency may establish administrative standing criteria that are less rigorous than those for judicial standing; CLI-09-20, 70 NRC 911 (2009)
an alleged injury to health and safety, shared equally by many, can form the basis for standing; LBP-09-18, 70 NRC 385 (2009)
an attack on the Commission's proximity presumption is rejected; LBP-09-18, 70 NRC 385 (2009)
an entity wishing to participate as a governmental body must demonstrate that it goes beyond an advisory role and exercises executive or legislative responsibilities; LBP-09-13, 70 NRC 168 (2009)
an injury in fact must go beyond generalized grievances to affect a petitioner in a personal and individual way; LBP-09-13, 70 NRC 168 (2009)
because agencies are not constrained by Article III of the Constitution, nor are they governed by judicially created standing doctrines restricting access to federal courts, the criteria for establishing administrative standing may permissibly be less demanding than the criteria for judicial standing; LBP-09-18, 70 NRC 385 (2009)
even if NRC's proximity presumption is viewed as more lenient than judicial standing requirements, NRC may choose to retain it; CLI-09-20, 70 NRC 911 (2009)
every petitioner bears the burden of demonstrating standing in order to participate in hearings before a licensing board; LBP-09-18, 70 NRC 385 (2009)
having established proximity standing, petitioner need not separately establish the requisite injury, causation, and redressability elements; LBP-09-18, 70 NRC 385 (2009)
in assessing intervention petitions, licensing boards must determine whether standing elements are met even though there are no objections to petitioner's standing; LBP-09-23, 70 NRC 659 (2009)
in assessing whether petitioner has standing, NRC has long applied contemporaneous judicial concepts of standing; CLI-09-20, 70 NRC 911 (2009)

in demonstrating that a proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences, petitioner cannot rely on conclusory allegations about potential radiological harm, but must show how these various harms might result from the proposed action; LBP-09-20, 70 NRC 565 (2009)
in determining whether a petitioner has established standing, boards are to construe the petition in favor of the petitioner; LBP-09-10, 70 NRC 51 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-21, 70 NRC 581 (2009)
in determining whether petitioner is an "interested person" for the purposes of a standing determination, NRC is not strictly bound by judicial standing doctrines; CLI-09-20, 70 NRC 911 (2009)
in nonreactor cases, the potential for offsite consequences is not always clear, and thus the burden falls on petitioner to demonstrate that the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-09-20, 70 NRC 565 (2009)
in proceedings involving nuclear power reactors, the Commission has adopted a proximity presumption, whereby a petitioner who resides within 50 miles of the reactor is presumed to have standing without the need to plead injury, causation, and redressability; CLI-09-20, 70 NRC 911 (2009); LBP-09-10, 70 NRC 51 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009)
in proceedings other than for construction permits, operating licenses, or significant amendments thereto, the Commission decides on a case-by-case basis whether the proximity presumption should apply, taking into account any obvious potential for offsite radiological consequences, as well as the nature of the proposed action and the significance of the radioactive source; LBP-09-20, 70 NRC 565 (2009); LBP-09-28, 70 NRC 1019 (2009)
in ruling on a request for a hearing, a licensing board is to consider the nature of petitioner's right under the Atomic Energy Act or the National Environmental Policy Act to be made a party to the proceeding, the nature and extent of petitioner's property, financial, or other interest in the proceeding, and the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest; LBP-09-10, 70 NRC 51 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009)
in source materials cases, petitioner has the burden to show a specific and plausible means of how proposed license activities may affect him or her; LBP-09-13, 70 NRC 168 (2009)
injury-in-fact is defined as an invasion of a legally protected interest which is concrete and particularized and actual or imminent; LBP-09-13, 70 NRC 168 (2009)
intervention petitioner must state the nature of its right to be made a party to the proceeding, the nature and extent of its property, financial, or other interest in the proceeding, and the possible effect of any decision or order that might be issued in the proceeding on its interest; LBP-09-26, 70 NRC 939 (2009)
judicial concepts of standing are generally followed in NRC proceedings; LBP-09-10, 70 NRC 51 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-28, 70 NRC 1019 (2009)
judicial concepts of standing require that a petitioner establish that it has suffered a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute, that the injury can fairly be traced to the challenged action and that the injury is likely to be redressed by a favorable decision; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
licensing boards have been lenient in permitting *pro se* petitioners the opportunity to cure procedural defects in petitions to intervene regarding standing; LBP-09-18, 70 NRC 385 (2009)
membership of a petitioning Indian group must be composed principally of persons who are not members of any other acknowledged North American Indian tribe; LBP-09-13, 70 NRC 168 (2009)
no proximity presumption applies in source materials cases; LBP-09-13, 70 NRC 168 (2009)
not all entities with governmental ties are entitled to participate in licensing proceedings as local governmental bodies; LBP-09-13, 70 NRC 168 (2009)
NRC generally follows judicial concepts of standing; LBP-09-26, 70 NRC 939 (2009)

NRC's proximity presumption does not disregard contemporaneous judicial concepts of standing, but rather the Commission applied its expertise to determine that persons living within a 50-mile radius of a nuclear reactor face a realistic threat of harm if a release of radioactive material were to occur from the facility; LBP-09-16, 70 NRC 227 (2009)
once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing; LBP-09-16, 70 NRC 227 (2009)
organizations may demonstrate standing in either an organizational or a representational capacity; LBP-09-28, 70 NRC 1019 (2009)
petitioner has an affirmative duty to demonstrate that it has standing in each proceeding in which it seeks to participate because a petitioner's status can change over time and the bases for its standing in an earlier proceeding may no longer apply; LBP-09-18, 70 NRC 385 (2009)
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; CLI-09-20, 70 NRC 911 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-26, 70 NRC 939 (2009); LBP-09-28, 70 NRC 1019 (2009)
petitioner who might have had standing in an earlier proceeding will not automatically be granted standing in subsequent proceedings; LBP-09-18, 70 NRC 385 (2009)
redressability requires petitioner to show that its alleged injury-in-fact could be cured or alleviated by some action of the tribunal; LBP-09-13, 70 NRC 168 (2009)
standing cannot be based on unfounded conjecture; LBP-09-28, 70 NRC 1019 (2009)
standing generally has been denied when the threat of injury is not concrete and particularized; LBP-09-13, 70 NRC 168 (2009)
state and federally recognized Indian tribes do not need to address standing requirements if the facility is located within their boundaries; CLI-09-15, 70 NRC 1 (2009)
substantial deference is given to boards' determinations on threshold issues, such as standing and contention admissibility; CLI-09-20, 70 NRC 911 (2009)
the better practice for an intervention petitioner is to submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings; LBP-09-18, 70 NRC 385 (2009)
the Commission recognizes a 50-mile proximity presumption to establish standing in proceedings concerning nuclear power reactor construction and operating licenses; LBP-09-28, 70 NRC 1019 (2009)
the fact that an ancestor of a member of the Oglala Delegation of the Great Sioux Nation Treaty Council signed several treaties with the United States more than 100 years ago does not establish that the delegation is a current and official successor to the delegation that signed such treaties, or that the delegation is a local governmental entity that currently exercises executive authority; LBP-09-13, 70 NRC 168 (2009)
the nontrivial increased risk of living within 50 miles of a proposed reactor constitutes injury-in-fact, is traceable to the challenged action, and is likely to be redressed by a favorable decision that either denies a license or mandates compliance with legal requirements that protect the interests of the petitioners; CLI-09-20, 70 NRC 911 (2009); LBP-09-16, 70 NRC 227 (2009)
the process of sifting and weighing participants' factual proffers often calls upon a board to make difficult choices, so that a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself; LBP-09-18, 70 NRC 385 (2009)
the proximity presumption applies in proceedings for nuclear power plant construction permits, operating licenses, or significant amendments thereto; LBP-09-26, 70 NRC 939 (2009)
the requisite injury to establish standing may be either actual or threatened but must nonetheless be concrete and particularized, not conjectural or hypothetical; LBP-09-28, 70 NRC 1019 (2009)
there is no conflict between the basic requirements for standing, as applied in the federal courts, and the NRC's proximity presumption; CLI-09-22, 70 NRC 932 (2009)
to demonstrate standing to intervene, petitioner must state, and boards must assess, the nature of petitioner's right under the governing statutes to be made a party, the nature and extent of petitioner's

property, financial, or other interest, and the possible effect of the outcome of the proceeding on petitioner's interest; CLI-09-20, 70 NRC 911 (2009)
to determine whether an interest is in the zone of interests of a statute, it is necessary first to discern the interests arguably to be protected by the statutory provision at issue, and then to inquire whether petitioner's interests affected by the agency action are among them; LBP-09-13, 70 NRC 168 (2009)
to establish causation, petitioner must show that there is a causal connection between the injury-in-fact and the conduct complained of; LBP-09-13, 70 NRC 168 (2009)
to establish standing in federal court, a party must show injury-in-fact, causation, and redressability; LBP-09-13, 70 NRC 168 (2009)
to establish standing, petitioner's claimed injury must be arguably within the zone of interests protected by the governing statute in the proceeding; LBP-09-13, 70 NRC 168 (2009)
under the proximity presumption, petitioner in an operating license proceeding who lives within 50 miles of a nuclear power reactor is presumed to have standing without the need specifically to plead injury, causation, and redressability; LBP-09-26, 70 NRC 939 (2009)
when denial of a license would alleviate a petitioner's asserted potential injury, any admissible contention with such a result can be prosecuted by a petitioner, regardless of whether that contention is directly related to that petitioner's articulated injury; LBP-09-16, 70 NRC 227 (2009)
STANDING TO INTERVENE, ORGANIZATIONAL
a broadly stated interest in a problem is not sufficient by itself to render the organization adversely affected or aggrieved; LBP-09-13, 70 NRC 168 (2009)
a Native American group that has failed to establish that it is a federally recognized Indian tribe is denied standing based on its tribal status; LBP-09-13, 70 NRC 168 (2009)
an organization that is neither a federally recognized Indian tribe nor a local governmental body does not qualify for standing; LBP-09-13, 70 NRC 168 (2009)
general environmental and policy interests are insufficient for organizational standing; LBP-09-20, 70 NRC 565 (2009)
injury-in-fact to establish standing requires more than a general interest in preserving of the environment; LBP-09-28, 70 NRC 1019 (2009)
no obvious potential for offsite consequences sufficient to establish organizational standing was shown even though the organization's office was a mere 3 miles from the facility; LBP-09-28, 70 NRC 1019 (2009)
organizations seeking to challenge regulations of a government agency failed to demonstrate standing where they did not demonstrate a concrete application of the regulations that threatened imminent harm to their interests; CLI-09-20, 70 NRC 911 (2009)
petitioner must demonstrate that the action at issue will cause an injury-in-fact to the organization's interests or the interests of its members and that the injury is within the zone of interests protected by the National Environmental Policy Act or the Atomic Energy Act; LBP-09-10, 70 NRC 51 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009)
the injury-in-fact necessary to establish standing must be more than a mere interest in a problem, no matter how longstanding the interest and no matter how qualified the organization is in evaluating the problem; LBP-09-13, 70 NRC 168 (2009)
the organization must, in its own right, satisfy the same requirements of injury, causation, and redressability as an individual; LBP-09-28, 70 NRC 1019 (2009)
STANDING TO INTERVENE, REPRESENTATIONAL
a member must qualify for standing in his or her own right, the interests that the organization seeks to protect must be germane to its own purpose, and neither the petitioner's contentions nor the requested relief must require an individual member to participate in the proceeding; LBP-09-16, 70 NRC 227 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009)
affidavits authorizing organizational representation are to be filed with specific reference to the proceeding in which standing is sought and petitioners given the opportunity to cure such defects in their affidavits; LBP-09-13, 70 NRC 168 (2009)
an organization asserting representational standing must demonstrate that the interest of at least one of its members will be harmed, demonstrate that the member would have standing in his or her own right, identify that member by name and address, and demonstrate that the organization is authorized to

request a hearing on behalf of that member; LBP-09-10, 70 NRC 51 (2009); LBP-09-13, 70 NRC 168 (2009); LBP-09-16, 70 NRC 227 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-20, 70 NRC 565 (2009); LBP-09-21, 70 NRC 581 (2009); LBP-09-26, 70 NRC 939 (2009); LBP-09-28, 70 NRC 1019 (2009)
STATE GOVERNMENT
if applicant chooses to submit a complete and integrated emergency plan at the early site permit stage, applicant also is required to make a good-faith effort to obtain a certification from federal, state, and local governmental agencies with emergency planning responsibilities; LBP-09-19, 70 NRC 433 (2009)
STATE REGULATORY REQUIRMENTS
nothing in the National Environmental Policy Act shall be deemed to authorize any federal agency to review any effluent limitation or other requirement established pursuant to the Clean Water Act or to authorize any such agency to impose any effluent limitation other than those set by EPA or a state agency that has been delegated such authority; LBP-09-25, 70 NRC 867 (2009)
when water quality decisions have been made by a state pursuant to the Clean Water Act and these decisions are raised in NRC licensing proceedings, the NRC is bound to take the Environmental Protection Agency's considered decisions at face value; LBP-09-25, 70 NRC 867 (2009)
STATUTES
contentions challenging applicable statutory requirements or Commission regulations are not admissible in agency adjudications; LBP-09-16, 70 NRC 227 (2009); LBP-09-26, 70 NRC 939 (2009)
STATUTORY CONSTRUCTION
a court should not adopt an interpretation that would render a statutory provision redundant or nonsensical; LBP-09-16, 70 NRC 227 (2009)
a text should be construed so that effect is given to all its provisions, so that no part will be inoperative or superfluous, void or insignificant, and so that one section will not destroy another unless the provision is the result of obvious mistake or error; LBP-09-16, 70 NRC 227 (2009)
each word that Congress used must be given a separate and distinct significance that is consistent with its ordinary meaning; LBP-09-30, 70 NRC 1039 (2009)
it is a fundamental principle that the meaning of a word cannot be determined in isolation, but must be drawn from the context in which it is used; LBP-09-15, 70 NRC 198 (2009)
not only the bare meaning of the word but also its placement and purpose in the statutory scheme are considered; LBP-09-15, 70 NRC 198 (2009)
since most words admit of different shades of meaning, susceptible of being expanded or abridged to conform to the sense in which they are used, the presumption that identical words in a statute always have identical meaning readily yields to the controlling force of the circumstance that the words, though in the same act, are found in such dissimilar connections as to warrant the conclusion that they were employed in the different parts of the act with different intent; LBP-09-30, 70 NRC 1039 (2009)
the most natural way to read a provision that sets forth a general obligation followed by a set of specific requirements is that the specific requirements provide the details necessary to fulfilling the general obligation; LBP-09-15, 70 NRC 198 (2009)
STAY
a court inclined to apply collateral estoppel based on a judgment that is subject to appeal may want to avoid the question by staying the case pending the appeal; LBP-09-24, 70 NRC 676 (2009)
STAY OF EFFECTIVENESS
a party seeking a stay must show that it faces imminent, irreparable harm that is both certain and great; CLI-09-23, 70 NRC 935 (2009)
in deciding whether to grant a stay, the Commission considers whether the moving party has made a strong showing that it is likely to prevail on the merits, whether the party will be irreparably injured unless a stay is granted, whether the granting of a stay would harm the other parties, and where the public interest lies; CLI-09-23, 70 NRC 935 (2009)
party seeking a stay did not show an overwhelming probability of success on the merits of its appeal sufficient to overcome its lack of showing of irreparable harm; CLI-09-23, 70 NRC 935 (2009)
the possibility that the prevailing party would use the board's order in his favor to persuade a District Court to reconsider part of the penalty imposed on him in a parallel criminal proceeding did not constitute immediate, irreparable harm to the NRC Staff; CLI-09-23, 70 NRC 935 (2009)

whether the party seeking a stay faces potentially irreparable harm is the most important factor considered in the Commission's determination whether to grant a stay; CLI-09-23, 70 NRC 935 (2009)
SUBPART G PROCEDURES
cross-examination occurs virtually automatically, subject to normal judicial management and the requirement to file a cross-examination plan; LBP-09-10, 70 NRC 51 (2009)
these procedures focus on issues where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness; LBP-09-22, 70 NRC 640 (2009)
SUBPART G PROCEEDINGS
each expert witness is required to create, sign, and submit a written expert report; LBP-09-30, 70 NRC 1039 (2009)
SUBPART L PROCEDURES
a board may ask witnesses to appear in person and answer questions; LBP-09-22, 70 NRC 640 (2009)
a party seeking to conduct cross-examination must file a written motion and obtain leave from the board; LBP-09-10, 70 NRC 51 (2009)
boards may allow parties to conduct cross-examination in Subpart L proceedings; LBP-09-22, 70 NRC 640 (2009)
NRC Staff must produce a hearing file and make it available to all parties; LBP-09-22, 70 NRC 640 (2009)
SUBPART L PROCEEDINGS
each witness is not required to generate an analysis, but rather must disclose the analysis or other authority upon which the witness bases his or her opinion; LBP-09-30, 70 NRC 1039 (2009)
if the duty to make disclosures applied only to parties who have claims and contentions, it would create an unintended and invidious asymmetry in mandatory disclosures, which are the only form of discovery available in Subpart L proceedings; LBP-09-30, 70 NRC 1039 (2009)
SUMMARY DISPOSITION
a motion must be granted if the filings in the proceeding together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-09-15, 70 NRC 198 (2009)
an answer supporting or opposing a motion for summary disposition or other dispositive motion shall be filed within 20 days after service of the motion; LBP-09-22, 70 NRC 640 (2009)
applicant may challenge an expert opinion in the disclosure stage, via a motion for summary disposition, if it can show that there is no genuine issue as to any material fact and that it is entitled to a decision as a matter of law; LBP-09-30, 70 NRC 1039 (2009)
if it appears from the affidavits of the opposing party that the opposing party cannot, for reasons stated, present by affidavit facts essential to justify the party's opposition, the board may refuse the application for summary disposition or may order a continuance as may be necessary or just; LBP-09-22, 70 NRC 640 (2009)
in an evidentiary hearing, the board may weigh competing evidence and expert opinion and may resolve/decide factual disputes, whereas this is not possible when ruling on motions for summary disposition, which are restricted to situations where there is no genuine issue as to any material fact; LBP-09-22, 70 NRC 640 (2009)
motions may be filed 20 days after the occurrence or circumstance from which the motion arises, rather than the 10-day time frame, provided that the moving party commences sincere efforts to contact and consult all other parties within 10 days of the occurrence or circumstance, and the accompanying certification so states; LBP-09-22, 70 NRC 640 (2009)
representations of movant are described; LBP-09-22, 70 NRC 640 (2009)
the contention admissibility threshold is less than is required at the summary disposition stage; LBP-09-26, 70 NRC 939 (2009)
the licensing board shall not entertain motions for summary disposition unless the board finds that such motions, if granted, are likely to expedite the proceeding; CLI-09-15, 70 NRC 1 (2009); LBP-09-22, 70 NRC 640 (2009)
SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT
the fact that an Integrated Resource Plan revision process has been instituted does not support a claim that the final SEIS is inadequate because of its reliance on earlier studies; LBP-09-26, 70 NRC 939 (2009)

TERMINATION OF LICENSE
decommissioning is not complete, and an operating license cannot be terminated, in effect, until all spent fuel and high-level waste has been removed from the site; LBP-09-17, 70 NRC 311 (2009)
when a nuclear power plant ceases operations, the owner must apply for a license to terminate, which cannot be granted until the NRC is satisfied that the plant has been properly dismantled and decommissioned so that residual radiation meets established rules, and that no spent fuel or high-level wastes would be onsite; LBP-09-21, 70 NRC 581 (2009)
TERMINATION OF PROCEEDING
dismissal of one contention on mootness grounds would not terminate a case where the board had expressly retained jurisdiction to decide whether to admit another contention; LBP-09-27, 70 NRC 992 (2009)
if a previously terminated contested hearing is subsequently renoticed, a new licensing board would need to be established to preside over the renoticed litigation; LBP-09-23, 70 NRC 659 (2009)
when an adjudicatory proceeding has been terminated before a licensing board pursuant to a settlement agreement, the board loses its jurisdiction over, and thus its authority to act with respect to, that licensing action; LBP-09-23, 70 NRC 659 (2009)
TERRORISM
for licensing decisions involving facilities located within the jurisdictional boundaries of the U.S. Court of Appeals for the Ninth Circuit, the NRC Staff will consider, as part of its NEPA analysis, the potential environmental consequences, if any, of a terrorist attack on the proposed facility to occur; CLI-09-15, 70 NRC 1 (2009)
licensing boards are required to apply the Commission's directive that outside the Ninth Circuit, NEPA does not require the evaluation of the impact of terrorist attacks by aircraft or other means; LBP-09-10, 70 NRC 51 (2009); LBP-09-18, 70 NRC 385 (2009); LBP-09-17, 70 NRC 311 (2009)
NEPA does not require applicants or licensees to consider terrorist attacks as part of their environmental reviews; LBP-09-26, 70 NRC 939 (2009)
under NEPA the Commission looks to the reasonably foreseeable impacts of simply licensing the facility, not the reasonably foreseeable effects of a successful terrorist attack; LBP-09-26, 70 NRC 939 (2009)
TESTIMONY
in a Subpart L evidentiary hearing, the board may ask witnesses to appear in person and answer questions; LBP-09-22, 70 NRC 640 (2009)
rebuttal testimony shall be under oath or by affidavit so that it is suitable for being received into evidence directly, in exhibit form; LBP-09-22, 70 NRC 640 (2009)
TOTAL EFFECTIVE DOSE EQUIVALENT
individuals located at the boundary of the exclusion area cannot be exposed to more than 25 rem total effective dose equivalent in any 2-hour period, and any individual located at the outer boundary of the low population zone cannot be exposed to more than 25 rem TEDE during the entire period of any radioactive release; LBP-09-19, 70 NRC 433 (2009)
TRANSFER OF OWNERSHIP
if, at some point in the future, applicant were to decide to change the ownership structure and to enter into a joint venture with another entity, its license would have to be amended to reflect this change; LBP-09-18, 70 NRC 385 (2009)
TREATIES
Congress's plenary power with respect to Native Americans entitles it to abrogate treaties with Native American nations; LBP-09-13, 70 NRC 168 (2009)
the United States is no longer bound by the terms of the 1868 Fort Laramie Treaty; LBP-09-13, 70 NRC 168 (2009)
TRUST RELATIONSHIP DOCTRINE
federal agencies are required to take actions or refrain from taking actions in fulfillment of Congress's duty to protect the Indians; LBP-09-13, 70 NRC 168 (2009)
TURBINES
licensee's report to NRC of a manual reactor trip due to main turbine high vibrations included the details of the event, provided an analysis of the event, including estimated change in conditional core damage probability, and provided a list of corrective actions; DD-09-2, 70 NRC 899 (2009)

UNCONTESTED LICENSE APPLICATIONS
for uranium enrichment facilities, licensing boards must determine whether NRC Staff's review of the application has been adequate to support the finding to be made by the Director of the Office of Nuclear Materials Safety and Safeguards; CLI-09-15, 70 NRC 1 (2009)
in uranium enrichment facility proceedings, licensing boards must determine whether the review conducted by the NRC Staff pursuant to 10 C.F.R. Part 51 has been adequate; CLI-09-15, 70 NRC 1 (2009)
licensing boards do not conduct a *de novo* review of the application; CLI-09-15, 70 NRC 1 (2009)
licensing boards must determine whether the applicant and record of the proceeding contain sufficient information to support license issuance; CLI-09-15, 70 NRC 1 (2009)
URANIUM
See Depleted Uranium
URANIUM ENRICHMENT FACILITIES
an affirmative finding by the Commission that issuance of a license for a uranium enrichment facility will not be inimical to the common defense and security is required; CLI-09-15, 70 NRC 1 (2009)
an enrichment facility is not a production or utilization facility and, therefore, NRC does not have antitrust responsibilities for it; CLI-09-15, 70 NRC 1 (2009)
an environmental report and an environmental impact statement for a materials license must include a statement on the alternatives to the proposed action, including a discussion of the no-action alternative; CLI-09-15, 70 NRC 1 (2009)
before a facility can be licensed, a hearing is required to be held on that license application; CLI-09-15, 70 NRC 1 (2009)
creditor regulations may be augmented by license conditions as necessary to allow ownership arrangements, such as sale and leaseback, provided it can be found that such arrangements are not inimical to the common defense and security of the United States; CLI-09-15, 70 NRC 1 (2009)
depleted uranium from an enrichment facility is appropriately classified as a low-level radioactive waste; CLI-09-15, 70 NRC 1 (2009)
URANIUM ENRICHMENT FACILITY PROCEEDINGS
a licensing board must determine in its initial decision whether the requirements of section 102(2)(A), (C), and (E) of the National Environmental Policy Act have been complied with; CLI-09-15, 70 NRC 1 (2009)
any person who does not wish, or is not qualified, to become a party to the proceeding may request permission to make a limited appearance pursuant to the provisions of 10 C.F.R. 2.315(a); CLI-09-15, 70 NRC 1 (2009)
in a contested uranium enrichment facility proceeding, the licensing board shall make findings of fact and conclusions of law on admitted contentions; CLI-09-15, 70 NRC 1 (2009)
in uncontested proceedings, licensing boards do not conduct a *de novo* review of the application; CLI-09-15, 70 NRC 1 (2009)
in uncontested proceedings, licensing boards must determine whether NRC Staff's review of the application has been adequate to support the finding to be made by the Director of the Office of Nuclear Materials Safety and Safeguards; CLI-09-15, 70 NRC 1 (2009)
in uncontested proceedings, licensing boards must determine whether the applicant and record of the proceeding contain sufficient information to support license issuance; CLI-09-15, 70 NRC 1 (2009)
in uncontested proceedings, licensing boards must determine whether the review conducted by the NRC Staff pursuant to 10 C.F.R. Part 51 has been adequate; CLI-09-15, 70 NRC 1 (2009)
matters of fact and law to be considered in a uranium enrichment facility licensing proceeding are whether the application satisfies the applicable standards in 10 C.F.R. Parts 30, 40, and 70, and whether the requirements of the National Environmental Policy Act and the NRC's implementing regulations in 10 C.F.R. Part 51 have been met; CLI-09-15, 70 NRC 1 (2009)
the Commission retains its inherent supervisory authority over the proceeding to provide additional guidance to the licensing board and participants and to resolve any matter in controversy itself; CLI-09-15, 70 NRC 1 (2009)
the licensing board shall not entertain motions for summary disposition unless the board finds that such motions, if granted, are likely to expedite the proceeding; CLI-09-15, 70 NRC 1 (2009)

to avoid unnecessary delays in the proceeding, the licensing board should not routinely grant requests for extensions of time and should manage the schedule such that the overall hearing process is completed within 28-1/2 months; CLI-09-15, 70 NRC 1 (2009)
URANIUM FUEL CYCLE
both temporary and permanently committed land resources are specified as part of the uranium fuel cycle; LBP-09-21, 70 NRC 581 (2009)
carbon dioxide emissions are to be listed as zero; LBP-09-21, 70 NRC 581 (2009)
each environmental report prepared for the combined license stage must take Table S-3 as the basis for evaluating the contribution of the environmental effects of the fuel cycle to the environmental costs of licensing the reactor; CLI-09-21, 70 NRC 927 (2009)
USEC PRIVATIZATION ACT
transfer of depleted tails to DOE for disposal constitutes a plausible strategy for disposition; CLI-09-15, 70 NRC 1 (2009)
VIOLATIONS
a licensee employee who contributes to submission of information to the NRC that the employee knows is not complete or accurate in some material respect places the licensee in violation; LBP-09-24, 70 NRC 676 (2009)
an employee of a licensee may not deliberately submit to the NRC information that he knows to be incomplete or inaccurate in some respect material to the NRC; LBP-09-24, 70 NRC 676 (2009)
careless disregard in the execution of one's duties does not amount to deliberate misconduct or a violation; LBP-09-24, 70 NRC 676 (2009)
deliberate misconduct refers to an intentional act or omission that the person knows would cause a licensee to be in violation of any rule; LBP-09-24, 70 NRC 676 (2009)
information submitted to an NRC inspector that was not complete and accurate in all material respects is a violation; LBP-09-12, 70 NRC 159 (2009)
VOLCANOES
contention asserting that DOE's description of its expert elicitation relating to a probabilistic volcanic hazard analysis update fails to comply with this section or the NRC guidance document that DOE formally committed to follow, is admissible; LBP-09-29, 70 NRC 1028 (2009)
WAIVER
a party's failure to advance a collateral estoppel argument does not perforce trigger the waiver principle, thus precluding a tribunal from applying collateral estoppel; LBP-09-24, 70 NRC 676 (2009)
WAIVER OF RULE
absent a waiver, a contention that constitutes a collateral attack on NRC regulations is inadmissible; CLI-09-20, 70 NRC 911 (2009)
in addressing a petition for a rule waiver, the board, in lieu of holding oral argument to obtain answers to its questions, poses questions for NRC Staff about the waiver petition; LBP-09-29, 70 NRC 1028 (2009)
licensing boards may not admit any contention that challenges a Commission rule or regulation, unless a waiver is requested under 10 C.F.R. 2.335(b); LBP-09-10, 70 NRC 51 (2009); LBP-09-21, 70 NRC 581 (2009)
participants may not submit paper copies of their filings unless they seek a waiver; CLI-09-15, 70 NRC 1 (2009)
to challenge a regulation, petitioner must submit a supporting affidavit setting forth with particularity the special circumstances that justify the waiver or exception requested; LBP-09-18, 70 NRC 385 (2009)
WASTE CONFIDENCE RULE
contentions challenging the Waste Confidence Rule are inadmissible; LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
contentions that concern greater-than-Class-C waste, seek to require a change to the decommissioning cost estimate, or constitute a challenge to Table S-3 of 10 C.F.R. 51.51 are inadmissible; LBP-09-16, 70 NRC 227 (2009)
if new information becomes available in the course of waste confidence rulemaking proceedings that contravenes a combined license application, petitioner may file a motion to admit a new or amended contention; LBP-09-18, 70 NRC 385 (2009)

NRC has made a generic determination that there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century with sufficient capacity for any reactor to dispose of the high-level waste that it generates; LBP-09-10, 70 NRC 51 (2009); LBP-09-18, 70 NRC 385 (2009)
regulations cover the storage of spent fuel in new or existing facilities; LBP-09-10, 70 NRC 51 (2009); LBP-09-17, 70 NRC 311 (2009); LBP-09-18, 70 NRC 385 (2009)
the environmental impacts related to storage of spent fuel under Part 72 have been generically evaluated under two previous rulemakings and the Commission's waste confidence proceedings, and thus need not be reassessed; LBP-09-21, 70 NRC 581 (2009)
WASTE DISPOSAL
See Radioactive Waste Disposal; Radioactive Waste Management
WATER
contention that concerns onsite and offsite impacts of active and passive dewatering associated with the proposed project satisfies the admissibility criteria; LBP-09-10, 70 NRC 51 (2009)
WATER POLLUTION
a general assessment of radioactivity within waters of the Great Lakes Basin does not address specific issues with regard to the proposed reactor, and it does not provide any support for the petitioners' assertions needed to advance an admissible contention; LBP-09-16, 70 NRC 227 (2009)
the environmental baseline reflects the effects of all currently existing pollution sources in the relevant watershed, including contributions of all nuclear power plants, and petitioners failed to provide information indicating that this aggregate analysis was insufficient under NEPA; LBP-09-16, 70 NRC 227 (2009)
See also Groundwater Contamination
WATER QUALITY
abdicating water quality effects entirely to other agencies' certifications subverts the special purpose of NEPA; LBP-09-16, 70 NRC 227 (2009)
although applicant's description of existing water quality conditions did not separately evaluate the contributions of specific sources, it nonetheless formed an environmental baseline against which to measure the cumulative impact of the proposed new reactor; LBP-09-16, 70 NRC 227 (2009)
nothing in the National Environmental Policy Act shall be deemed to authorize any federal agency to review any effluent limitation or other requirement established pursuant to the Clean Water Act or to authorize any such agency to impose any effluent limitation other than those set by EPA or a state agency that has been delegated such authority; LBP-09-25, 70 NRC 867 (2009)
petitioner demonstrates a genuine dispute with the applicant on the adequacy of the water quality analysis; LBP-09-16, 70 NRC 227 (2009)
the reach of 33 U.S.C. § 1371(c)(2) is confined to navigable waters, which do not even encompass all surface waters; LBP-09-25, 70 NRC 867 (2009)
when decisions have been made by a state pursuant to the Clean Water Act and these decisions are raised in NRC licensing proceedings, the NRC is bound to take the Environmental Protection Agency's considered decisions at face value; LBP-09-25, 70 NRC 867 (2009)
WETLANDS
the fact that disposal of dredged or fill material in wetlands is regulated by EPA and the U.S. Army Corps of Engineers does not render a contention inadmissible; LBP-09-10, 70 NRC 51 (2009)
WITHDRAWAL
when a hearing notice has been issued, withdrawal of an application would be subject to such terms as the presiding officer may prescribe; LBP-09-23, 70 NRC 659 (2009)
when applicant decides it no longer wishes to have the agency evaluate its application, the usual approach is for the applicant to request that the agency permit it to withdraw its licensing request; LBP-09-23, 70 NRC 659 (2009)
when applicant withdraws an application, all agency consideration of the matter ends, including any Staff technical review and any adjudicatory proceeding, either as to contested matters raised by any intervenors or any uncontested/mandatory hearing that might be required; LBP-09-23, 70 NRC 659 (2009)

WITNESSES
in a Subpart L evidentiary hearing, the board may ask witnesses to appear in person and answer questions; LBP-09-22, 70 NRC 640 (2009)
selection of hearing procedures for contentions at the outset of a proceeding is not immutable, because the availability of Subpart G procedures depends critically on the credibility of eyewitnesses, and the identity of such witnesses may not be known until after the contentions are admitted; LBP-09-10, 70 NRC 51 (2009)
Subpart G procedures focus on issues where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness; LBP-09-22, 70 NRC 640 (2009)
WITNESSES, EXPERT
although an expert may be misinterpreting data submitted by applicant, this is not considered at the contention admissibility stage; LBP-09-27, 70 NRC 992 (2009)
an expert opinion that merely states a conclusion (e.g., the application is deficient, inadequate, or wrong) without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; LBP-09-16, 70 NRC 227 (2009)
applicant may challenge an expert opinion in the disclosure stage, via a motion for summary disposition, if it can show that there is no genuine issue as to any material fact and that it is entitled to a decision as a matter of law; LBP-09-30, 70 NRC 1039 (2009)
disclosure of the name and telephone number of an expert witness, if this information is not known to the party, is not required; LBP-09-30, 70 NRC 1039 (2009)
each witness is not required to generate an analysis, but rather must disclose the analysis or other authority upon which the witness bases his or her opinion; LBP-09-30, 70 NRC 1039 (2009)
experience with and information about past direct and indirect effects of individual past actions may be useful in illuminating or predicting the direct and indirect effects of a proposed action; LBP-09-16, 70 NRC 227 (2009)
for Subpart G proceedings, each expert witness is required to create, sign, and submit a written expert report; LBP-09-30, 70 NRC 1039 (2009)
if an expert witness has a copy of the analysis or other authority upon which his or her opinion is based, and it is extant and reasonably available to that witness and/or the party, then the mandatory disclosure should include that analysis or other authority; LBP-09-30, 70 NRC 1039 (2009)
if an expert witness is subsequently selected, or any analysis or other authority is subsequently amended or newly developed, then this information must be promptly disclosed; LBP-09-30, 70 NRC 1039 (2009)
mandatory disclosures by parties include the disclosure of the name of any person, including any expert, upon whose opinion the party bases its claims and contentions and may rely upon as a witness, and a copy of the analysis or other authority upon which that person bases his or her opinion; LBP-09-22, 70 NRC 640 (2009)

FACILITY INDEX

BELL BEND NUCLEAR POWER PLANT; Docket No. 52-039-COL
COMBINED LICENSE; August 10, 2009; MEMORANDUM AND ORDER (Ruling on Petitions to Intervene and Requests for Hearing); LBP-09-18, 70 NRC 385 (2009)
BELLEFONTE NUCLEAR POWER PLANT, Units 3 and 4; Docket Nos. 52-014-COL, 52-015-COL
COMBINED LICENSE; November 3, 2009; MEMORANDUM AND ORDER; CLI-09-21, 70 NRC 927 (2009)
CALLAWAY PLANT, Unit 2; Docket No. 52-037-COL
COMBINED LICENSE; August 28, 2009; MEMORANDUM AND ORDER (Approving Settlement Agreement and Terminating Contested Adjudicatory Proceeding); LBP-09-23, 70 NRC 659 (2009)
CALVERT CLIFFS NUCLEAR POWER PLANT, Unit 3; Docket No. 52-016-COL
COMBINED LICENSE; July 30, 2009; MEMORANDUM AND ORDER (Granting Motion for Summary Disposition of Contention 2); LBP-09-15, 70 NRC 198 (2009)
COMBINED LICENSE; October 13, 2009; MEMORANDUM AND ORDER; CLI-09-20, 70 NRC 911 (2009)
COMANCHE PEAK NUCLEAR POWER PLANT, Units 3 and 4; Docket Nos. 52-034-COL, 52-035-COL
COMBINED LICENSE; August 6, 2009; MEMORANDUM AND ORDER (Ruling on Standing and Contentions of Petitioners, and Other Pending Matters); LBP-09-17, 70 NRC 311 (2009)
DONALD C. COOK NUCLEAR PLANT, Unit 1; Docket No. 50-315
REQUEST FOR ACTION; September 4, 2009; DIRECTOR'S DECISION UNDER 10 C.F.R. § 2.206; DD-09-2, 70 NRC 899 (2009)
EAGLE ROCK ENRICHMENT FACILITY; Docket No. 70-7015
MATERIALS LICENSE; July 23, 2009; ORDER (Notice of Receipt of Application for License; Notice of Consideration of Issuance of License; Notice of Hearing and Commission Order; and Order Imposing Procedures for Access to Sensitive Unclassified Nonsafeguards Information and Safeguards Information for Contention Preparation); CLI-09-15, 70 NRC 1 (2009)
FERMI NUCLEAR POWER PLANT, Unit 3; Docket No. 52-033-COL
COMBINED LICENSE; July 31, 2009; MEMORANDUM AND ORDER (Ruling on Hearing Requests); LBP-09-16, 70 NRC 227 (2009)
COMBINED LICENSE; November 17, 2009; MEMORANDUM AND ORDER; CLI-09-22, 70 NRC 932 (2009)
FERMI POWER PLANT INDEPENDENT SPENT FUEL STORAGE INSTALLATION; Docket No. 72-71-EA
LICENSE MODIFICATION; August 21, 2009; MEMORANDUM AND ORDER (Ruling on Standing and Contention Admissibility); LBP-09-20, 70 NRC 565 (2009)
HIGH-LEVEL WASTE REPOSITORY; Docket No. 63-001-HLW
CONSTRUCTION AUTHORIZATION; December 9, 2009; MEMORANDUM AND ORDER (Addressing Contentions Filed After Initial Petitions); LBP-09-29, 70 NRC 1028 (2009)
IRIGARAY AND CHRISTENSEN RANCH FACILITIES; Docket No. 40-08502-MLR
MATERIALS LICENSE RENEWAL; July 23, 2009; MEMORANDUM AND ORDER (Ruling on Petition for Review and Request for Hearing); LBP-09-13, 70 NRC 168 (2009)
LEVY COUNTY NUCLEAR POWER PLANT, Units 1 and 2; Docket Nos. 52-029-COL, 52-030-COL
COMBINED LICENSE; July 8, 2009; MEMORANDUM AND ORDER (Rulings on Standing, Contention Admissibility, Motion to File New Contention, and Selection of Hearing Procedure); LBP-09-10, 70 NRC 51 (2009)

FACILITY INDEX

COMBINED LICENSE; August 27, 2009; INITIAL SCHEDULING ORDER; LBP-09-22, 70 NRC 640 (2009)

COMBINED LICENSE; December 29, 2009; ORDER (Denying Motion to Compel Disclosure of Bases for Expert Opinion); LBP-09-30, 70 NRC 1039 (2009)

NORTH ANNA POWER STATION, Unit 3; Docket No. 52-017-COL

COMBINED LICENSE; November 25, 2009; MEMORANDUM AND ORDER (Admitting Contention 10 in Part); LBP-09-27, 70 NRC 992 (2009)

SOUTH TEXAS PROJECT, Units 3 and 4; Docket Nos. 52-012-COL, 52-013-COL

COMBINED LICENSE; August 27, 2009; MEMORANDUM AND ORDER (Ruling on Standing and Admissibility of Certain Contentions); LBP-09-21, 70 NRC 581 (2009)

COMBINED LICENSE; September 23, 2009; MEMORANDUM AND ORDER; CLI-09-18, 70 NRC 859 (2009)

COMBINED LICENSE; September 29, 2009; MEMORANDUM AND ORDER (Ruling on Admissibility of Contentions 8-16); LBP-09-25, 70 NRC 867 (2009)

VERMONT YANKEE NUCLEAR POWER STATION; Docket No. 50-271-LR

LICENSE RENEWAL; July 8, 2009; FULL INITIAL DECISION (Denying NEC's Motion to File a New Contention); LBP-09-9, 70 NRC 41 (2009)

VOGTLE ELECTRIC GENERATING PLANT, Units 3 and 4; Docket Nos. 52-025-COL, 52-026-COL

COMBINED LICENSE; July 31, 2009; MEMORANDUM AND ORDER; CLI-09-16, 70 NRC 33 (2009)

WATTS BAR NUCLEAR PLANT, Unit 2; Docket No. 50-391-OL

OPERATING LICENSE; November 19, 2009; MEMORANDUM AND ORDER (Granting Petition to Intervene); LBP-09-26, 70 NRC 939 (2009)

WILLIAM STATES LEE III NUCLEAR STATION, Units 1 and 2; Docket Nos. 52-018-COL, 52-019-COL

COMBINED LICENSE; November 3, 2009; MEMORANDUM AND ORDER; CLI-09-21, 70 NRC 927 (2009)