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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 No. 52-029-COL, 52-030-COL
PROGRESS ENERGY FLORIDA, INC.	ASLBP No. 09-879-04-COL-BD01
(Combined License Application for Levy County Nuclear Power Plant, Units 1 and 2)	July 8, 2009

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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

[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).

concludes that, for the time being, each of the admitted contentions will be heard under the procedures set forth in the NRC regulations at 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 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 at 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]

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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

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]

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

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 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 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 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).

[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).

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 Mgmt. 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) the injury can fairly be traced to the challenged action; and (3) the injury is likely to be redressed by a favorable decision." Yankee Atomic Elec. 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 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 Inst. of Tech. (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 fifty 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 Elec. 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.

[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").

1. GPF

GPF identified eight members who live within fifty 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 this proceeding.[11] Therefore, GPF meets the requirements for representational standing.

2. EPF

EPF identified four members who live within fifty 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 fifty 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.

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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. 6, 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

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:

(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: 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 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).

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).

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 Generating Station), CLI-09-07, 69 NRC __, __ (slip op. at 31) (Apr. 1, 2009). The rules on contention admissibility are "strict by design."[14] Further, absent a waiver, 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. Dominion Nuclear Conn., 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

[14] See, e.g., Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003); Dominion Nuclear Conn., 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).

[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

> 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 "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).

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as AP1000 Rev. 16 has not been certified by the NRC, the design control documents submitted in the Rev. 16 application are "proposed DCD."

[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.

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 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.

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

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.

[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 Elec. & Gas (Virgil C. Summer, Units 2 and 3), LBP-09-02, 69 NRC __, __ (slip op. at 9) (Feb. 18, 2009) (Summer)).

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 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 petitioners 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 Univ. 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, L.L.C. (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"), nor 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]

[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 1, 4 (2008); Progress Energy Carolinas (Shearon Harris Nuclear Power Plant, Units 2 and 3), CLI-09-08, 69 NRC __, __ (slip op. at 8, 12) (May 18, 2009); Southern Nuclear Operating Co. (Vogtle Electric Generating Plant, Units 3 and 4), CLI-09-13, 69 NRC __, __ (slip op. at 3) (June 25, 2009).

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).

C. Contention 3 (C3)

1. Statement of C3

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 at 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,

[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. Id. at 31.

ratepayer impacts are outside the scope of the COL proceeding because Florida, not the NRC, is charged with protecting rate-payers' interests. Id. (citing Pacific Gas & Elec. 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 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

[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 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.

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.

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. Id. 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 rate-payers. 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 (40 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

[23] Louisiana Energy Servs., LP (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 rate-payers to pay for LNP, thereby further ensuring PEF's financial qualifications. Tr. at 160-61.

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 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 (C9-11), below.[25] Petition at 65. Finally, Petitioners raise a sub-issue 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.

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

[26] The Part 230 sub-issue 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

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 flood plains. 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.

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, flood plains 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.

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discuss C4 we use the phrase "environmental impact" to include "adverse direct, indirect, and cumulative environmental impact."

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, flood plains, 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

[28] See, e.g., Crow Butte Resources, Inc. (License Renewal for In Situ Leach Facility, Crawford, NE), CLI-09-09, 69 NRC __, __ (slip op. at 26) (May 18, 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 & Power Co. (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 548 (1980) (citing Mississippi Power & Light Co. (Grand Gulf Nuclear Stations, 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. Dep't of Energy (High Level Waste Repository), CLI-09-14, 69 NRC __, __ (slip op. at 13) ("[O]ur rules permit contentions that raise issues of law as well as contentions that raise issues of fact.").

Board merely decides whether the contentions meet the six pleading requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).

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

[31] See, e.g., Save the Bay, Inc. v. U.S. Corps of Eng'rs, 610 F.2d 322, 326 (5th Cir. 1980); Sierra Club v. EPA, 995 F.2d 1478, 1485 (9th Cir. 1993); Natural Res. Def. Council v. EPA, 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).

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 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

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

[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.

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 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.

[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).

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 LNP within flood plains," Petition at 35, it immediately acknowledges that the ER indeed addresses the construction of the LNP in the flood plain. 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 ft, 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 (off-site) 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 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, flood plains, special aquatic sites and waters in the area. Id. at 42-43; Bacchus Declaration at 7-8. Dr. Bacchus, who holds a PhD 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.

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

Subpart C4E alleges that the ER failed to address the on-site and off-site 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 on-site 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" off-site wetlands, flood plains, 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 off-site 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. 40 C.F.R. Part 230 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 non-mechanical 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 are "normal," whereas the inland location of the LNP tower (albeit using salt water 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

[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.

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 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), that 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 § 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 (10 C.F.R. § 1502.14(c)), and the case law (Natural Res. Def. Council 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, 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. 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 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]

[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 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,

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 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 PhD in hydroecology and has studied and written concerning the hydroecology of Northern Florida, where the LNP project is proposed to be 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.

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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.

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 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.

[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.

Subparts C4D (dewatering portion), C4E, C4F and C4G. 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., non-mechanical 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. 10 C.F.R. § 51.45 requires the ER to consider all significant environmental impacts. 10 C.F.R. § 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

[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.

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 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

[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.

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 ten 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(1)(a)(vi). The "fission product release" assumed for the FSAR is based on a major accident [assumed] to result in the 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

[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 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).

mitigation analysis (SAMA), and a severe accident mitigation design alternatives (SAMDA) analysis.[44]

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

[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).

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

A SAMA analysis thus has the dual purpose of prevention and mitigation, locating it both within 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.

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 ten 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 Sys. Energy Res., Inc. (Early Site Permit for Grand Gulf), 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 ten 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

[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.

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 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 ten 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 ten 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 ten 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 & 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 § 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. § 197.

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

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 re-opening of the WCR should be raised in the rule-making 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 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. 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

[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 __, __ (slip op. at 39-40) (Oct. 20, 2008); Lee, LBP-08-17, 68 NRC at 431; Tennessee Valley Auth. (Bellefonte Nuclear Power Plant Units 3 and 4), LBP-08-16, 68 NRC 361, 416 (2008); Virginia Elec. & Power Co. (North Anna 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.

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, the Commission has recently held that a Licensing Board may not admit a contention that directly or indirectly challenges Table S-3. Tennessee Valley Auth. (Bellefonte Nuclear Power Plant, Units 3 and 4), CLI-09-03, 69 NRC __, __ (slip op. at 9) (Feb. 17, 2009). This Board is bound by that ruling, and therefore will not address Petitioners' issues with Table S-3 because it is 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).

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[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 ___ (slip op. at 39 fn.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, 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.

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 re-opening 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.

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-07-08, 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 terrorist 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 Dep't of Envtl. 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 & 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

[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.").

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 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. § 52.77(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,

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

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 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) off-site. Petition at 88. Petitioners concede that some on-site storage is contemplated in the ER, but only for a short time until the trucks arrive to transport it off-site. 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 off-site 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

[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 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 at ¶ 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.

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 on-site 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 §§ 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-09-03, 69 NRC __ (slip op.). 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 __ (slip op.). Id. at 173. PEF asserts that, in both North Anna and in Bellefonte, the licensing boards concluded that the disposal of

[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.

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 on-site 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." Reply at 34 (citing Bellefonte, CLI-09-03, 69 NRC at __ (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 now off-site 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 thirty 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 off-site, and that the proposed DCD for the AP1000 Rev. 17 state, "[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 Related to 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 § 3.5 of the ER ("[s]olid radioactive wastes are collected and packaged for temporary storage, shipment, and offsite disposal") assumes prompt shipment off-site. 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 Standard Review Plan for Review of Safety Analysis Reports for Nuclear Power Plants, NUREG-0800 at 11.4025 (Rev. 3 Mar. 2007)). PEF argues that C8 (which deals with long term storage of LLW on-site) must fail because it fails to challenge the portions of the FSAR that discuss on-site handling, solidification, and dewatering of LLW. Id. at 177. PEF challenges Petitioners' assumption that no off-site 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 & 8

The Board concludes that C7 and C8, while generally inadmissible, contain a narrow issue concerning on-site 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]

[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.

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 on-site 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-09-03, 69 NRC at __ (slip op. at 5-6). Petitioners conceded this point at oral argument. Tr. at 308. For the foregoing reasons, we 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-09-03, 69 NRC at __ (slip op. at 9). 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 __ (slip op. at 8 n.30). Accordingly, we may not admit a contention that challenges this conclusion.

(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 Unit 3), LBP-09-04, 69 NRC __, __ (slip op. at 63); North Anna, LBP-08-15, 68 NRC at 316-17; Bellefonte, LBP-08-16, 68 NRC at 414.

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 __ (slip op. at 11 n.42). The Commission further concluded that "[t]he questions of the safety and environmental impacts of on-site low-level waste storage are, in our view, largely site-specific and design-specific, and appropriately decided in an individual licensing proceeding, provided that litigants proffer properly framed and supported contentions." Id. at __ (slip op. at 11). 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 __ (slip op. at 11-12) (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 __ (slip op. at 6 (where the North Anna Board admitted the FSAR LLW contention on other grounds), 8 (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 __ (slip op. at 8-9) (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 on-site 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 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).

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

We find the requirements of Sections 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 on-site 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). 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 two 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 two 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 two-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 §§ 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 on-site prior to disposal, it is usually in the context of processing and short-term storage prior to shipment to an unnamed,

off-site disposal facility. Ultimately, the ER fails to describe a plan for storing the LLW on-site for an extended period of time (greater than two years), in the event that shipping off-site 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 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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[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).

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. Dep't of Transp., 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-01-04, 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, LLC (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 146 (2006) (quoting Citizens Against Burlington, Inc. 938

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[61] Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council, 435 U.S. 519, 551 (1978).

[62] Westlands Water District v. U.S. Dep't of Interior, 376 F.3d 853, 868 (9th Cir. 2004); City of Bridgeton v. Fed. Aviation Admin., 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).

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."[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.

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[64] Envtl. Law & Policy Ctr. v. NRC, 470 F.3d 676, 683 (7th Cir. 2006); Simmons v. U.S. Army Corps of Eng'rs, 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.").

4. 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, 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 § 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

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[67] Contention C9 is quoted in full at 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 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.

(DSM) measures, LNP Units 1 and 2 are necessary. Id. at 184-85. PEF stated that, in addition to the DSM discussion in § 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-09-02, 69 NRC at __ (slip op. at 25).

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 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 a statement of his contentions." Id. at 75 (citing Pub. Serv. 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 § 8 of the ER. 10 C.F.R. § 2.309(f)(1)(vi) 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 60 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.

5. 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 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 avoids the need for further transmission line construction, does not increase the burden of water use, does not generate waste, and avoids radiological consequences of potential accidents. Id. at 99-100.

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

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

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 base load power, which is the accepted project purpose. Id. at 194 (citing Summer, LBP-09-02, 69 NRC at __ (slip op. at 23)). PEF asserts that only alternatives that generate equivalent base load 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 timeframe 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. (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801 (2005); 40 C.F.R. § 1502.14(a); Summer, LBP-09-02, 69 NRC at ___ (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.

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 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).

6. 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

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

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 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 . . .

[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.

> 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 re-statement 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.

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 at § 9.2.2.4, wind at § 9.2.2.4, and hydropower at § 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).

7. Contention 4O

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

[73] Contention C4O is quoted in full at 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).

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 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

[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)(v) and (vi) (emphasis added); Crow Butte, CLI-09-09, 69 NRC at __ (slip op. at 26).

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.

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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 multi-year NRC-PEF process. Even PEF acknowledges that Petitioners have the right to file new and amended contentions when PEF amends its application. Tr. at

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 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,

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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.

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' 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

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

[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).

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 §§ 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 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.

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 19-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

[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 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 Elec. 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.

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, affirmed, CLI-07-03, 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 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-06-06, 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

[83] See Bellefonte New Contention Ruling at 7.

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. § 51.15. See Bellefonte, CLI-09-03, 69 NRC at __ (slip op. at 9).

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

[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 at 10 C.F.R. § 2.1400-.1407. These procedures are highly truncated, but may prove appropriate for certain contentions at a later stage.

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 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 (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).

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[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.

[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 § 2.310 states, and is simply not possible (e.g., Subpart L and Subpart N cannot simultaneously govern license renewal proceedings for materials licensees).

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]

[88] 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 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).

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.

IT IS SO ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD[90]

/RA/
Alex S. Karlin, Chairman
ADMINISTRATIVE JUDGE

/RA/
Dr. Anthony J. Baratta
ADMINISTRATIVE JUDGE

/RA/
Dr. William M. Murphy
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 8, 2009

[89] The right to interlocutory appeal 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 any contention, but denies Petitioners the right to immediately appeal the denial of any of the contentions. Thus, PEF can appeal any of the three admitted contentions, but Petitioners cannot appeal (under 10 C.F.R. § 2.311) the denial of the nine contentions. Their appeal of the admitted contentions must "abide the end of the case," i.e., wait approximately two or three years until the Staff issues the FSER and FEIS and the final disposition of the evidentiary hearing on the 3 admitted contentions. Private Fuel Storage, LLC (Independent Spent Fuel Storage Installation), CLI-00-02, 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 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 Nuclear Generating Plant, Units 2 and 3), CLI-09-06, 69 NRC __, __ (slip op. at 3) (Mar. 5, 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 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.

[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.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
PROGRESS ENERGY FLORIDA, INC.	)	Docket Nos. 52-029-COL
	)	and 52-030-COL
(Levy County Nuclear Power Plant Units 1 and 2)	)	
	)	
	)	
(Combined License)	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LB MEMORANDUM AND ORDER (RULINGS ON STANDING, CONTENTION ADMISSIBILITY, MOTION TO FILE NEW CONTENTION, AND SELECTION OF HEARING PROCEDURE) (LBP-09-10) have been served upon the following persons by Electronic Information Exchange.

Office of Commission Appellate Adjudication
U.S. Nuclear Regulatory Commission
Mail Stop: O-16C1
Washington, DC 20555-0001
E-mail: ocaamail@nrc.gov

Office of the Secretary of the Commission
U.S. Nuclear Regulatory Commission
Mail Stop O-16C1
Washington, DC 20555-0001
Hearing Docket
E-mail: hearingdocket@nrc.gov

Atomic Safety and Licensing Board Panel
U.S. Nuclear Regulatory Commission
Mail Stop T-3F23
Washington, DC 20555-0001

Alex S. Karlin, Chair
Administrative Judge
E-mail: ask2@nrc.gov

Anthony J. Baratta
Administrative Judge
E-mail: ajb5@nrc.gov

William M. Murphy
Administrative Judge
E-mail: William.murphy@nrc.gov

Megan Wright, Law Clerk
E-mail: megan.wright@nrc.gov

Pillsbury, Winthrop, Shaw, Pittman, LLP
2300 N. Street, N.W.
Washington, DC 20037-1122
Counsel for Progress Energy Florida, Inc.
John H. O'Neill, Esq.
Robert B. Haemer, Esq.
Ambrea Watts, Esq.
Alison Crane, Esq.
Michael G. Lepre, Esq.
Blake J. Nelson, Esq.
Jason P. Parker, Esq.
Stefanie M. Nelson, Esq.
E-mail:
john.oneill@pillsburylaw.com
robert.haemer@pillsburylaw.com;
ambrea.watts@pillslburylaw.com
alison.crane@pillsburylaw.com
michael.lepre@pillsburylaw.com
blake.nelson@pillsburylaw.com
jason.parker@pillsburylaw.com
stefanie.nelson@pillsburylaw.com

Office of the General Counsel
U.S. Nuclear Regulatory Commission
Mail Stop O-15D21
Washington, DC 20555-0001
Kathryn L. Winsberg, Esq.
Sara Kirkwood, Esq.
Jody Martin, Esq.
Laura Goldin, Esq.
Michael Spencer, Esq.
Joseph Gilman, Paralegal
E-mail:
kathryn.winsberg@nrc.gov
seb2@nrc.gov
jcm5@nrc.gov
laura.goldin@nrc.gov
michael.spencer@nrc.gov
jsg1@nrc.gov

OGC Mail Center : OGCMailCenter@nrc.gov

Nuclear Information & Resource Service
P.O. Box 7586
Asheville, NC 28802
Mary Olson,
NIRS Southeast Regional Coordinator
E-mail: nirs@main.nc.us

Alachua County Green Party, Green Party of Florida
P.O. Box 190
Alachua, FL
Michael Canney, Co-Chair
E-mail: alachuagreen@windstream.net

Nuclear Information Resource Service
6390 Carroll Avenue, #340
Takoma Park, MD 20912
Michael Mariotte, Executive Director
E-mail: nirsnet@nirs.org

Eckert Seamans Cherin & Mellott, LLC
600 Grant Street, 44th Floor
Pittsburg, PA 15219
Counsel for Westinghouse Electric Co., LLC
Barton Z. Cowan, Esq.
E-mail: teribart61@aol.com

Ecology Party of Florida
641 SW 6th Avenue
Ft. Lauderdale, FL 33315
Cara Campbell, Chair
Gary Hecker
[E-filing participants using nirs@main.nc.us]

State of Florida Department of Environmental Protection, Office of Siting
3900 Commonwealth Blvd., MS 35
Tallahassee, FL 32399-3000
Michael Halpin, Program Administrator
Toni L. Sturtevant, Esq.
E-mail: Mike.halpin@dep.state.fl.us
E-mail: toni.sturtevant@dep.state.fl.us

Ecology Party of Florida
641 SW 6th Avenue
Ft. Lauderdale, FL 33315
Michael Canney
Email: alachuagreen@windstrem.net

[Original signed by Evangeline S. Ngbea]
Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 8th day of July 2009