

**NUCLEAR REGULATORY COMMISSION  
ISSUANCES**

**OPINIONS AND DECISIONS OF THE  
NUCLEAR REGULATORY COMMISSION  
WITH SELECTED ORDERS**

July 1, 2007 – December 31, 2007

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## PREFACE

This is the sixty-sixth volume of issuances (1–376) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from July 1, 2007, to December 31, 2007.

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

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

On June 29, 1990, however, the Commission voted to abolish the Atomic Safety and Licensing Appeal Panel, and the Panel ceased to exist as of June 30, 1991. Since then, the Commission itself reviews Licensing Board and other adjudicatory decisions, as a matter of discretion. *See* 56 Fed. 29 & 403 (1991).

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

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

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

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

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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**G. Paul Bollwerk, III, Chairman  
Dr. Richard F. Cole  
Lester S. Rubenstein**

**In the Matter of**

**Docket Nos. 50-387-OLA  
50-388-OLA  
(ASLBP No. 07-854-01-OLA-BD01)**

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

**July 27, 2007**

In this 10 C.F.R. Part 50 operating license amendment proceeding regarding the application of PPL Susquehanna LLC (PPL) to increase the current maximum authorized power level for each of the two units at its Susquehanna Steam Electric Station through an extended power uprate (EPU), ruling on a hearing petition filed by Eric Joseph Epstein seeking to intervene to contest the PPL EPU request, the Licensing Board concludes that although this *pro se* petitioner made a showing that is minimally sufficient to establish his standing as of right, he failed to proffer an admissible contention.

**RULES OF PRACTICE: STANDING TO INTERVENE**

In determining whether an individual or organization should be granted party status in a proceeding based on standing “as of right,” the agency has applied contemporaneous judicial standing concepts that require a participant to establish (1) it has suffered or will suffer a distinct and palpable injury that constitutes injury-in-fact within the zones of interests arguably protected by the governing

statutes (e.g., the Atomic Energy Act of 1954 (AEA), the National Environmental Policy Act of 1969 (NEPA)); (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

**RULES OF PRACTICE: STANDING TO INTERVENE  
(PRESUMPTION BASED ON GEOGRAPHIC PROXIMITY)**

In cases involving the possible construction or operation of a nuclear power reactor, the Commission has created a presumption that residing or regularly conducting activities within a 50-mile proximity of the proposed facility is considered sufficient to establish the requisite injury, causation, and redressability elements. *See Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989). In other cases, such as operating license amendment cases, a petitioner must (1) assert an injury-in-fact associated with the challenged license amendment, not simply a general objection to the facility; and (2) in the absence of a showing that the proposed action obviously entails an increased potential for offsite consequences, base its standing upon more than residence or activities within a particular proximity of the plant by making a showing of a plausible chain of events that would result in offsite radiological consequences posing a distinct new harm or threat to the participant. *See Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 188, 191-92 (1999). Moreover, even in those nonreactor construction permit/operating license cases involving an increased potential for offsite consequences in which proximity can be the primary basis for establishing standing, the distance at which a petitioner can be presumed to be affected must take into account the nature of the proposed action and the significance of the radioactive source. *See Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995); *see also Consumers Energy Co.* (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-21, 65 NRC 519, 522-23 (2007) (difference in potential risk between independent spent fuel storage installation (ISFSI) and operating reactor justifies treating ISFSI and license transfer cases differently in terms of potential proximity presumption).

**LICENSING BOARD(S): RESPONSIBILITIES (STANDING DETERMINATION)**

**RULES OF PRACTICE: STANDING TO INTERVENE (CONSTRUCTION OF *PRO SE* PETITION; UNCONTESTED)**

In assessing a hearing petition to determine whether the standing elements are met, which a presiding officer must do even if there are no objections to a petitioner's standing, *see Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-04-27, 60 NRC 530, 542 n.3 (2004) (even if undisputed, jurisdictional nature of standing requires independent examination by presiding officer), the Commission has indicated that we are to "construe the petition in favor of the petitioner." *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC at 115.

**RULES OF PRACTICE: BURDEN OF PROOF (STANDING)**

A petitioner bears the burden of establishing its standing to intervene in a proceeding. *See Babcock & Wilcox Co.* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 81, *appeal dismissed*, CLI-93-9, 37 NRC 190 (1993).

**RULES OF PRACTICE: STANDING TO INTERVENE (PRESUMPTION BASED ON GEOGRAPHIC PROXIMITY)**

The benefits of the proximity presumption are not limited to those who reside within the area in which the presumption applies, but can be extended to those who conduct everyday activities or visit within that area. *See Big Rock Point*, CLI-07-21, 65 NRC at 523-24; *see also Zion*, CLI-99-4, 49 NRC at 191; *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 226 (1974). Nonetheless, as is sometimes the case regarding the degree to which someone "resides" in the requisite area, *see Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 35 (1993) (regular but intermittent residence 1 week a month in house 35 miles from facility sufficient for standing purposes), there may be issues about the extent to which those activities and contacts are sufficient to invoke the presumption.

**RULES OF PRACTICE: STANDING TO INTERVENE (PRESUMPTION BASED ON GEOGRAPHIC PROXIMITY)**

The relevant concern in determining if the proximity presumption applies in a particular case to afford standing as of right is whether the record reflects

information that adequately demonstrates (1) the obvious potential for offsite consequences such that a proximity presumption would be applicable in the proceeding; (2) the scope of the area within which the presumption would apply; and (3) whether the petitioner has shown it has sufficient contacts within that area to establish the applicability of the presumption.

**RULES OF PRACTICE: STANDING TO INTERVENE (EXTENDED POWER UPRATE PROCEEDING)**

Showing that estimated dose consequences associated with operation under EPU conditions can be expected to increase by the 20% power level change establishes that the proposed EPU creates an obvious potential for offsite consequences. *See Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 553-54 (2004) (EPU amendment involves increase in reactor core radioactivity with obvious potential for offsite consequences); *see also Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2; Watts Bar Nuclear Plant, Unit 1), LBP-02-14, 56 NRC 15, 25 (2002) (obvious offsite consequences from technical specification change that would add tens of millions of curies of radioactive gas to already significant core inventory).

**RULES OF PRACTICE: STANDING TO INTERVENE (EXTENDED POWER UPRATE PROCEEDING)**

Given that an EPU is directly associated with continuing reactor operation, the potential geographic scope of the consequences of EPU operation can be considered to be similar to that which supported the creation of a 50-mile presumption for construction permit and operating license proceedings. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), LBP-98-33, 48 NRC 381, 385 n.1 (1998) (50-mile presumption should apply to life extension cases because reactor operation over additional period subject to same equipment failure and personnel errors), *aff'd*, CLI-99-11, 49 NRC 328 (1999); *see also Big Rock Point*, CLI-07-21, 65 NRC at 522-23 (in determining application of potential proximity presumption, potential risk difference between a reactor and an independent spent fuel storage installation (ISFSI) justifies treating the ISFSI differently).

**RULES OF PRACTICE: PRECEDENTIAL EFFECT OF BOARD DECISIONS; STANDING TO INTERVENE (SHOWING NEEDED IN SUBSEQUENT PROCEEDING REGARDING SAME FACILITY)**

There is agency case law indicating that a petitioner's showing establishing standing in one proceeding need not be repeated to establish standing in another proceeding regarding that same facility. *See U.S. Army* (Jefferson Proving Ground Site), LBP-04-1, 59 NRC 27, 29 (2004); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-23, 42 NRC 215, 217 (1995). Nonetheless, given that a Board in one proceeding is not constrained to follow the rulings of another Board (absent explicit affirmation by the Commission), *see Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-92-4, 35 NRC 114, 125-26 (1992), *rev'd on other grounds*, CLI-93-21, 38 NRC 87 (1993), the better practice for a petitioner is to submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings.

**LICENSING BOARD(S): RESOLUTION OF ISSUES (STANDING RULING AS DICTA)**

A Licensing Board's ruling regarding a petitioner's standing does not constitute dicta simply because the Board also concluded that the petitioner had failed to proffer an admissible contention. Because a petitioner's failure to establish its standing is a jurisdictional flaw that likewise is fatal to its attempt to gain party status, any discussion of its failure to proffer an admissible contention would be every bit as deserving of a "dicta" label. To suggest that a Board's decision on one of these admission elements necessarily renders any discussion of the other superfluous fails to acknowledge that, as a practical matter, a decision addressing only one of these two items creates the potential for significant delay if that single determination is later overturned on appeal.

**RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING REGARDING STANDING BASED ON GEOGRAPHIC PROXIMITY)**

A finding regarding whether a petitioner has established proximity presumption-based standing must be based on the factual circumstances presented by the information before the Licensing Board regarding the petitioner's activities, which, as the Commission has noted in the past, may include consideration of the proximity (i.e., is the activity within the presumption zone), timing, and duration of those activities. *See Big Rock Point*, CLI-07-21, 65 NRC at 523-24; *Private*

*Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999).

**RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING REGARDING STANDING BASED ON GEOGRAPHIC PROXIMITY)**

The process of sifting and weighing the participants' factual proffers often calls upon a Licensing Board to make difficult choices, so that a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself. *See Private Fuel Storage*, CLI-99-10, 49 NRC at 325.

**RULES OF PRACTICE: OFFICIAL NOTICE**

In accord with 10 C.F.R. § 2.337(f), a Licensing Board can take official notice of the locations and the distances to the various locations specified by a petitioner as denominated on Mapquest (<http://www.mapquest.com>) and an American Automobile Association road map.

**RULES OF PRACTICE: INTERVENTION PETITION(S) (PRO SE PETITIONER)**

Somewhat greater latitude generally is afforded *pro se* petitioners in drafting their intervention petitions. *See Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487, 489 (1973).

**RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING REGARDING STANDING BASED ON GEOGRAPHIC PROXIMITY)**

Standing depends on the petitioner's present circumstances (or the extent to which activities in the recent past reflect a likely pattern of future conduct).

**RULES OF PRACTICE: STANDING TO INTERVENE (SHOWING REGARDING STANDING BASED ON GEOGRAPHIC PROXIMITY)**

In seeking to establish standing to intervene in a licensing adjudication based on regular activities within a proximity zone (including business, recreational, or personal activities), a petitioner, whether *pro se* or otherwise, is best served by accurately delineating in as much detail as practicable the particulars associated with the proximity, timing, and duration of those activities.

#### **RULES OF PRACTICE: DISCRETIONARY INTERVENTION**

Discretionary standing will not lie in the absence of a finding that one intervening participant has standing as of right. *See* 10 C.F.R. § 2.309(e) (discretionary standing only appropriate when one petitioner has been shown to have standing as of right and an admissible contention so that a hearing will be conducted).

#### **RULES OF PRACTICE: CONTENTIONS (SPECIFICITY AND BASIS)**

Section 2.309(f) of the Commission's rules of practice specifies the requirements that must be met if a contention is to be deemed admissible. Specifically, a contention must provide (1) a specific statement of the legal or factual issue sought to be raised; (2) a brief explanation of its basis; (3) a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (4) sufficient information demonstrating that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. *See* 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), and (vi). In addition, the petitioner must demonstrate that the issue raised in the contention is both "within the scope of the proceeding" and "material to the findings the NRC must make to support the action that is involved in the proceeding." *Id.* § 2.309(f)(1)(iii), (iv). Failure to comply with any of these requirements is grounds for dismissing a contention. *See Private Fuel Storage*, CLI-99-10, 49 NRC at 325; *see also Arizona Public Service Co.* (Palo Verde Nuclear Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

#### **RULES OF PRACTICE: CONTENTIONS (CHALLENGE OF COMMISSION RULE)**

An adjudication is not the proper forum for challenging applicable statutory requirements or the basic structure of the agency's regulatory process. *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20, *aff'd in part on other grounds*, CLI-74-32, 8 AEC 217 (1974). Similarly, a contention that attacks a Commission rule, or which seeks to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, is inadmissible. *See* 10 C.F.R. § 2.335; *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85, 89 (1974). This includes contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a

Commission rulemaking. See *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 159, *aff'd*, CLI-01-17, 54 NRC 3 (2001); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-93-1, 37 NRC 5, 29-30 (1993); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 (1982); see also *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 251 (1996); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 NRC 397, 410, *aff'd in part and rev'd in part on other grounds*, CLI-91-12, 34 NRC 149 (1991). By the same token, a contention that simply states the petitioner's views about what regulatory policy should be does not present a litigable issue. See *Peach Bottom*, ALAB-216, 8 AEC at 20-21 & n.33.

#### **RULES OF PRACTICE: CONTENTIONS (SCOPE OF PROCEEDING)**

All proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board. See 10 C.F.R. § 2.309(f)(1)(iii); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). As a consequence, any contention that falls outside the specified scope of the proceeding must be rejected. See *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289 n.6 (1979).

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

It is the petitioner's obligation to present factual information and/or expert opinion necessary to support its contention. See 10 C.F.R. § 2.309(f)(1)(v); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, and *aff'd in part*, CLI-95-12, 42 NRC 111 (1995). While a Licensing Board may appropriately view a petitioner's supporting information in a light favorable to the petitioner, failure to provide such information regarding a proffered contention requires the contention be rejected. See *Palo Verde*, CLI-91-12, 34 NRC at 155. In this connection, neither mere speculation nor bare or conclusory assertions alleging that a matter should be considered will suffice to allow the admission of a proffered contention. See *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003). If a petitioner neglects

to provide the requisite support for its contentions, it is not within the Board's power to make assumptions of fact that favor the petitioner, nor may the Board supply information that is lacking. *See Palo Verde*, CLI-91-12, 34 NRC at 155; *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001), *rev'd in part on other grounds*, CLI-02-24, 56 NRC 335 (2002); *Georgia Tech Research Reactor*, LBP-95-6, 41 NRC at 305.

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

Simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention. *See Fansteel*, CLI-03-13, 58 NRC at 204-05. Along these lines, any supporting material provided by a petitioner, including those portions of the material that are not relied upon, is subject to Licensing Board scrutiny. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90, *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996). Thus, the material provided in support of a contention will be carefully examined by the Board to confirm that on its face it does supply an adequate basis for the contention. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990).

#### **RULES OF PRACTICE: CONTENTIONS (MATERIALITY)**

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

**RULES OF PRACTICE: CONTENTIONS (CHALLENGE TO LICENSE APPLICATION)**

All properly formulated contentions must focus on the license application in question, challenging either specific portions of or alleged omissions from the application (including the Safety Analysis Report and the Environmental Report) so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(vi). Any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue can be dismissed. *See Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined*, CLI-94-2, 39 NRC 91 (1994); *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992), *appeals dismissed as moot*, CLI-93-10, 37 NRC 192 (1993).

**NUCLEAR REGULATORY COMMISSION: PERMITTING BY OTHER REGULATORY AUTHORITIES**

**RULES OF PRACTICE: LITIGABILITY OF ISSUES (MATTERS THAT ARE THE RESPONSIBILITY OF OTHER REGULATORY AGENCIES)**

As the Commission has made apparent in other contexts, *see Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 121-22 (1998), absent some need for resolution to meet the agency's statutory responsibilities, the agency's adjudicatory process is not a forum for litigating matters that are primarily the responsibility of other federal or state/local regulatory agencies.

**OPERATING LICENSE AMENDMENTS: APPLICANT'S CHARACTER AND COMPETENCE**

Assertions regarding purported water fouling incidents by members of the applicant's corporate family who are not NRC licensees fall far short of what is required to establish circumstances that would create a genuine material dispute regarding the potential for such activities by the Applicant, which is an NRC licensee, during the course of facility operation. *See* 10 C.F.R. § 2.309(f)(1)(v); *see also GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000) (absent evidence to the contrary, it is assumed NRC licensees will not contravene agency regulations).

**RULES OF PRACTICE: CONTENTIONS (CHALLENGES TO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION)**

As the agency's rules state, "[n]o petition or other request for review on the staff's significant hazards consideration determination will be entertained by the Commission. The staff's determination is final, subject only to the Commission's discretion on its own initiative, to review the determination." 10 C.F.R. § 50.58(b)(6); *see also Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-05-14, 61 NRC 359, 361 n.2 (2005).

**RULES OF PRACTICE: CONTENTIONS (REPLY BRIEF)**

A reply pleading is an improper place to attempt to introduce a new argument to establish a contention's admissibility. *See Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225, *reconsideration denied*, CLI-04-35, 60 NRC 619, 623-24 (2004).

**TECHNICAL ISSUE DISCUSSED**

The following technical issue is discussed: power uprates.

**MEMORANDUM AND ORDER  
(Ruling on Standing and Contentions)**

Before the Licensing Board is *pro se* Petitioner Eric Joseph Epstein's May 11, 2007 hearing request in which he challenges certain aspects of the October 11, 2006 application of PPL Susquehanna LLC (PPL) for an extended power uprate (EPU) for the two nuclear reactors at its Susquehanna Steam Electric Station (SSES) located near Berwick, Pennsylvania. Both Applicant PPL and the NRC Staff contest Petitioner Epstein's hearing request, asserting that he lacks standing and has failed to present an admissible issue statement.

Although we conclude that, in this instance, Petitioner Epstein has made a showing that is minimally sufficient to establish his standing as of right, we also find he has failed to proffer an admissible contention. As such, we deny his hearing request and terminate this proceeding.

## I. BACKGROUND

### A. PPL Power Uprate Application

Seeking to increase the current maximum authorized power level for each of its two SSES units from 3489 megawatts thermal (MWt) to 3952 MWt, a 13% increase, in its October 2006 application PPL requests that the 10 C.F.R. Part 50 operating licenses for both units be amended to change the associated technical specifications to implement uprated power operation. According to PPL, its EPU request,<sup>1</sup> which included a 350-page Power Uprate Safety Analysis Report (PUSAR) and a 54-page Environmental Report (ER),<sup>2</sup> is for a constant pressure power uprate (CPPU) that would obtain increased electrical output by generating and supplying higher steam flow to the turbine generator rather than through any significant increase in reactor or main steam pressure or temperature. *See* [PPL] Answer to Eric Epstein's Petition for Leave To Intervene (June 5, 2007) at 2 [hereinafter PPL Answer].

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<sup>1</sup>Power uprates are of three stripes. A measurement uncertainty recapture power uprate (MUPU), which involves an uprate of less than 2%, is achieved by implementing enhanced techniques for calculating reactor power, such as state-of-the-art feedwater flow measurement devices that more precisely gauge the feedwater flow used to calculate reactor power. These more precise measurements reduce the degree of uncertainty in the power level, which is used by analysts to predict the ability of the reactor to be safely shut down under postulated accident conditions. A stretch power uprate (SPU), which is typically up to 7%, is intended to stay within the design capacity of the plant. The actual percentage increase in power a plant can achieve and still stay within the SPU category depends on the plant-specific operating margins included in the facility's design. Therefore, an SPU usually involves changes to instrumentation setpoints, but does not involve major plant modifications. An EPU is greater than an SPU and has been approved for increases as high as 20%. An EPU requires significant modifications to major balance-of-plant equipment such as the high-pressure turbines, condensate pumps and motors, main generators, and transformers. *See* <http://www.nrc.gov/reactors/operating/licensing/power-uprates.html#definition> (last visited July 26, 2007).

Previously, the SSES units each were approved for an SPU (1994) and an MUPU (2001), which raised their rated power by 4.5% and 1.4%, respectively. *See* <http://www.nrc.gov/reactors/operating/licensing/power-uprates/approved-applications.html> (last visited July 26, 2007). These increases, when combined with the proposed 13% increase sought by PPL in the current amendment request, would bring the total power uprate for each of the SSES units to just under 20%.

<sup>2</sup>*See* [SSES] Proposed License Amendment Numbers 285 for Unit 1 Operating License No. NPF-14 and 253 for Unit 2 Operating License No. NPF-22 Constant Pressure Power Uprate, PLA-6076 (Oct. 11, 2006) (ADAMS Accession No. ML062900160) [hereinafter PLA-6076], *id.* Attach. 3 (ADAMS Accession No. ML062900161) [hereinafter ER]; *id.* Attach. 6 (nonproprietary version) (ADAMS Accession No. ML062900401) [hereinafter PUSAR].

## **B. Petitioner Epstein's Hearing Request/Licensing Board Establishment and Initial Procedures**

In accord with a March 2, 2007 notice of the Staff's consideration of the requested SSES operating license amendments, the Staff's proposed no significant hazards consideration determination regarding the EPU application, and the opportunity to petition for a hearing on the PPL licensing request, *see* 72 Fed. Reg. 11,383, 11,392 (Mar. 13, 2007), on May 11, 2007, Petitioner Epstein submitted his hearing request in which he seeks to establish his standing to participate in this proceeding and proffers three contentions contesting the PPL EPU application. *See* Eric Joseph Epstein's Petition for Leave To Intervene, Request for Hearing, and Presentation of Contentions with Supporting Factual Data (May 11, 2007) [hereinafter Intervention Petition]. Thereafter, on May 31, 2007, this Atomic Safety and Licensing Board was established to adjudicate the issues raised by Petitioner Epstein relative to the PPL EPU application. *See* 72 Fed. Reg. 31,617 (June 7, 2007).

In an initial prehearing order issued that same day, *see* Licensing Board Memorandum and Order (Initial Prehearing Order) (May 31, 2007) (unpublished) [hereinafter Initial Prehearing Order], in addition to establishing several procedural measures to govern matters such as the filing of time extension motions, the Licensing Board indicated it found each of Petitioner Epstein's three issue statements could be categorized as a technical contention (TC), as opposed to an environmental or miscellaneous contention.<sup>3</sup> The Board also noted, however, that if Petitioner Epstein believed any of his existing contentions raised issues that could not be classified as primarily falling into that category, he could provide a supplement to his petition setting forth the contention and supporting bases separately for each category into which it is asserted to fall, with a separate designation for that category.<sup>4</sup> *See id.* at 2.

On June 5, 2007, both PPL and the Staff filed their responses to Petitioner Epstein's hearing request, opposing his admission as a party based on his lack of standing and his failure to submit any admissible contentions. *See* PPL

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<sup>3</sup> In its initial prehearing order, the Board indicated it reviewed the three contentions in the context of the three classifications: (1) Technical, which primarily concern matters discussed or referenced in the October 2006 PPL EPU application, as supplemented, other than National Environmental Policy Act (NEPA)-related matters discussed in the ER, or matters that are asserted should be discussed in the technical portions of the PPL application; (2) Environmental, which primarily concern NEPA-related matters discussed or referenced in the ER, or matters that are asserted should be discussed in the ER; and (3) Miscellaneous, which did not fall into one of the two categories outlined above. *See* Initial Prehearing Order at 2.

<sup>4</sup> The Board also made it clear that these same designations should be used for any other contentions subsequently filed in this proceeding and that contentions bearing more than one designation (e.g., Technical-3/Environmental-3) were not acceptable. *See id.* at 2-3.

Answer at 1; NRC Staff Response to Eric Joseph Epstein's Petition for Leave To Intervene, Request for Hearing, and Contentions (June 5, 2007) at 1 [hereinafter Staff Answer]. On June 12, 2007, Petitioner Epstein filed his reply to the PPL and Staff answers. See Eric Joseph Epstein's Reply to [PPL] and NRC Staff's Responses to Eric Joseph Epstein's Petition for Leave To Intervene, Request for Hearings and Contentions (June 12, 2007) [hereinafter Petitioner Reply].

The following day, the Board issued an order proposing a schedule for a telephone prehearing conference during which the participants would be permitted to address orally the questions of Petitioner Epstein's standing and the admissibility of his contentions. See Licensing Board Memorandum and Order (Initial Prehearing Conference Schedule; Argument Allocations) (June 13, 2007) at 1 (unpublished). After receiving participant input, the Board scheduled the prehearing conference for July 10, 2007. See Licensing Board Memorandum and Order (June 15, 2007) at 1 (unpublished). And on that date, the Board conducted the teleconference. See Tr. at 1-88.

## II. ANALYSIS

### A. Standing

#### 1. Standards Governing Standing

In determining whether an individual or organization should be granted party status in a proceeding based on standing "as of right," the agency has applied contemporaneous judicial standing concepts that require a participant to establish (1) it has suffered or will suffer a distinct and palpable injury that constitutes injury-in-fact within the zones of interests arguably protected by the governing statutes (e.g., the Atomic Energy Act of 1954 (AEA), the National Environmental Policy Act of 1969 (NEPA)); (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision. See *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

In this regard, in cases involving the possible construction or operation of a nuclear power reactor, the Commission has created a presumption that residing or regularly conducting activities within a 50-mile proximity of the proposed facility is considered sufficient to establish the requisite injury, causation, and redressability elements.<sup>5</sup> See *Florida Power & Light Co.* (St. Lucie Nuclear Power

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<sup>5</sup> Coincidentally, the 50-mile radius around a facility utilized for this presumption conforms generally to the ingestion pathway emergency planning zone established for emergency planning purposes.

(Continued)

Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989). In other cases, such as operating license amendment cases like this one, a petitioner must (1) assert an injury-in-fact associated with the challenged license amendment, not simply a general objection to the facility; and (2) in the absence of a showing that the proposed action obviously entails an increased potential for offsite consequences, base its standing upon more than residence or activities within a particular proximity of the plant by making a showing of a plausible chain of events that would result in offsite radiological consequences posing a distinct new harm or threat to the participant. *See Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 188, 191-92 (1999). Moreover, even in those nonreactor construction permit/operating license cases involving an increased potential for offsite consequences in which proximity can be the primary basis for establishing standing, the distance at which a petitioner can be presumed to be affected must take into account the nature of the proposed action and the significance of the radioactive source. *See Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995); *see also Consumers Energy Co.* (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-21, 65 NRC 519, 522-23 (2007) (difference in potential risk between independent spent fuel storage installation (ISFSI) and operating reactor justifies treating ISFSI and license transfer cases differently in terms of potential proximity presumption).

In assessing a hearing petition to determine whether the standing elements are met, which a presiding officer must do even if there are no objections to a petitioner's standing, *see Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-04-27, 60 NRC 530, 542 n.3 (2004) (even if undisputed, jurisdictional nature of standing requires independent examination by presiding officer), the Commission has indicated that we are to "construe the petition in favor of the petitioner." *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC at 115.

We apply these precepts in evaluating Petitioner Epstein's standing presentation.

## **2. *Petitioner Epstein's Standing***

DISCUSSION: Intervention Petition at 4-7; PPL Answer at 3-9; Staff Answer at 4-5; Petitioner Reply at 2-3; Tr. at 10-12, 15-29.

Petitioner Epstein, who bears the burden of establishing his standing to in-

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*See* U.S. Nuclear Regulatory Comm'n & Federal Emergency Mgmt. Agency, NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" at 11 (rev. 1, Nov. 1980).

tervene in this power uprate proceeding, *see Babcock & Wilcox Co.* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 81, *appeal dismissed*, CLI-93-9, 37 NRC 190 (1993), seeks to demonstrate his standing based on his concern that the proposed SSES power uprate amendment could compromise his health and safety by increasing his likelihood of exposure to radiological emissions or other toxic, caustic, or carcinogenic atmospheric discharges. *See* Intervention Petition at 7. Because Petitioner Epstein lives more than 50 miles from the SSES,<sup>6</sup> he asserts his standing in this proceeding is based on the extent of his day-to-day activities in the vicinity of the facility. Referencing a teleconference from another recently concluded Licensing Board proceeding in which he sought to intervene regarding a PPL request for a 20-year extension of its operating authority for the SSES, he asserts that he “routinely” pierces the 50-mile proximity zone. *See id.* at 6. In this regard, besides purported regular activities in Lebanon, Schuylkill, and Upper Dauphin counties in Pennsylvania, including shopping trips and hiking in the Appalachian Mountains, he also maintains that as a member of the Sustained Energy Fund’s (SEF) Board of Directors he commutes to its Allentown, Pennsylvania offices, which he asserts are located approximately 47 miles from the SSES, as well as other Pennsylvania cities and towns — purportedly located from approximately 10 miles to 45 miles from the SSES — to attend various business meetings. *See id.*; Tr. at 22-23. Further in this regard, he provided a list of dates for SEF meetings — four in May 2007 and eight in June 2007 — that he was scheduled to attend (albeit without specifying which meetings took place where), *see* Petitioner Reply at 3, and indicated during the July 10 teleconference that each of those meetings is at least 3 hours long, *see* Tr. at 22. He additionally relies on the fact that the Licensing Board presiding over the SSES life extension proceeding found he had standing to intervene, essentially on the basis of this same showing. *See* Intervention Petition at 7 (citing *PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 296 (2007)). Finally, referencing the Commission’s *Pebble Springs* decision, he noted that “intervention can be allowed as a matter of discretion.” *Id.* at 8 (citing *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 614-17 (1976)).

Both PPL and the Staff assert that Petitioner Epstein’s showing is inadequate to establish his standing. In summary fashion, the Staff declares that Petitioner Epstein has not demonstrated sufficiently frequent contacts within close proximity to the SSES. *See* Staff Answer at 4-5. In a more detailed analysis, PPL contends that there has been an insufficient showing to establish that a proximity pre-

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<sup>6</sup> Although Mr. Epstein indicated in his petition that he lives 56 miles from the SSES, *see* Intervention Petition at 5, the Board’s check of this claim using Mapquest (<http://www.mapquest.com>) and an American Automobile Association (AAA) Pennsylvania road map, *see infra* note 11, indicates that distance is closer to 60 miles.

sumption should be applied in this instance, so that Petitioner Epstein's standing depends on traditional standing doctrine that requires a focus on the length and nature of his activities, including their proximity to the SSES site. PPL maintains that in the face of the inapplicability of the proximity presumption, Petitioner Epstein's mere assertion that he may suffer injury in fact from radiation exposure is wholly insufficient to support his standing given his failure to proffer any specific and plausible means by which, as a consequence of the power uprate amendment, he will experience radiation exposure in the course of his activities. Additionally, according to PPL, whether or not a 50-mile proximity presumption applies, Petitioner Epstein's showing relative to his sojourns into the 50-mile area surrounding the SSES are insufficient to establish his standing because the trips are too infrequent and do not show any relationship or bond between Petitioner Epstein and the plant site. *See* PPL Answer at 5-7.

As to the Licensing Board decision in the SSES license renewal case, PPL declares this case does not mandate a similar result here because a standing finding in one proceeding does not automatically grant standing in a second proceeding regarding that facility. Moreover, according to PPL, the earlier Board's decision is particularly inapposite here given Petitioner Epstein's failure to show a distinct new harm or threat associated with the uprate amendment as well as the fact the Board ruling was both dicta and not subjected to review on appeal so as to be binding precedent. Finally, PPL declares that as the sole petitioner in this proceeding, having failed to establish his standing as of right, under Commission practice Petitioner Epstein cannot be granted discretionary standing. *See id.* at 7-8.

**RULING:** As the cases make manifest, the benefits of the proximity presumption are not limited to those who reside within the area in which the presumption applies, but can be extended to those who conduct everyday activities or visit within that area.<sup>7</sup> *See Big Rock Point*, CLI-07-21, 65 NRC at 523-24; *see also Zion*, CLI-99-4, 49 NRC at 191; *Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 226 (1974). Nonetheless, as is sometimes the case regarding the degree to which someone "resides" in the requisite area, *see Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 35 (1993) (regular but intermittent residence 1 week a month in house 35 miles from facility sufficient for standing purposes), there may be issues about the extent to which those activities and contacts are sufficient to invoke the presumption.

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<sup>7</sup> Although PPL in its response to Petitioner Epstein's hearing request seemed to suggest that the proximity presumption was limited to those in residence within the appropriate area, *see* PPL Answer at 4, during the July 10, 2007 prehearing conference, PPL agreed that the presumption, if applicable, would encompass those who regularly undertake activities in that area, *see* Tr. at 18-19.

The relevant concern in this instance thus is whether the record reflects information that adequately demonstrates (1) the obvious potential for offsite consequences such that a proximity presumption would be applicable in this EPU proceeding; (2) the scope of the area within which the presumption would apply; and (3) whether Petitioner Epstein has shown he has sufficient contacts within that area to establish the applicability of the presumption.

Relative to the first two items, the answer is found in the information Applicant PPL provides in its response to Petitioner Epstein's technical issue TC-3, which, as we will discuss further in section II.B.2.c, *infra*, questions whether PPL has adequately characterized the accident consequences that will arise from the proposed EPU. In its response regarding that contention's admissibility, *see* PPL Answer at 28, PPL points to section 8.3 of the ER that accompanies its EPU application, which states:

Under EPU conditions, the dose consequences estimated in the [SSES operating license-related Final Environmental Impact Statements] can be reasonably and conservatively expected to increase by the percentage change in power level [from] the original licensed power to the EPU power level. In numerical terms this is approximately 20% (from 3293 MWt to 3952 Mwt).

ER at 8-9. From the Board's perspective, this establishes that this proposed EPU creates an obvious potential for offsite consequences. *See Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 553-54 (2004) (EPU amendment involves increase in reactor core radioactivity with obvious potential for offsite consequences); *see also Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2; Watts Bar Nuclear Plant, Unit 1), LBP-02-14, 56 NRC 15, 25 (2002) (obvious offsite consequences from technical specification change that would add tens of millions of curies of radioactive gas to already significant core inventory). Moreover, given that the EPU is directly associated with continuing reactor operation, we consider the potential geographic scope of such consequences to be similar to that which supported the creation of a presumption for construction permit and operating license proceedings. *See Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), LBP-98-33, 48 NRC 381, 385 n.1 (1998) (50-mile presumption should apply to life extension cases because reactor operation over additional period subject to same equipment failure and personnel errors), *aff'd*, CLI-99-11, 49 NRC 328 (1999); *see also Big Rock Point*, CLI-07-21, 65 NRC at 522-23 (in determining application of potential proximity presumption, potential risk difference between a reactor and an ISFSI justifies treating the ISFSI

differently). As such, the application of a 50-mile presumption is justified in this instance.<sup>8</sup>

A very much closer question is the sufficiency of Petitioner Epstein's showing regarding his activities within such a radius of the SSES as a basis for invoking the presumption. As PPL pointed out, the *Susquehanna* life extension proceeding Board's standing ruling is not dispositive of our determination here because that decision was not the subject of appellate review.<sup>9</sup> Rather, we must make a finding based on the factual circumstances presented by the information before the Board regarding his activities, which, as the Commission has noted in the past, may include consideration of the proximity (i.e., is the activity within the presumption zone), timing, and duration of those activities. See *Big Rock Point*, CLI-07-21, 65 NRC at 523-24; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999).

Not unexpectedly, this process of sifting and weighing the participants' factual proffers often calls upon a Board to make difficult choices, so that a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself. See *Private Fuel Storage*, CLI-99-10, 49 NRC at 325. In this instance, Petitioner

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<sup>8</sup> Noting that the trips described in Petitioner Epstein's hearing request appear to take place "well to the southwest" of the SSES, PPL asserts he has failed to make a proper showing because he has not provided a "specific and reasonable means" by which his activities will result in a radiation exposure due to the uprate. PPL Answer at 7. Although the direction of Mr. Epstein's activities relative to the facility (in conjunction with the direction of the prevailing winds) might be an issue if the proximity presumption were found not to apply, it is not a relevant consideration within the proximity zone once that presumption is deemed applicable.

<sup>9</sup> There is agency case law indicating that a petitioner's showing establishing standing in one proceeding need not be repeated to establish standing in another proceeding regarding that same facility. See *U.S. Army* (Jefferson Proving Ground Site), LBP-04-1, 59 NRC 27, 29 (2004); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-23, 42 NRC 215, 217 (1995). Nonetheless, given that a Board in one proceeding is not constrained to follow the rulings of another Board (absent explicit affirmation by the Commission), see *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-92-4, 35 NRC 114, 125-26 (1992), *rev'd on other grounds*, CLI-93-21, 38 NRC 87 (1993), the better practice for a petitioner is to submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings.

We also feel compelled to note our view that the SSES life extension Licensing Board's ruling regarding Petitioner Epstein's standing does not constitute dicta. Given that a petitioner's failure to establish its standing is a jurisdictional flaw that likewise is fatal to its attempt to gain party status, it would seem that any discussion of its failure to proffer an admissible contention would be every bit as deserving of the "dicta" label. Moreover, to suggest that a Board's decision on one of these admission elements necessarily renders any discussion of the other superfluous fails to acknowledge that, as a practical matter, a decision addressing only one of these two items creates the potential for significant delay if that single determination is later overturned on appeal.

Epstein's description of the timing (how often) and duration (how long) of his presumption zone activities is clearly not overpowering. Nonetheless he has been somewhat more forthcoming than the admitted petitioner in the *Private Fuel Storage* proceeding cited by PPL, *see* PPL Answer at 6, which simply described the activities in the area of the facility of the individual it was relying upon to establish standing as "frequent," CLI-99-10, 49 NRC at 324. Petitioner Epstein has indicated that, on average, about a half-dozen times a month,<sup>10</sup> he has traveled to and attended SEF business meetings at locations between 10 and 47 miles from the SSES,<sup>11</sup> so as to place him inside the 50-mile proximity zone for at least 5 hours per meeting.<sup>12</sup> While far from overwhelming, this information nonetheless indicates Petitioner Epstein frequents the 50-mile zone on a regular basis.

At the same time, we do not find compelling Applicant PPL's assertion that, in contrast to the *Private Fuel Storage* proceeding in which the Commission noted that the visits claimed to establish standing were to a particular parcel of land that would be affected by one aspect of the proposed licensing action at issue, Petitioner Epstein's SEF meetings apparently have nothing to do with the proposed EPU amendment or the SSES facility in general. *See* PPL Answer at 6. To be sure, the exact subject matter of the particular SEF business meetings attended by Petitioner Epstein has not been delineated. Nonetheless, to the degree Mr. Epstein's relationship to the SSES facility and its operational activities is relevant, the nature of the SEF organization is apparent, *see* Tr. at 23-24; <http://www.theseef.org/kb/?View=entry&EntryID=24> (last visited on July 26, 2007), so that attending meetings in support of that organization's purpose of promoting nonnuclear "clean/renewable" energy projects in the PPL service territory does not seem to us wholly unrelated to Petitioner Epstein's interest in challenging this EPU as it facilitates continued, enhanced operation of a nuclear power facility.

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<sup>10</sup>In addition to the four May and eight June dates referenced in his filings in this proceeding, during the license renewal proceeding Petitioner Epstein also proffered five April 2007 meeting dates at locations within a 50-mile proximity of the SSES. *See* Eric Joseph Epstein's Response to the [Licensing Board's] Request for Information (Mar. 11, 2007) at 3 (Docket Nos. 50-387-LR & 50-388-LR).

<sup>11</sup>Although the Staff has suggested that at least three of the meeting locations specified by Petitioner Epstein are more than 50 miles from the SSES, *see* Staff Answer at 4; Tr. at 20-21, in accord with 10 C.F.R. § 2.337(f), taking official notice of the locations and the distances to the various locations specified by petitioner Epstein, including the SEF offices, as denominated on Mapquest (<http://www.mapquest.com>) and an AAA Pennsylvania road map, it appears that all are within a 50-mile radius of the SSES.

<sup>12</sup>In addition to lasting at least 3 hours (and some requiring an overnight stay), each meeting requires travel from his home through the 50-mile proximity zone that would last between 1 and 1 1/2 hours each way. *See* Tr. at 28.

In the end, bearing in mind the above-referenced Commission admonition that in the context of standing determinations hearing requests be construed in favor of a petitioner, *see supra* p. 15, as well as the somewhat greater latitude generally afforded *pro se* petitioners in drafting their intervention petitions, *see Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487, 489 (1973), we consider the activities specified by Petitioner Epstein within a 50-mile radius of the SSES to be of minimally sufficient regularity and duration to establish his injury-in-fact,<sup>13</sup> as well as the traceability and redressability of that injury, such that he has standing to participate in this EPU proceeding.<sup>14</sup>

## **B. Petitioner Epstein's Contentions**

### **1. Contention Admissibility Standards**

Section 2.309(f) of the Commission's rules of practice specifies the require-

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<sup>13</sup> Many of the supposed activities Petitioner Epstein referenced in his pleadings and during the prehearing conference are, for the purposes of determining his standing, irrelevant or inadequately delineated to be of much substantive value in establishing his standing. Given that standing depends on the petitioner's present circumstances (or the extent to which activities in the recent past reflect a likely pattern of future conduct), general assertions that a petitioner, who admittedly resides outside the zone, was "born and raised in this area," will "likely die in this area," and lived within the zone almost 20 years ago, Tr. at 11; or visits locations in the area outside the 50-mile proximity area (i.e., Grantsville and Halifax, Pennsylvania); or goes recreational hiking or shopping an unrevealed number of times at undisclosed locations purportedly in the zone, *see* Tr. at 22, 23; or has made a single personal trip or business trip into the zone, *see* Tr. at 25, are not particularly helpful to the presiding officer.

Ultimately, in seeking to establish standing to intervene in a licensing adjudication based on regular activities within a proximity zone (including business, recreational, or personal activities), a petitioner, whether *pro se* or otherwise, is best served by accurately delineating in as much detail as practicable the particulars associated with the proximity, timing, and duration of those activities.

<sup>14</sup> As PPL notes, case law suggests that a traveler who occasionally traverses the 50-mile zone while driving on an interstate roadway to a vacation spot or shopping venue that itself is located more than 50 miles from a facility likely does not have standing to challenge a licensing request regarding that plant. On the other hand, as PPL's answer also denotes, the same may not be true for someone who commutes past the plant on that same road daily on the way to a work location at a similar distance. *See* PPL Answer at 6 & n.7 (citing *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC at 117 (daily commute taking petitioner in front of facility entrance sufficient to establish injury-in-fact)). Nothing we decide here today, however, does violence to either of those precepts.

Additionally, although we need not reach the question of discretionary standing given our determination regarding Mr. Epstein's standing as of right, we nonetheless observe that it is apparent discretionary standing will not lie in the absence of a finding that one intervening participant has standing as of right. *See* 10 C.F.R. § 2.309(e) (discretionary standing only appropriate when one petitioner has been shown to have standing as of right and admissible contention so that a hearing will be conducted).

ments that must be met if a contention is to be deemed admissible. Specifically, a contention must provide (1) a specific statement of the legal or factual issue sought to be raised; (2) a brief explanation of its basis; (3) a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner's position and upon which the petitioner intends to rely at hearing; and (4) sufficient information demonstrating that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. *See* 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), and (vi). In addition, the petitioner must demonstrate that the issue raised in the contention is both "within the scope of the proceeding" and "material to the findings the NRC must make to support the action that is involved in the proceeding." *Id.* § 2.309(f)(1)(iii), (iv). Failure to comply with any of these requirements is grounds for dismissing a contention. *See Private Fuel Storage*, CLI-99-10, 49 NRC at 325; *see also Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

NRC case law has further developed these requirements, as is summarized below.

*a. Challenges to Statutory Requirements/Regulatory Process/Regulations*

An adjudication is not the proper forum for challenging applicable statutory requirements or the basic structure of the agency's regulatory process. *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20, *aff'd in part on other grounds*, CLI-74-32, 8 AEC 217 (1974). Similarly, a contention that attacks a Commission rule, or which seeks to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, is inadmissible. *See* 10 C.F.R. § 2.335; *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85, 89 (1974). This includes contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking. *See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 159, *aff'd*, CLI-01-17, 54 NRC 3 (2001); *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-93-1, 37 NRC 5, 29-30 (1993); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 (1982); *see also Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 251 (1996); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 NRC 397, 410, *aff'd in part and rev'd in part on other grounds*, CLI-91-12, 34 NRC 149

(1991). By the same token, a contention that simply states the petitioner's views about what regulatory policy should be does not present a litigable issue. See *Peach Bottom*, ALAB-216, 8 AEC at 20-21 & n.33.

*b. Challenges Outside Scope of Proceeding*

All proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board. See 10 C.F.R. § 2.309(f)(1)(iii); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985). As a consequence, any contention that falls outside the specified scope of the proceeding must be rejected. See *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289 n.6 (1979).

*c. Need for Adequate Factual Information or Expert Opinion*

It is the petitioner's obligation to present factual information and/or expert opinion necessary to support its contention. See 10 C.F.R. § 2.309(f)(1)(v); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, *and aff'd in part*, CLI-95-12, 42 NRC 111 (1995). While a Board may appropriately view a petitioner's supporting information in a light favorable to the petitioner, failure to provide such information regarding a proffered contention requires the contention be rejected. See *Palo Verde*, CLI-91-12, 34 NRC at 155. In this connection, neither mere speculation nor bare or conclusory assertions alleging that a matter should be considered will suffice to allow the admission of a proffered contention. See *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003). If a petitioner neglects to provide the requisite support for its contentions, it is not within the Board's power to make assumptions of fact that favor the petitioner, nor may the Board supply information that is lacking. See *Palo Verde*, CLI-91-12, 34 NRC at 155; *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001), *rev'd in part on other grounds*, CLI-02-24, 56 NRC 335 (2002); *Georgia Tech Research Reactor*, LBP-95-6, 41 NRC at 305.

Likewise, simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention. See *Fansteel*, CLI-03-13, 58 NRC at 204-05. Along these lines, any supporting material provided by a

petitioner, including those portions of the material that are not relied upon, is subject to Board scrutiny. *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90, *rev'd in part on other grounds*, CLI-96-7, 43 NRC 235 (1996). Thus, the material provided in support of a contention will be carefully examined by the Board to confirm that on its face it does supply an adequate basis for the contention. *See Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990).

*d. Materiality*

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

*e. Insufficient Challenges to the Application*

All properly formulated contentions must focus on the license application in question, challenging either specific portions of or alleged omissions from the application (including the Safety Analysis Report and the Environmental Report) so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact. *See* 10 C.F.R. § 2.309(f)(1)(vi). Any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue can be dismissed. *See Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined*, CLI-94-2, 39 NRC 91 (1994); *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992), *appeals dismissed as moot*, CLI-93-10, 37 NRC 192 (1993).

## 2. *Technical Contentions (TC)*<sup>15</sup>

### a. *TC-1 — PPL Failed To Consider the Impact of Its Proposed Uprate on Water Use Issues*<sup>16</sup>

CONTENTION: PPL failed to consider the impact of the proposed uprate on certain state and federal water use issues, and the potential impact these regulations will have on water flow, water volume and surface water withdrawal for the SSES's cooling systems. The traditional implications of the Pennsylvania Public Utility Commission ("Pa PUC") policy and regulations relating to "withdraw and treatment" of water, i.e., referred to as "cost of water" under the Public Utility Code, Title 66, have to be factored in this application absent a Pa PUC proceeding as well as Act 220 water usage guidelines. PPL has not established (nor has the NRC reviewed) compliance milestones for EPA's Act 316 (a) or 316 (b) and their impact on power uprates at the Susquehanna Electric Steam Station. [Footnote omitted.]

Intervention Petition at 10.

DISCUSSION: *Id.* at 10-18; PPL Answer at 15-22; Staff Answer at 7-12; Petitioner Reply at 4-8; Tr. at 12-15, 29-54.

As Petitioner Epstein explained during the July 10, 2007 prehearing conference, *see* Tr. at 48-49, at the crux of the concern he has sought to express in this contention is the possibility of a regulatory "gap" relative to the regulation of water withdrawal from the Susquehanna River by the SSES facility that will lead to health and safety impacts as a result of higher power operation of the SSES units in accord with the PPL EPU request. Specifically, he is concerned that (1) PPL in its application has not addressed the fact that, pursuant to the Pennsylvania State Water Plan and Act 220 of 2002 (Act 220), in March 2008 areas will be identified in which water use exceeds or is projected to exceed available supplies; and (2) the requested EPU will require modification of the existing Susquehanna River Basin Commission (SRBC) water use approval for the SSES to accommodate what will ultimately be an 8 million gallon per day increase in its

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<sup>15</sup> Given the potential scheduling implications associated with the type of contention submitted by a petitioner, *see* 10 C.F.R. § 2.332(d); *see also* *Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-07-17, 65 NRC 392 (2007), as was noted previously, as part of its initial prehearing order the Board, after reviewing his issue statements, denoted each of Petitioner Epstein's contentions as a "technical contention." *See supra* note 3. Although the Board also indicated he had the opportunity to provide an additional, albeit separate, designation of "environmental" or "miscellaneous" for any of his contentions if he thought it appropriate, Petitioner Epstein did not provide any further designations.

<sup>16</sup> Because Petitioner Epstein did not assign a title to any of his three contentions, the Board has done so based on the contention's content and stated bases. The language of this and his other contentions as set forth below is verbatim from his hearing petition.

maximum demand limit for water withdrawal from the Susquehanna River.<sup>17</sup> *See* Intervention Petition at 12-13, 17-18. According to Petitioner Epstein, these items have safety significance because a decrease in the availability of water to SSES as a result either of an Act 220 designation or a denial of a pending December 2006 PPL EPU-related request to the SRBC for a water use approval modification, *see id.* Exh. 1, may result in the facilities having to make power generation reductions based on compliance with water use restrictions. This, in turn, would result in the SSES units becoming more susceptible to the types of reactor scrams and power changes of 20% or more that the NRC generally considers to have safety significance. *See* Tr. at 31-32. For their part, both PPL and the Staff assert that these water withdrawal matters, in addition to lacking proper support to create a genuine material dispute, are irrelevant and immaterial to this license amendment proceeding. *See* PPL Answer at 22; Staff Answer at 8.

RULING: As apparently was the case relative to a similar contention (i.e., Contention 2) he sought to have admitted in the recently concluded SSES license renewal adjudication (albeit unsuccessfully, *see* LBP-07-4, 65 NRC at 317-25), Petitioner Epstein seemingly wishes to have this proceeding serve as the vehicle to promote coordination regarding facility water use among the various state and federal bodies — including the SRBC, which operates under the aegis of a federal/state interstate compact — having regulatory jurisdiction over the SSES. *See* Tr. at 41, 49. Unfortunately, this case is an equally inapposite forum to obtain that goal, because, among other things, the issues he seeks to raise are outside the scope of this proceeding and lack materiality in this context. *See* 10 C.F.R. § 2.309(f)(1)(iii), (iv).

To the degree the Act 220 and SRBC water use processes could indeed have an impact upon the availability of water from the Susquehanna River for use at the SSES,<sup>18</sup> as PPL noted, *see* PPL Answer at 16-17, although it provides makeup water to the SSES cooling towers, the Susquehanna River is not a safety-related source of water for the SSES in the context of this amendment. Rather, both plants have an ultimate heat sink that consists of an eight-acre, 25-million gallon spray pond that must be maintained at specified water levels to provide cooling water sufficient to accommodate a design-basis loss of coolant accident in one unit, and bring both units to cold shutdown and maintain the units in that state —

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<sup>17</sup> In his contention, Petitioner Epstein also makes reference to the absence of a Pennsylvania Public Utility Commission proceeding relating to “cost of water,” but supplies no further details as to what that proceeding might entail so as to provide an adequate basis for admitting this contention relative to such a purported deficiency.

<sup>18</sup> In its response, Applicant PPL asserts that the Act 220 process is one that would only result in identifying areas in which water use exceeds, or is projected to exceed, available supplies, but does not itself provide any authority to regulate or control water withdrawal or use permits. *See* PPL Answer at 17-18.

as well as provide spent fuel pool cooling — for 30 days. Under SSES technical specifications, if the delineated water levels are not maintained, PPL is required to take certain actions, which ultimately might include facility shutdown. *See* Tr. at 35-39. Thus, Petitioner Epstein’s concern that the water availability shortfalls for SSES might occur sometime in the future as a consequence of the Act 220 and SRBC processes going forward lacks materiality in terms of any substantial health and safety implications.<sup>19</sup>

Additionally, as the Commission has made apparent in other contexts, *see Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 121-22 (1998), absent some need for resolution to meet the agency’s statutory responsibilities, the agency’s adjudicatory process is not a forum for litigating matters that are primarily the responsibility of other federal or state/local regulatory agencies. To be sure, the EPU request will have implications in terms of increased water consumption, entrainment and impingement, and thermal and liquid effluent discharges, all of which are evaluated in the ER accompanying the PPL application that has not been the subject of Petitioner Epstein’s contentions. *See* ER §§ 7.2.1 to 7.2.4. At the same time, it is apparent water use-related permits under the jurisdiction of entities other than the NRC are associated with operating the SSES under the proposed EPU, in particular the SRBC-issued water use permit that is the subject of the PPL EPU-based revision request. Whether an SRBC permit revision is issued and what additional water use is approved may have a substantial impact on facility operation under an EPU. But relative to the merits of the PPL EPU application, and consistent with existing Commission precedent, whether that SRBC permit revision is issued and what facility operation limitations the revised permit may impose is not a matter within the scope of this proceeding.<sup>20</sup>

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<sup>19</sup>In this regard, even putting aside the speculative nature of the purported harm, which can occur only if the Act 220 and SRBC processes actually result in SSES water allocations that are inadequate for the facilities’ needs, Petitioner Epstein fails to provide any specific technical support for his concern, *see* 10 C.F.R. § 2.309(f)(1)(v), which was first voiced at the prehearing conference, about the degree to which curtailing SSES operations would have safety implications, other than the general statement that “[e]ach scram or power reduction creates a safety challenge.” Tr. at 31. Certainly, nothing that has been presented suggests that the periodic modification of power generation levels that might possibly result from Susquehanna River water use restrictions would be the type of unplanned reactor scram that has been identified as potentially resulting in safety significant challenges to reactor systems.

<sup>20</sup>In addition to his concerns about current and future SSES water use pursuant to the Act 220 and SRBC processes, in seeking to provide a basis for this contention Petitioner Epstein makes reference to an assortment of other purported PPL deficiencies, including (1) PPL noncompliance with thermal discharge/impingement/entrainment milestones under paragraphs (a) and (b) of section 316 of the Clean Water Act (CWA), 33 U.S.C. § 1326(a), (b), and the Environmental Protection Agency’s final

*(Continued)*

Accordingly, we decline to admit this contention for litigation in this proceeding.

*b. TC-2 — PPL Failed To Disclose Damaging Information Regarding Faulty and Corroded Intake Piping*

CONTENTION: PPL failed to disclose damaging information included in a hastily filed Application for Surface Water Withdrawal. [Footnote omitted.] “[W]hen a

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Phase II rules regarding cooling water intake structures at existing facilities, 69 Fed. Reg. 41,576 (July 9, 2004); (2) problems with PPL planning or reporting regarding shad ladders and controlling bacterial/fungal/algae contamination and asiatic clam and zebra mussel infestation using chlorinated water or molluscicides; (3) inadequate PPL responses to prior drought-induced water shortages; and (4) water fouling and fish kill incidents at other nonnuclear facilities operated by members of the PPL corporate family. *See* Intervention Petition at 14-17.

As PPL points out, *see* PPL Answer at 19-20, the alternative thermal effluent limitations afforded by CWA § 316(a) do not apply to the SSES because it employs closed-cycle cooling, while PPL’s CWA § 316(b) compliance is outlined in section 7.2.3 of the ER, which Petitioner Epstein does not contest, thereby rendering this concern an insufficient basis for this contention as lacking adequate factual support and failing to allege any genuine material dispute with the portion of the application that is relevant to his concern. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi).

So too, Petitioner Epstein failed to provide a sufficient factual basis to support a genuine material dispute with the PPL application regarding his shad ladder/contamination/infestation claims given (a) the nearest shad ladders are on dams 100 miles below the SSES, *see* PPL Answer at 21; (b) he provides no evidence of biological fouling at SSES, *see* Intervention Petition at 15 (discussing Three Mile Island (TMI) facility-related circumstances); Petitioner Reply at 8 n.15 (same); and (c) as the ER indicates, ER §§ 7.2.2, 7.2.5, and Petitioner Epstein does not contest, there is no evidence zebra mussels have been found anywhere in the vicinity of the SSES, the asiatic clam is being controlled with an approved molluscicide in the spray pond, and any chlorine discharge is controlled under a National Pollutant Discharge Elimination System (NPDES) permit. *See* 10 C.F.R. § 2.309(f)(1) (v), (vi).

Regarding the drought-related shortages, in the face of Petitioner Epstein’s continuing assertion that ongoing SSES water use consistent with its existing SRBC permit is somehow deficient or improper so as to warrant Board review of SSES water use generally, *see* Petitioner Reply at 6-7, and the uncontroverted PPL showing that during the drought it conformed to the SRBC requirement that the SSES compensate consumptive water use during river low flow conditions by sharing the costs of the Cowanesque Lake Reservoir, which provides a river flow augmentation source, *see* PPL Answer at 19, we likewise find this assertion provides an inadequate factual basis to create a genuine material dispute with the PPL application. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi).

Finally, relative to the purported water fouling incidents, Petitioner Epstein’s assertions regarding members of the PPL corporate family who are not NRC licensees fall far short of what is required to establish circumstances that would create a genuine material dispute regarding the potential for such activities by PPL, which is an NRC licensee, during the course of SSES EPU operation. *See id.* § 2.309(f)(1)(v); *see also GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000) (absent evidence to the contrary, it is assumed NRC licensees will not contravene agency regulations).

party has relevant evidence within his control which he fails to produce, that failure gives rise to an inference that the evidence is unfavorable to him.” [Footnote omitted.]

Intervention Petition at 19.

DISCUSSION: *Id.* at 19-25; PPL Answer at 22-27; Staff Answer at 12-14; Petitioner Reply at 9; Tr. at 54-69.

The crux of this contention is Petitioner Epstein’s assertion that the PPL EPU application is deficient because it does not include plans for repairing faulty and corroded piping and inaccurate flow meters associated with the SSES Susquehanna River water intake system, despite having identified this deficiency in its pending December 2006 SRBC application seeking an increase in its current surface water withdrawal maximum daily limit. According to Petitioner Epstein, PPL’s failure to address, correct, and analyze the problems associated with the river intake system significantly reduces SSES safety margins, undermines PPL’s evaluation of the impact the EPU would have on water-related components and systems, and deprives PPL of the ability to accurately gauge the amount of water passing through the plant’s cooling system for consumption, cooling, and discharge purposes. *See* Intervention Petition at 20-23. PPL and the Staff assert, however, that the river intake system has no relevance to PPL’s EPU application by reason of the fact it relates only to SRBC-imposed requirements and is not relied upon for NRC safety-related analyses or any other relevant purpose. *See* PPL Answer at 23-24; Staff Answer at 12-13.

RULING: In arguing that PPL wrongly omitted information from its application, Petitioner Epstein makes no mention of any NRC requirement for such disclosures, but rather cites only to Act 220 and related SRBC regulations that he states require accurate metering to within 5% on the water diverted to the SSES. As we explained with respect to TC-1, *see supra* p. 27, this proceeding is not the proper forum for litigating matters that are primarily the responsibility of other federal/state/local regulatory agencies. Further, as we also explained previously, *see supra* pp. 26-27, although the river intake system provides makeup water for the SSES cooling system, it is not a safety-related system relative to PPL’s EPU application. Thus, like issue statement TC-1, contention TC-2 is inadmissible for failing to raise any issues that are within the scope of this cause or are material to the safety findings the NRC must make in this EPU proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iii), (iv).

We likewise reject Petitioner Epstein’s argument, first articulated during the July 10 prehearing conference, that the alternative method currently in use by PPL for measuring water withdrawal and consumptive use is inadequate such that additional monitoring should be implemented. *See* Tr. at 65-68; *see also* Intervention Petition, Exh. 1, at 5 (Letter from Jerome S. Fields, PPL Senior Environmental Scientist-Nuclear, to Paul O. Schwartz, Executive Director, SRBC

at 3 (Dec. 20, 2006)). Issues regarding the adequacy of the SSES river intake flow meters and the methods used to measure water withdrawal are wholly within the purview of the SRBC and so outside the scope of this EPU proceeding. *See* 10 C.F.R. § 2.309(f)(1)(iii). If he believes the methodology currently being used by PPL violates SRBC regulations, Petitioner Epstein is best served by raising that concern before the SRBC.

Finally, we must reject this contention because Petitioner Epstein does not provide any support for his allegation that PPL's failure to submit information regarding the river intake system in its EPU application and to analyze and correct that item significantly reduces the SSES safety margin and undermines its evaluation of EPU impacts on water-related components and systems. In his intervention petition and reply pleading, Petitioner Epstein does not support this claim with any citation to the portions of the PPL application he believes are deficient because they lack this information, or reference any documentation or expert opinion that supports his margin of safety reduction assertion or identifies the water-related components and systems he believes are in jeopardy. Additionally, this concern fails to merit admission on scope and materiality grounds because it again is based on the misdirected premise that, in the context of this EPU application, the river intake system is a safety-related structure such that alleged inaccuracies with its withdrawal metering would have safety significance. *See* 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v), (vi).<sup>21</sup>

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<sup>21</sup> Besides these main points, Petitioner Epstein references several additional claimed deficiencies in the PPL river intake system, including (1) the failure of the PPL application to provide for adequate inspection of systems and components that may contain radioactively contaminated water; (2) the water intake variable undermines PPL's ability to affix the appropriate chemical dosage needed to defeat thermal aquatic invasions not planned for in connection with its original operating license or the present EPU amendment; (3) the water intake variable presents increased safety challenges by undermining and disrupting the SSES borated water formula; (4) the EPU entails additional stream flow introduced into the high-pressure environment of the turbines so as to cause turbine blade stress cracking; and (5) the EPU application does not contain an adequate analysis of the effect of the EPU on aging equipment such as occurred relative to the steam dryers during an EPU test at the Quad Cities facility. *See* Intervention Petition at 22-25.

We find each of Petitioner Epstein's vague and unsupported assertions insufficient to support this contention's admissibility. *See* 10 C.F.R. § 2.309(f)(1)(v), (vi). Relative to his concerns about radioactively contaminated water and borated water systems, Petitioner Epstein fails to show any relationship between the intake system that feeds the SSES cooling basin and facility systems and components containing radioactive water (including underground pipes and tanks) or the standby liquid control system that uses borated water. His chemical dosage concern likewise is lacking given, as we have already explained, the PPL ability to apply molluscicides to the spray pond. *See supra* note 20. And as to his turbine blade stress and steam dryer claims, he has failed to identify any deficiencies in the PPL application's discussions of planned EPU-associated turbine and steam dryer design and component changes, which include installing upgraded turbine blades and steam dryers, analyses of turbine missile risk probabilities and replacement steam dryer fatigue at CPPU conditions,

*(Continued)*

For these reasons, we also reject issue statement TC-2 as inadmissible.

c. *TC-3 — PPL Failed To Consider the Consequences of an Accident Caused by Its Proposed Uprate*

CONTENTION: The proposed change involves a significant increase in the “consequences” of an accident than previously evaluated, and the amount of radioactivity in the reactor core (and thus available for release in event of an accident) is significantly more at 120% power than at 100% power.

Intervention Petition at 26.

DISCUSSION: *Id.* at 26-28; PPL Answer at 27-29; Staff Answer at 14-16; Petitioner Reply at 10; Tr. at 69-82.

Petitioner Epstein bases this contention on the notion that PPL and the Staff have not examined the “consequences” of an accident associated with the proposed EPU and the increased core radioactivity it would entail. *See* Intervention Petition at 27-28. Also, in his reply pleading, Petitioner Epstein posited two possible scenarios that needed to be evaluated, i.e., “spent fuel failure in Transnuclear [NUHOMS] 61BT casks from [high-level transuranic] waste; and, density problems associated with re-racking spent fuel cells to accommodate off-core fuel loads.” Petitioner Reply at 10. PPL and the Staff, on the other hand, noted that PPL did analyze accident consequences in sections 8.3 to 8.5 and section 9.2 of its PUSAR and ER sections 8.2 and 8.3, none of which Petitioner Epstein cited or made any attempt to critique. *See* PPL Answer at 28-29; Staff Answer at 15-16. In the context of its prehearing conference presentation, PPL also objected to Petitioner Epstein’s reply scenarios as an improper attempt to raise new information in a reply pleading and as inadequate to provide a basis for an admissible contention. *See* Tr. at 71-72. Accordingly, PPL and the Staff

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and a PPL commitment to a steam dryer inspection program. *See* PUSAR at 7-1 to 7-3; [SSES] Proposed License Amendment No. 285 for Unit 1 Operating License No. NPF-14 and Proposed License Amendment No. 253 for Unit 2 Operating License No. NPF-22 [CPPU] — Supplement, PLA-6138, at 2 (Dec. 4, 2006) (ADAMS Accession No. ML063460354); PLA-6076, Attach. 14, at 8 (nonproprietary version of steam dryer evaluation) (ADAMS Accession No. ML062900162); [SSES] Proposed License Amendment No. 285 for Unit 1 Operating License No. NPF-14 and Proposed License Amendment No. 253 for Unit 2 Operating License No. NPF-22 [CPPU] — Supplement, PLA-6146, Encl. 2, at 1 (Dec. 26, 2006) (nonproprietary version of replacement steam dryer fatigue analysis) (ADAMS Accession No. ML070040383). These claims thus lack merit as bases for an admissible contention as well.

concluded that Petitioner Epstein has not met the section 2.309(f) admissibility requirements for this contention either.<sup>22</sup>

RULING: Contrary to Petitioner Epstein's assertion, it is apparent PPL did provide an evaluation of the "consequences" of the proposed EPU in both the technical and environmental portions of its EPU application. Section 9.2 of the PUSAR addresses the radiological consequences of design basis accidents for the SSES, *see* PUSAR at 9-4,<sup>23</sup> while ER section 8.3 reviews the potential environmental impact and radiological consequences of reactor accidents, *see* ER at 8-8 to 8-10; *see also supra* p. 18. Contrary to the dictates of section 2.309(f)(1)(vi), Petitioner Epstein fails to refer to either of these portions of the application or contend that the analyses they discuss are inadequate. Further, in connection with his cask failure and spent fuel reracking concerns, not only were they an impermissible attempt to introduce a new argument to establish a contention's admissibility in the context of a reply pleading, *see Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225, *reconsideration denied*, CLI-04-35, 60 NRC 619, 623-24 (2004), but he has failed to provide any statement of alleged facts, specific sources or documents, or expert opinion that would support the scenarios as required under section 2.309(f)(1)(v).<sup>24</sup>

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<sup>22</sup> In addition, both PPL and the Staff argue that this contention is merely an impermissible challenge to the Staff's proposed finding of no significant hazards consideration, which is a prerequisite to Staff issuance of an amendment granting the PPL EPU request prior to the conclusion of this adjudication. *See* PPL Answer at 27; Staff Answer at 15. While Petitioner Epstein never explicitly states that he is challenging the Staff's proposed finding of no significant hazards consideration, to whatever extent this issue statement (or his other contentions) might be construed as attempting to mount such a challenge, they clearly would be improper. As the agency's rules state, "[n]o petition or other request for review on the staff's significant hazards consideration determination will be entertained by the Commission. The staff's determination is final, subject only to the Commission's discretion on its own initiative, to review the determination." 10 C.F.R. § 50.58(b)(6); *see also Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-05-14, 61 NRC 359, 361 n.2 (2005).

<sup>23</sup> In this regard, the PPL PUSAR references a previous PPL accident source term analysis that was prepared, among other things, in anticipation of the EPU amendment request. *See* [SSES] Proposed Amendment No. 281 to License NPF-14 and Proposed Amendment No. 251 to License NPF-22: Application for License Amendment and Related Technical Specification Changes To Implement Full-Scope Alternative Source Term in Accordance with 10 CFR 50.67, PLA-5963, at 2, 3 (Oct. 13, 2005) (ADAMS Accession No. ML060120353).

<sup>24</sup> Relative to these concerns, we also note that Petitioner Epstein's spent fuel cask failure assertion appears to be an impermissible challenge to the rulemaking certification of those casks under 10 C.F.R. Part 72, *see* 10 C.F.R. § 72.214, while his spent fuel reracking concern seemingly was addressed in the application PUSAR. In the PUSAR, PPL notes that the increased heat from the uprate "will result in a higher heat load in the fuel pool during long-term storage," but also declares that the current fuel racks are "designed for higher temperatures (212°F) than the licensing limit of 125°F. There is no effect on the design of the SSES fuel racks because the original fuel pool design temperature is

(Continued)

In short, Petitioner Epstein's issue statement TC-3 does not meet the requirements governing the admission of litigable contentions and so must be dismissed.

### III. CONCLUSION

Although the record before the Licensing Board contains information that is minimally sufficient for the Board to conclude that Petitioner Eric Joseph Epstein has met his burden of establishing his standing as of right to participate in this proceeding, relative to his three technical contentions, the Board has determined that none is admissible, either as outside the scope of this proceeding and/or as lacking materiality, adequate factual support, or sufficient information to demonstrate a genuine material factual or legal dispute exists with PPL relative to its EPU application. Accordingly, his hearing request is denied.<sup>25</sup>

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For the foregoing reasons, it is this 27th day of July 2007, ORDERED, that:

1. Relative to the contentions specified in section II.B.2 above, the Licensing Board having concluded that none of the proffered issue statements is admissible, Petitioner Epstein's hearing request is *denied*.
2. In accordance with the provisions of 10 C.F.R. § 2.311, as it rules upon an

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not exceeded." PUSAR at 6-6. Furthermore, in evaluating the changes needed to the SSES technical specifications resulting from the EPU, PPL's analysis showed that a new fuel design is not required for this EPU. "The current fuel design limits will continue to be met at CPPU conditions. Analyses for each fuel reload will continue to meet the criteria accepted by the NRC. Future fuel designs will meet acceptance criteria accepted by the NRC." PLA-6076, Attach. 1, at 24 (evaluation of proposed technical specification changes for EPU) (ADAMS Accession No. ML062900160). Petitioner Epstein has not alleged that these analyses are inadequate.

<sup>25</sup> Given we conclude we are unable to grant Petitioner Epstein's hearing request, we need not reach his argument that a formal hearing under 10 C.F.R. Part 2, Subpart G, is appropriate for litigating issue statement TC-2. *See* Petitioner Reply at 10.

intervention petition, any appeal to the Commission from this Memorandum and Order must be taken within ten (10) days after it is served.

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>26</sup>

G. Paul Bollwerk, III, Chairman  
ADMINISTRATIVE JUDGE

Richard F. Cole  
ADMINISTRATIVE JUDGE

Lester S. Rubenstein  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
July 27, 2007

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<sup>26</sup> Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to (1) counsel for Applicant PPL and the Staff; and (2) Petitioner Eric Joseph Epstein.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Dale E. Klein**, Chairman  
**Edward McGaffigan, Jr.**  
**Gregory B. Jaczko**  
**Peter B. Lyons**

**In the Matter of**

**Docket No. 52-008-ESP**

**DOMINION NUCLEAR NORTH  
ANNA, LLC  
(Early Site Permit for North Anna  
ESP Site)**

**August 2, 2007**

**ORDER**

On June 29, 2007, a split Atomic Safety and Licensing Board issued its Initial Decision, LBP-07-9, in the “mandatory hearing” portion of this adjudication addressing Dominion Nuclear North Anna, LLC’s application for an Early Site Permit (ESP). “Before the Early Site Permit . . . can be made effective, the Commission must review and approve the Licensing Board’s Initial Decision authorizing its issuance.”<sup>1</sup> Here, the majority of the Board approved issuance of the North Anna ESP, while the dissenting judge would have denied the ESP due to insufficiencies in the NRC Staff’s and Dominion’s examinations of alternative sites and alternative design features related to water conservation. The Initial Decision recommended that the Commission consider the following issues:<sup>2</sup>

- (i) Did the Staff’s environmental justice analysis in the FEIS follow the

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<sup>1</sup> *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-7, 65 NRC 122 (2007) (citing 10 C.F.R. § 2.340(f)).

<sup>2</sup> See LBP-07-9, 65 NRC 539, 616-29 (2007).

“greater detail” guidance set forth in the Commission’s Environmental Justice Policy Statement?

- (ii) How do the NRC’s multiple radiation protection standards (and the ALARA concept) apply to new reactors that are proposed to be added at a site with preexisting nuclear reactors and radiological effluents?
- (iii) How should the Commission apply its statement prohibiting partial ESPs and ESPs where adequate information is not available to a situation where significant elements of the plant parameter envelope for the ESP are missing and numerous siting issues are unresolved due to lack of information?

We invite the NRC Staff and Dominion to submit initial and reply briefs addressing the questions above, the issues of alternative sites and alternative design features raised in Judge Karlin’s dissent, the suggestions in LBP-07-9 regarding perceived deficiencies in the NRC Staff’s and Dominion’s evidence and arguments,<sup>3</sup> and any other issues that, in the parties’ view, warrant comment. Each initial brief shall be no longer than 40 pages (exclusive of title page, table of contents, and table of authorities) and shall be filed within 21 calendar days of the date of this Order. Each reply brief shall be no longer than 20 pages and shall be filed within 14 days thereafter.<sup>4</sup>

IT IS SO ORDERED.

For the Commission

KENNETH R. HART  
Acting Secretary of the Commission

Dated at Rockville, Maryland,  
this 2d day of August 2007.

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<sup>3</sup> See 65 NRC at 569-75 (hydrology), 582-83 (tritium), 589-94 (alternative sites); dissenting opinion, 65 NRC at 631-38 (alternative sites), 631 & 638-39 (alternative design criteria).

<sup>4</sup> Due to the potentially large number of issues requiring discussion, the Commission will entertain motions to expand these page limits if good cause can be shown. We urge the parties, however, to keep their briefs as short as possible, consistent with providing meaningful responses to our inquiry.

**Commissioner Gregory B. Jaczko Respectfully Concurring**

I approve of this order and the request for briefs on these difficult and important questions. I offer a concurring opinion because I believe the Commission should have also specifically requested *amicus* briefs on these issues. The answers to these questions will impact the early site permit process for future applicants and participants. Thus, I believe the ultimate Commission decision would be better informed with a wider variety of interested stakeholder perspectives on these issues to aid the Commission in better understanding how best to improve the ESP process.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Dale E. Klein**, Chairman  
**Edward McGaffigan, Jr.**  
**Gregory B. Jaczko**  
**Peter B. Lyons**

**In the Matter of**

**Docket No. 52-011-ESP**

**SOUTHERN NUCLEAR OPERATING  
COMPANY  
(Early Site Permit for Vogtle  
ESP Site)**

**August 30, 2007**

**MEMORANDUM AND ORDER**

The Commission delegated this early site permit (ESP) application proceeding to the Licensing Board to conduct the mandatory hearing and make the findings required under 10 C.F.R. § 2.104(b).<sup>1</sup> Subsequently, the Commission accepted a proposal from the Combined License Review Task Force that the Commission itself conduct the mandatory hearings for combined operating license applications.<sup>2</sup> In view of this Commission decision, the Board certified the following question to the Commission, pursuant to 10 C.F.R. § 2.319(l):

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<sup>1</sup> See Southern Nuclear Operating Company; Notice of Hearing and Opportunity To Petition for Leave To Intervene on an Early Site Permit for the Vogtle ESP Site, 71 Fed. Reg. 60,195, 60,195-96 (Oct. 12, 2006).

<sup>2</sup> See Memorandum from Annette L. Vietti-Cook, Secretary, to Luis A. Reyes, Executive Director for Operations, et al., Staff Requirements — COMDEK-07-0001/COMJSM-07-0001 — Report of the Combined License Review Task Force (June 22, 2007) at 1.

Does the Commission wish this Licensing Board to conduct the Vogtle ESP mandatory hearing?<sup>3</sup>

In response to this certified question, the Commission affirms its original delegation to the Board and asks the Board to conduct the mandatory hearing in this proceeding, as originally planned.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 30th day of August 2007.

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<sup>3</sup>Memorandum (Certifying Question Regarding Conduct of Mandatory Hearing) (July 12, 2007) at 3, unpublished Licensing Board decision.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Ann Marshall Young, Chair  
Dr. Peter S. Lam  
Dr. Alice Mignerey**

**In the Matter of**

**Docket No. 50-400-LR  
(ASLBP No. 07-855-02-LR-BD01)**

**CAROLINA POWER & LIGHT  
COMPANY  
(Shearon Harris Nuclear Power  
Plant, Unit 1)**

**August 3, 2007**

In this license renewal proceeding the Licensing Board finds that Petitioners have standing to intervene but have not submitted a contention that is admissible in the current circumstances, and that the proceeding must therefore be terminated at this time.

**RULES OF PRACTICE: STANDING TO INTERVENE;  
INTERVENTION**

A petitioner's standing, or right to participate in a Commission licensing proceeding, is derived from section 189a of the Atomic Energy Act (AEA), which requires the NRC to provide a hearing "upon the request of any person whose interest may be affected by the proceeding," and which has been implemented in Commission regulations as 10 C.F.R. § 2.309(d)(1).

**RULES OF PRACTICE: STANDING TO INTERVENE;  
INTERVENTION**

Judicial concepts of standing, to which licensing boards are to look in ruling on standing, provide the following guidance in determining whether a petitioner has established the necessary “interest” under 10 C.F.R. § 2.309(d)(1): To qualify for standing a petitioner must allege (1) a concrete and particularized injury that is (2) fairly traceable to the challenged action and (3) likely to be redressed by a favorable decision, criteria commonly referred to, respectively, as “injury in fact,” causality, and redressability. The injury may be either actual or threatened, but must lie arguably within the “zone of interests” protected by the statutes governing the proceeding — here, either the Atomic Energy Act (AEA) or the National Environmental Policy Act (NEPA).

**RULES OF PRACTICE: STANDING TO INTERVENE;  
INTERVENTION**

Individual petitioners living within 50 miles of a nuclear power plant may establish standing based on a longstanding “proximity presumption” principle in NRC adjudicatory proceedings, under which the elements of standing will be presumed to be satisfied if an individual lives within the zone of possible harm from a significant source of radioactivity, in the geographical area that might be affected by an accidental release of fission products; this has been defined in proceedings involving nuclear power plants as being within a 50-mile radius of such a plant.

**RULES OF PRACTICE: STANDING TO INTERVENE;  
INTERVENTION**

An organization that wishes to establish standing to intervene may do so by demonstrating either organizational or representational standing. To establish organizational standing it must be shown that the interests of the organization will be harmed by the proceeding. To establish representational standing, (1) it must be demonstrated that the interests of at least one member who has standing to sue in his or her own right may be affected by the licensing action; (2) that member must be identified by name and address; and (3) it must be shown that the organization is authorized to request a hearing on behalf of that member. Petitioner organizations that provided affidavits of seven members who lived within 50 miles of plant were found to have established standing on behalf of such public interest groups; even though affidavits did not explicitly authorize organizations to represent them, this was implicit in their providing the affidavits, and in any event this matter was cured after objection was raised.

#### **RULES OF PRACTICE: CONTENTIONS**

To intervene in an NRC proceeding, a petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. § 2.309(f)(1). Failure of a contention to meet any of the requirements of section 2.309(f)(1) is grounds for its dismissal.

#### **RULES OF PRACTICE: CONTENTIONS**

The “strict contention rule serves multiple interests,” including (1) focusing the hearing process on real disputes susceptible of resolution in an adjudication (for example, a petitioner may not demand an adjudicatory hearing to attack generic NRC requirements or regulations, or to express generalized grievances about NRC policies); (2) by requiring detailed pleadings, putting other parties in the proceeding on notice of the Petitioners’ specific grievances and thereby giving them a good idea of the claims they will be either supporting or opposing; and (3) helping to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions.

#### **RULES OF PRACTICE: CONTENTIONS**

Although the February 2004 revision of the NRC procedural rules no longer incorporates all of the prior provisions, including some of those formerly found in 10 C.F.R. § 2.714(a)(3), (b)(1), which in the past permitted the amendment and supplementation of petitions and filing of contentions after the original filing of petitions, the new rules contain essentially the same substantive admissibility standards for contentions.

#### **RULES OF PRACTICE: CONTENTIONS; LICENSE RENEWAL: SCOPE**

Under 10 C.F.R. § 2.309(f)(1)(iii), a contention must allege facts sufficient to establish that it falls directly within the scope of a proceeding. The scope of a license renewal proceeding is addressed, with regard to safety-related issues, in 10 C.F.R. Part 54, and, with regard to environmental issues, in 10 C.F.R. Part 51.

#### **RULES OF PRACTICE: CONTENTIONS**

A contention that challenges any Commission rule or applicable statutory requirement is outside the scope of the proceeding. A petitioner may, however, within the adjudicatory context submit a request for waiver of a rule under 10

C.F.R. § 2.335, and outside the adjudicatory context file a petition for rulemaking under 10 C.F.R. § 2.802 or a request that the NRC Staff take enforcement action under 10 C.F.R. § 2.206.

#### **RULES OF PRACTICE: CONTENTIONS; LICENSE RENEWAL**

Under 10 C.F.R. § 2.309(f)(1)(iv), a petitioner must demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding; the standards defining the findings the NRC must make to support a license renewal are set forth in 10 C.F.R. § 54.29.

#### **RULES OF PRACTICE: CONTENTIONS**

Under 10 C.F.R. § 2.309(f)(1)(vi), requiring the provision of sufficient information to show a genuine dispute with the applicant on a material issue of law or fact, a petitioner must read pertinent portions of the license application, including the safety analysis report and the environmental report (ER); state the applicant's position and the petitioner's opposing view; and explain why petitioner disagrees with the applicant. If a petitioner does not believe these materials address a relevant issue, petitioner must explain why the application is deficient. A contention must directly controvert a position taken by the applicant in the application, and an allegation that some aspect of a license application is "inadequate" or "unacceptable" does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect.

#### **LICENSE RENEWAL: SCOPE, SAFETY-RELATED ISSUES**

As addressed in 10 C.F.R. Part 54 and described by the Commission in *Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4)*, CLI-01-17, 54 NRC 3 (2001), the NRC license renewal safety review is focused "upon those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs," which the Commission considers "the most significant overall safety concern posed by extended reactor operation," and on "plant systems, structures, and components for which current [regulatory] activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation." An issue can be related to plant aging and still not warrant review at the time of a license renewal application, if an aging-related issue is "adequately dealt with by regulatory processes" on an ongoing basis. For example, if a structure or component is already required to be replaced "at

mandated, specified time periods,’’ it would fall outside the scope of license renewal review.

#### **LICENSE RENEWAL: SCOPE, ENVIRONMENTAL ISSUES**

The regulatory provisions of 10 C.F.R. Part 51, relating to the environmental aspects of license renewal, arise out of the requirement that the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(C), places on federal agencies to “include in every recommendation or report on . . . major federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on . . . the environmental impact of the proposed action . . . .” As noted in *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989), the “statutory requirement that a federal agency contemplating a major action prepare such an environmental impact statement [EIS] serves NEPA’s ‘action-forcing’ purpose in two important respects. . . . It ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.”

#### **LICENSE RENEWAL: SCOPE, ENVIRONMENTAL ISSUES**

Although the requirements of NEPA are directed to federal agencies and thus the primary duties of NEPA fall on the NRC Staff in NRC proceedings, the initial requirement to analyze the environmental impacts of an action, including license renewal, is directed to applicants, and 10 C.F.R. § 51.53(c) requires a license renewal applicant to submit with its application an environmental report (ER), which “must contain a description of the proposed action, including the applicant’s plans to modify the facility or its administrative control procedures as described in accordance with § 54.21,” and “describe in detail the modifications directly affecting the environment or affecting plant effluents that affect the environment.”

#### **LICENSE RENEWAL: SCOPE, ENVIRONMENTAL ISSUES**

Environmental issues identified as “category 1,” or “generic,” issues in 10 C.F.R. Part 51, Subpart A, Appendix B, are not within the scope of a license renewal proceeding. On these issues the Commission found that it could draw generic conclusions that are applicable to nuclear power plants generally. Thus these issues need not be repeatedly assessed on a plant-by-plant basis, and license

renewal applicants may in their ERs refer to and adopt the generic environmental impact findings found in Table B-1, Appendix B, for all category 1 issues, with the following exception: As required by 10 C.F.R. § 51.53(c)(3)(iv), ERs must also contain “any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware,” even if this concerns a category 1 issue; but this is not a proper subject for a contention absent a waiver of the rule in 10 C.F.R. § 51.53(c)(3)(i) that category 1 issues need not be addressed in a license renewal.

**LICENSE RENEWAL: SCOPE, ENVIRONMENTAL ISSUES**

The Commission was not able to make generic environmental findings on issues identified as “category 2,” or “plant specific,” issues in 10 C.F.R. Part 51, Subpart A, Appendix B, and thus these issues are within the scope of license renewal, and applicants must provide a plant-specific review of them. These issues are characterized by the Commission as involving environmental impact severity levels that could differ significantly from plant to plant, or impacts for which additional plant-specific mitigation measures should be considered.

**LICENSE RENEWAL: SCOPE, ENVIRONMENTAL ISSUES**

As required under 10 C.F.R. § 51.95(c), the Commission in 1996 adopted a “Generic Environmental Impact Statement for License Renewal of Nuclear Plants” (GEIS), published as NUREG-1437, which provides data supporting the table of category 1 and 2 issues in Appendix B. Issuance of the 1996 GEIS was part of an amendment of the requirements of Part 51 undertaken by the Commission to establish environmental review requirements for license renewals “that were both efficient and more effectively focused.”

**LICENSE RENEWAL: SCOPE, ENVIRONMENTAL ISSUES**

Section 51.103 defines the requirements for the “record of decision” relating to any license renewal application, including the standard that the Commission, in making such a decision pursuant to Part 54, “shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.”

**RULES OF PRACTICE: CONTENTIONS; LICENSE RENEWAL**

A contention that the license should not be renewed for an additional 20 years

until the plant comes into compliance with fire safety requirements, although it raises a significant issue, is found not to be admissible at this time, based on binding Commission case law precedent, that issues already the focus of ongoing regulatory processes do not come within the NRC's safety review of a license renewal application, and based on the circumstance that licensee was required by NRC Staff to file a license amendment application indicating how it intended to come into compliance with relevant fire safety requirements by May 2008, prior to scheduled final action on the license renewal application, which would seem to allow for such processes to provide "reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis," as required under 10 C.F.R. § 54.29(a) — provided Staff addresses whether the new proposed fire protection program effectively addresses all relevant aging issues. Though the contention is denied at this time, petitioners might file a new petition in a license amendment proceeding and/or at a later point in this license renewal proceeding, provided relevant requirements of 10 C.F.R. § 2.309(c), (f)(1), and/or (f)(2) are met.

**RULES OF PRACTICE: CONTENTIONS; LICENSE RENEWAL**

Contentions that the license renewal application fails to satisfy NEPA, because it does not address environmental impacts of attack by deliberate and malicious crash of aircraft into the plant, must be denied based on binding Commission case law precedent that NEPA imposes no duty on NRC to consider intentional malevolent acts in a license renewal proceeding.

**RULES OF PRACTICE: CONTENTIONS; LICENSE RENEWAL**

A contention that the plant's evacuation plan does not adequately protect the health and safety of public and plant workers must be denied based on binding Commission case law precedent that emergency planning is not within the scope of license renewal as a safety issue, and because, as an environmental issue, petitioners did not challenge specific input data to the severe accident mitigation alternatives (SAMA) analysis, which might have brought the contention within the scope of license renewal.

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**MEMORANDUM AND ORDER**  
**(Ruling on Standing and Contentions of Petitioners**  
**North Carolina Waste Awareness and Reduction Network**  
**and Nuclear Information and Resource Service)**

**I. INTRODUCTION**

This proceeding involves the application of Carolina Power & Light Company (CP&L) to renew the operating license for the Shearon Harris Nuclear Power Plant, Unit 1 (Shearon Harris or plant), located in New Hill, North Carolina, for an additional 20-year period. Petitioners North Carolina Waste Awareness and Reduction Network (NCWARN) and Nuclear Information and Resource Service (NIRS), referred to collectively as Petitioners, have filed a request for hearing and petition to intervene in accordance with 10 C.F.R. § 2.309, in which they submit four contentions raising challenges in three principal areas of concern: alleged noncompliance with relevant fire protection requirements, failure to address the environmental impacts of possible aircraft attacks, and certain changes in circumstances that are asserted to render the current evacuation plan for the plant inadequate, in an environmental context.<sup>1</sup> (One of the contentions addresses the alleged combined environmental impact of the first two concerns.) Finally, Petitioners argue that certain backfits are required with regard to the first two areas of concern.

In this Memorandum and Order we find that, while Petitioners have shown standing to participate in the proceeding, they have not submitted any admissible contentions at this time. Therefore, as we are required to do under relevant law, we dismiss their petition and terminate this proceeding. We also address Petitioners'

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<sup>1</sup>The first of Petitioners' contentions, concerning fire protection issues, is identified as a "technical" contention, numbered "T-1," and also herein referred to as "TC-1." The remaining three are identified as "environmental" contentions, numbered "EC-1," "EC-2," and "EC-3."

request for certain backfits to the plant, and a motion for stay made during oral argument held July 17, 2007.

## II. BACKGROUND

CP&L's application requesting renewal of Operating License No. NPF-63 was received by the NRC Staff on November 16, 2006.<sup>2</sup> The current operating license expires on October 24, 2026; the requested renewal would extend the license for an additional 20-year period.<sup>3</sup> The NRC published a notice of acceptance and docketing and opportunity for hearing regarding this license renewal application (LRA or Application) on March 20, 2007,<sup>4</sup> and on May 18, 2007, Petitioners timely filed a petition to intervene and request for hearing.<sup>5</sup>

On May 25, 2007, the Commission through its Secretary referred the Petition to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel;<sup>6</sup> on May 31 this Atomic Safety and Licensing Board (Board) was established to preside over this adjudicatory proceeding;<sup>7</sup> and on June 5 the Board issued an order providing guidance for the proceeding.<sup>8</sup> On June 18, 2007, the NRC Staff and CP&L filed responses to the Petition,<sup>9</sup> and on June 25, 2007, Petitioners filed a reply to these responses.<sup>10</sup>

On June 13, 2007, the Board issued an order scheduling oral argument on the petition for July 17, 2007, as well as setting the evening of July 17 for a session to

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<sup>2</sup>Harris Nuclear Plant License Renewal Application (ADAMS Accession No. ML063350270) [hereinafter Application], enclosed with Letter from Cornelius J. Gannon to U.S. NRC (Nov. 14, 2006) (ADAMS Accession No. ML063350267).

<sup>3</sup>Application at 1.1-1; *see also* Notice of Opportunity for Hearing, and Notice of Intent To Prepare an Environmental Impact Statement and Conduct the Scoping Process for Facility Operating License No. NPF-63 for an Additional 20-Year Period[,], Carolina Power & Light Company[,], Shearon Harris Nuclear Power Plant, Unit 1, 72 Fed. Reg. 13,139 (Mar. 20, 2007).

<sup>4</sup>72 Fed. Reg. 13,139.

<sup>5</sup>Petition for Leave To Intervene and Request for Hearing with Respect to Renewal of Facility Operating License No. NPF-63 by [NCWARN] and [NIRS] (May 18, 2007) [hereinafter Petition].

<sup>6</sup>Memorandum from Annette L. Vietti-Cook to E. Roy Hawkens (May 25, 2007).

<sup>7</sup>Establishment of Atomic Safety and Licensing Board (May 31, 2007).

<sup>8</sup>Licensing Board Order (Regarding Schedule and Guidance for Proceedings) (June 5, 2007) (unpublished).

<sup>9</sup>NRC Staff Response to Petition for Leave To Intervene and Request for a Hearing filed by the [NCWARN] and the [NIRS] (June 18, 2007) [hereinafter Staff Response]; [CP&L's] Answer to Petition for Leave To Intervene of NCWARN and NIRS (June 18, 2007) [hereinafter Applicant's Answer].

<sup>10</sup>Petitioners' Reply to Opposition of CPL and NRC Staff to Petition for Leave To Intervene and Request for a Hearing (June 25, 2007) [hereinafter Petitioners' Reply].

hear limited appearance statements pursuant to 10 C.F.R. § 2.315(a).<sup>11</sup> Thereafter, oral argument and the limited appearance session were held in Raleigh, North Carolina, as scheduled.<sup>12</sup> Subsequently, following up on matters that arose at oral argument, Petitioners filed certain affidavits of their members regarding authorization of NCWARN and NIRS to represent them in this proceeding,<sup>13</sup> and a motion to stay,<sup>14</sup> to which the Applicant and NRC Staff have responded.<sup>15</sup>

### **III. BOARD RULING ON STANDING OF PETITIONER TO PARTICIPATE IN PROCEEDING**

A petitioner's standing, or right to participate in a Commission licensing proceeding, is derived from section 189a of the Atomic Energy Act (AEA), which requires the NRC to provide a hearing "upon the request of any person whose interest may be affected by the proceeding."<sup>16</sup> The Commission has implemented this requirement in its regulations as 10 C.F.R. § 2.309(d)(1).<sup>17</sup>

When determining whether a petitioner has established the necessary "interest" under Commission rules, licensing boards are directed by Commission

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<sup>11</sup> Licensing Board Order (Regarding Oral Argument and Limited Appearance Session) (June 13, 2007) (unpublished). *See also* Order (Regarding Oral Argument and Limited Appearance Session) (June 26, 2007) (unpublished); Notice (Notice of Opportunity To Make Oral or Written Limited Appearance Statements) (June 26, 2007), 72 Fed. Reg. 36,516 (July 3, 2007); Order (Regarding Questions To Focus on in Oral Argument; Timing of Oral Argument) (June 29, 2007) (unpublished) [hereinafter 6/29/07 Order (Regarding Questions)].

<sup>12</sup> *See* Transcript at 1-186 (July 17, 2007) [hereinafter "Tr."].

<sup>13</sup> Supplemental Declarations by Petitioners' Members (July 23, 2007) [hereinafter Supplemental Declarations].

<sup>14</sup> Petitioners' Motion To Stay the Proceedings (July 20, 2007) [hereinafter Motion To Stay].

<sup>15</sup> [CP&L's] Response in Opposition to NCWARN and NIRS Motion for Stay of Proceedings (July 20, 2007) [hereinafter Applicant Response to Motion To Stay]; NRC Staff Response to and Opposition to Motion To Stay the Proceedings (July 20, 2007) [hereinafter Staff Response to Motion for Stay]; *see* Tr. at 183.

<sup>16</sup> 42 U.S.C. § 2239(a)(1)(A) (2000).

<sup>17</sup> Section 2.309(d)(1) provides in relevant part that the Board shall consider three factors when deciding whether to grant standing to a petitioner: the nature of the petitioner's right under the AEA to be made a party to the proceeding; the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and the possible effect of any order that may be entered in the proceeding on the petitioner's interest. 10 C.F.R. § 2.309(d)(1)(ii)-(iv). The provisions of 10 C.F.R. § 2.309 were formerly found in 10 C.F.R. § 2.714, prior to a major revision of the Commission's procedural rules for adjudications in 2004; thus, case law interpreting the prior section remains relevant. *See* Changes to Adjudicatory Process, 69 Fed. Reg. 2182 (Jan. 14, 2004).

precedent to look to judicial concepts of standing for guidance.<sup>18</sup> Under this authority, in order to qualify for standing a petitioner must “allege [1] a concrete and particularized injury that is (2) fairly traceable to the challenged action and (3) likely to be redressed by a favorable decision” — three criteria commonly referred to as “injury in fact, causality, and redressability.”<sup>19</sup> The requisite injury may be either actual or threatened,<sup>20</sup> but must arguably lie within the “zone of interests” protected by the statutes governing the proceeding — here, either the AEA or the National Environmental Policy Act (NEPA).<sup>21</sup> Additionally, Commission case law has established a “proximity presumption,” whereby an individual may satisfy these standing requirements by demonstrating that his or her residence or activities are within the geographical area that might be affected by an accidental release of fission products, and in proceedings involving nuclear power plants this area has been defined as being within a 50-mile radius of such a plant.<sup>22</sup>

An organization that wishes to establish standing to intervene may do so by demonstrating either organizational standing or representational standing. To establish organizational standing it must show that the interests of the organization will be harmed by the proposed licensing action, while an organization seeking representational standing must demonstrate that the interests of at least one of its members will be so harmed.<sup>23</sup> To establish such representational standing, an organization must: (1) show that at least one of its members may be affected by the licensing action and, accordingly, would have standing to sue in his or her own right; (2) identify that member by name and address; and (3) show that the organization is authorized to request a hearing on behalf of that member.<sup>24</sup>

Finally, in evaluating and ruling on a petitioner’s standing to intervene in an

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<sup>18</sup> See, e.g., *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998); *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

<sup>19</sup> *Yankee*, CLI-98-21, 48 NRC at 195 (citing *Steel Co. v. Citizens for a Better Environment*, 523 U.S. 83, 102-04 (1998); *Kelley v. Selin*, 42 F.3d 1501, 1508 (6th Cir. 1995)).

<sup>20</sup> See *id.* at 195 (citing *Wilderness Society v. Griles*, 824 F.2d 4, 11 (D.C. Cir. 1987)).

<sup>21</sup> *Id.* at 195-96 (citing *Ambrosia Lake Facility*, CLI-98-11, 48 NRC at 6).

<sup>22</sup> See *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989); *Virginia Electric and Power Co.* (North Anna Nuclear Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979) (“close proximity [to a facility] has always been deemed to be enough, standing alone, to establish the requisite interest” to confer standing); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146-50 (2001).

<sup>23</sup> See *Yankee*, CLI-98-21, 48 NRC at 195.

<sup>24</sup> See *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 202 (2000).

NRC adjudicatory proceeding, we are to “construe the petition in favor of the petitioner.”<sup>25</sup>

Petitioners assert representational standing on behalf of seven individuals, each of whom provided affidavits stating their name, occupation, address, proximity to the facility, concerns regarding the Shearon Harris license renewal, and affiliation with either NCWARN or NIRS (six from NCWARN and one from NIRS). Each of the seven affiants lives within 15 miles of the plant: two within 7 miles, four within 8 miles, and one within 15 miles.<sup>26</sup>

Both Applicant and the NRC Staff argue that Petitioners fail to establish representational standing because they have not “demonstrate[d] that they are authorized to represent the members whose affidavits are attached to the Petition.”<sup>27</sup> According to Applicant and the Staff, the affidavits must specifically “state that [the affiants] authorize Petitioners to represent them in this proceeding.”<sup>28</sup> In addition, Applicant asserts that Petitioners fail to establish organizational standing because they do not “allege a particularized injury that is fairly traceable to the license renewal, nor have they demonstrated how a decision regarding the license renewal would redress those concerns.”<sup>29</sup>

In their Reply Petitioners assert, in response to the NRC Staff and Applicant’s argument regarding representational standing, that the Petition

[o]n its face . . . clearly states that the Petitioners bring this action on behalf of their members, and that those members, including the affiants, would be significantly and adversely impacted by the relicensing of the [Shearon Harris Nuclear Power Plant]. These statements clearly demonstrate that these members have authorized the organization to represent his or her interests and meets the requirements for representational standing.<sup>30</sup>

If, however, Petitioners assert, the term “ ‘authorized’ is deemed to be a mandatory word for standing in this proceeding, then [they] request leave to amend the[ir] Petition to include it.”<sup>31</sup>

With respect to Applicant’s argument that Petitioners fail to establish organizational standing, Petitioners contend that they satisfy each of the required

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<sup>25</sup> *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC at 115.

<sup>26</sup> See Petition at 5-7; Attachment 1 to Petition, Declarations for NCWARN; Attachment 2 to Petition, Declaration for NIRS.

<sup>27</sup> Applicant’s Answer at 2-3; see also Staff Response at 6 (“the Declarations fail to support representational standing . . . by failing to authorize representation in the license renewal proceeding”).

<sup>28</sup> Applicant’s Answer at 3; see also Staff Response at 7 (“[t]he Declarations do not state that the Declarants have requested or authorized NIRS or NC WARN to represent them in this proceeding”).

<sup>29</sup> Applicant’s Answer at 3 n.1.

<sup>30</sup> Petitioners’ Reply at 3-4.

<sup>31</sup> *Id.* at 3 n.3.

criteria: injury in fact, causality, and redressability. Regarding injury, they state the members of NCWARN and NIRS live within 15 miles of the Shearon Harris plant. Regarding causality, they assert that continued operation of the plant “while it is out of compliance with serious safety regulations, along with the inability for the affiants and all other members of the public, to safely evacuate them and their families, is directly traceable to the potential of serious accidents now and in the future[.]”<sup>32</sup> Finally, regarding redressability, they aver that, “if Petitioners receive [a] favorable decision, and the plant is not relicensed, then the concerns by the affiants and Petitioners are directly addressed.”<sup>33</sup>

We agree with Petitioners that it is implicit in their Petition and accompanying affidavits that the seven affiants are authorizing NCWARN and NIRS to represent their interests and participate in this proceeding on their behalf. By providing signed affidavits — which state their affiliation with either NCWARN or NIRS and their particular concerns relating to the Shearon Harris license renewal — it is clear that the affiants, each of whom lives well within the 50-mile radius of the plant, are giving their assent to Petitioners’ representing their interests in this proceeding.

There is no support in either Commission or federal case law for the assertion put forth by Applicant and Staff that, in order to successfully demonstrate representational standing, the precise word “authorize” must appear in the supporting affidavits. Case law is clear that, while there must be “strict observance of the requirements governing intervention, in order that the adjudicatory process is invoked only by those persons who have real interests at stake and who seek resolution of concrete issues[,] . . . it is not necessary to the attainment of that goal that interested persons be rebuffed by the inflexible application of procedural requirements.”<sup>34</sup> Similarly, the federal courts have rejected the “approach that pleading is a game of skill in which one misstep by counsel may be decisive to the outcome, and accept the principle that the purpose of pleading is to facilitate a proper decision on the merits.”<sup>35</sup> Thus, while Petitioners would have been better served to include a precise statement of authorization, their failure to do so in this instance is not fatal to their claim of standing, and we find that Petitioners NCWARN and NIRS have demonstrated representational standing to intervene in this proceeding.<sup>36</sup>

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<sup>32</sup> *Id.* at 4.

<sup>33</sup> *Id.*

<sup>34</sup> *Virginia Electric and Power Co. (North Anna Power Station, Units 1 and 2)*, ALAB-146, 6 AEC 631, 633-34 (1973).

<sup>35</sup> *Wilson v. Westinghouse Electric Corp.*, 838 F.2d 286, 289-90 (8th Cir. 1988).

<sup>36</sup> Given our ruling finding representational standing on the part of Petitioners, we find it unnecessary to decide the issue of organizational standing.

Even if, however, we were to conclude that such failure on the part of Petitioners renders their Petition defective, we find that such a defect is readily curable. In *North Anna*, the Appeal Board found that a petition, which “was not submitted under oath and did not state expressly the manner in which the petitioner’s interest would be affected by the proceeding,” was a defect that “may be readily curable.”<sup>37</sup> Here, the defect is far less severe in that all that is arguably missing from Petitioners’ initial pleading is the word “authorize,” an element they were able to provide quite readily after requesting and receiving the Board’s permission therefor.<sup>38</sup>

#### IV. STANDARDS FOR ADMISSIBILITY OF CONTENTIONS IN LICENSE RENEWAL PROCEEDINGS

##### A. Regulatory Requirements on Contentions

As has previously been noted in a number of NRC adjudication proceedings,<sup>39</sup> to intervene in an NRC proceeding, a petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. § 2.309(f)(1).<sup>40</sup> Failure of a contention to meet any of the requirements of section

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<sup>37</sup> *North Anna*, ALAB-146, 6 AEC at 633; *see also U.S. Army* (Jefferson Proving Ground Site) (Feb. 24, 2000) (unpublished) (providing opportunity to cure defective hearing request that did not identify any member by name or address or indicate that any member authorized the particular organization to represent it).

<sup>38</sup> Tr. at 6-7; Supplemental Declarations.

<sup>39</sup> *See, e.g., Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 272-74 (2006), *aff’d*, CLI-07-3, 65 NRC 13, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007); *PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 302-12 (2007). An Appendix to the *Pilgrim* decision provides a more detailed summary of relevant case law on contention admissibility than that found in this Memorandum and Order. *See Pilgrim*, LBP-06-23, 64 NRC at 351-59.

<sup>40</sup> *See* 10 C.F.R. § 2.309(a). Section 2.309(f)(1) states that:

- (1) A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition must:
  - (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
  - (ii) Provide a brief explanation of the basis for the contention;
  - (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
  - (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
  - (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor’s/petitioner’s position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; and

(Continued)

2.309(f)(1) is grounds for its dismissal.<sup>41</sup> Heightened standards for the admissibility of contentions originally came into being in 1989, when the Commission amended its rules to “raise the threshold for the admission of contentions.”<sup>42</sup> The Commission has stated that the “contention rule is strict by design,” having been “toughened . . . in 1989 because in prior years ‘licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.’”<sup>43</sup> More recent amendments to the NRC procedural rules, which went into effect in 2004,<sup>44</sup> put into place various additional restrictions<sup>45</sup> and changes to provisions relating to the hearing process.<sup>46</sup> They do, however, contain essentially the same substantive admissibility standards for contentions.

The Commission has explained that the “strict contention rule serves multiple interests.”<sup>47</sup> These include the following (quoted in list form):

First, it focuses the hearing process on real disputes susceptible of resolution in an

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

<sup>41</sup> See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

<sup>42</sup> Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,168 (Aug. 11, 1989); see also *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999).

<sup>43</sup> *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001) (quoting *Oconee*, CLI-99-11, 49 NRC at 334).

<sup>44</sup> See 69 Fed. Reg. at 2182.

<sup>45</sup> For example, the current version of the rules no longer incorporates provisions formerly found in 10 C.F.R. § 2.714(a)(3), (b)(1), which permitted the supplementation of petitions and the filing of contentions after the original filing of petitions. Under the current rules, contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register*, unless a longer period is therein specified, an extension is granted, see *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224 (2004), *reconsideration denied*, CLI-04-35, 60 NRC 619, 625 (2004); 69 Fed. Reg. at 2200; or the contentions meet certain criteria for late-filed or new contentions based on information that is available only at a later time, see 10 C.F.R. § 2.309(b)(3)(iii), (c), (f)(2).

<sup>46</sup> In this connection we note that a challenge to the new rules by several public interest groups was rejected in the case of *Citizens Awareness Network, Inc. v. NRC* [*CAN v. NRC*], 391 F.3d 338 (1st Cir. 2004), on the basis that the new procedures “comply with the relevant provisions of the [Federal Administrative Procedure Act (APA)] and that the Commission has furnished an adequate explanation for the changes.” *Id.* at 343; see *id.* at 351, 355.

<sup>47</sup> *Oconee*, CLI-99-11, 49 NRC at 334.

adjudication. For example, a petitioner may not demand an adjudicatory hearing to attack generic NRC requirements or regulations, or to express generalized grievances about NRC policies.

Second, the rule's requirement of detailed pleadings puts other parties in the proceeding on notice of the Petitioners' specific grievances and thus gives them a good idea of the claims they will be either supporting or opposing.

Finally, the rule helps to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions.<sup>48</sup>

In its Statement of Considerations adopting the most recent revision of the rules, the Commission reiterated the same principles that were previously applicable; namely, that "[t]he threshold standard is necessary to ensure that hearings cover only genuine and pertinent issues of concern and that the issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues."<sup>49</sup> Additional guidance with respect to each of the requirements of subsections (i) through (vi) of section 2.309(f)(1) is found in NRC case law, familiarity with which can be significant to the matter of whether a petitioner's contention will be admitted or denied.

Because our rulings on the contentions submitted by Petitioners rest on subsections (iii), (iv), and (vi) of 10 C.F.R. § 2.309(f)(1), we focus in this section of our Memorandum on some of the guidance relating to these provisions to be found in relevant NRC case law. Under subsection (iii), a contention must allege facts "sufficient to establish that it falls directly within the scope of [a proceeding],"<sup>50</sup> and is not cognizable unless it is material to matters that fall within the scope of the proceeding for which the licensing board has been delegated jurisdiction.<sup>51</sup> (We discuss the scope of license renewal proceedings specifically, in section IV.B below.) Also, a contention that challenges any Commission rule is outside the scope of the proceeding because, absent a waiver, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding."<sup>52</sup> Similarly, any contention that amounts to an attack on applicable

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<sup>48</sup> *Id.* (citations omitted).

<sup>49</sup> 69 Fed. Reg. at 2189-90.

<sup>50</sup> *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 NRC 397, 412 (1991), *rev'd in part on other grounds*, CLI-91-12, 34 NRC 149 (1991).

<sup>51</sup> *See Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985); *Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976); *see also Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-616, 12 NRC 419, 426-27 (1980); *Commonwealth Edison Co.* (Carroll County Site), ALAB-601, 12 NRC 18, 24 (1980).

<sup>52</sup> 10 C.F.R. § 2.335(a).

statutory requirements must be rejected by a licensing board as outside the scope of the proceeding.<sup>53</sup> A petitioner may, however, within the adjudicatory context submit a request for waiver of a rule under 10 C.F.R. § 2.335, and outside the adjudicatory context file a petition for rulemaking under 10 C.F.R. § 2.802 or a request that the NRC Staff take enforcement action under 10 C.F.R. § 2.206.

Under 10 C.F.R. § 2.309(f)(1)(iv), a petitioner must “[d]emonstrate 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,” and the standards defining the “findings the NRC must make to support” a license renewal are set forth in 10 C.F.R. § 54.29 (which we discuss in our ruling below on Contention TC-1).

On the requirement of 10 C.F.R. § 2.309(f)(1)(vi) that a petitioner “provide sufficient information to show . . . a genuine dispute . . . with the applicant . . . on a material issue of law or fact,” the Commission has stated that the petitioner must “read the pertinent portions of the license application, including the Safety Analysis Report and the Environmental Report, state the applicant’s position and the petitioner’s opposing view,” and explain why it disagrees with the applicant.<sup>54</sup> If a petitioner does not believe these materials address a relevant issue, the petitioner is to “explain why the application is deficient.”<sup>55</sup> A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.<sup>56</sup> For example, an allegation that some aspect of a license application is “inadequate” or “unacceptable” does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect.<sup>57</sup>

In addition, the requirements in 10 C.F.R. § 2.309(f)(1)(iv), (vi) are related to the “scope” requirement of 10 C.F.R. § 2.309(f)(1)(iii), because if an issue is not within the scope of a proceeding, then it is also necessarily not material, either legally or factually, at the contention admissibility stage of the proceeding.

## **B. Scope of Subjects Admissible in License Renewal Proceedings**

As noted in previous NRC proceedings,<sup>58</sup> Commission regulations and case law address in some detail the scope of license renewal proceedings, which generally

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<sup>53</sup> *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974).

<sup>54</sup> 54 Fed. Reg. at 33,170; *Millstone*, CLI-01-24, 54 NRC at 358.

<sup>55</sup> 54 Fed. Reg. at 33,170; *Palo Verde*, CLI-91-12, 34 NRC at 156.

<sup>56</sup> See *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992).

<sup>57</sup> See *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 NRC 509, 521 & n.12 (1990).

<sup>58</sup> See, e.g., *Pilgrim*, LBP-06-23, 64 NRC at 274-80.

concern requests to renew 40-year reactor operating licenses for additional 20-year terms.<sup>59</sup> The regulatory authority relating to license renewal is found in 10 C.F.R. Parts 51 and 54. Part 54 concerns the “Requirements for Renewal of Operating Licenses for Nuclear Power Plants,” and addresses safety-related issues in license renewal proceedings. Part 51, concerning “Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions,” addresses, among other things, the environmental aspects of license renewal. The Commission has interpreted these provisions in various adjudicatory proceedings, probably most extensively in a decision in the 2001 *Turkey Point* proceeding.<sup>60</sup>

### ***1. Safety-Related Issues in License Renewal Proceedings***

Various sections of Part 54 speak to the scope of safety-related issues in license renewal proceedings. First, 10 C.F.R. § 54.4, titled “Scope,” specifies the plant systems, structures, and components that are within the ambit of Part 54.<sup>61</sup>

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<sup>59</sup>Section 54.31(b) of 10 C.F.R. provides that:

[a] renewed license will be issued for a fixed period of time, which is the sum of the additional amount of time beyond the expiration of the operating license (not to exceed 20 years) that is requested in a renewal application plus the remaining number of years on the operating license currently in effect. The term of any renewed license may not exceed 40 years.

Section 50.51(a) states in relevant part that “[e]ach [original] license will be issued for a fixed period of time to be specified in the license but in no case to exceed 40 years from date of issuance.”

<sup>60</sup>*See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 6-13 (2001); *see also Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 363-65 (2002); *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81, 90, *aff’d*, CLI-04-36, 60 NRC 631 (2004); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000); *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41, *motion to vacate denied*, CLI-98-15, 48 NRC 45 (1998); *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2 and 3), CLI-98-17, 48 NRC 123, 125 (1998).

<sup>61</sup>Section 54.4(a) describes those “systems, structures, and components” that are within scope as:

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49(b)(1)) to ensure the following functions —

- (i) The integrity of the reactor coolant pressure boundary;
- (ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or
- (iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

(2) All nonsafety-related systems, structures, and components whose failure could prevent satisfactory accomplishment of any of the functions identified in paragraphs (a)(1)(i), (ii), or (iii) of this section.

*(Continued)*

Sections 54.3 (containing definitions), 54.21 (addressing technical information to be included in an application and further identifying relevant structures and components), and 54.29 (stating the “Standards for issuance of a renewed license”) provide additional definition of what is encompassed within a license renewal review, which considers aging-management issues and some “time-limited aging analyses” that are associated with the functions of relevant plant systems, structures, and components.<sup>62</sup> Applicants must “demonstrate how their programs will be effective in managing the effects of aging during the proposed period of extended operation,” at a “detailed . . . ‘component and structure level,’ rather than at a more generalized ‘system level.’”<sup>63</sup>

The Commission in *Turkey Point* stated that, in developing 10 C.F.R. Part 54 beginning in the 1980s, it sought “to develop a process that would be both efficient, avoiding duplicative assessments where possible, and effective, allowing the NRC Staff to focus its resources on the most significant safety concerns at issue during the renewal term.”<sup>64</sup> Noting that the “issues and concerns involved in an extended 20 years of operation are not identical to the issues reviewed when a reactor facility is first built and licensed,” the Commission found that requiring a full reassessment of safety issues that were “thoroughly reviewed when the facility was first licensed” and continue to be “routinely monitored and assessed by ongoing agency oversight and agency-mandated licensee programs” would be “both unnecessary and wasteful.”<sup>65</sup> Nor did the Commission “believe it necessary or appropriate to throw open the full gamut of provisions in a plant’s current licensing basis to re-analysis during the license renewal review.”<sup>66</sup>

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(3) All systems, structures, and components relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission’s regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), and station blackout (10 CFR 50.63).

<sup>62</sup> See Final Rule: “Nuclear Power Plant License Renewal; Revisions,” 60 Fed. Reg. 22,461, 22,463 (May 8, 1995).

<sup>63</sup> *Turkey Point*, CLI-01-17, 54 NRC at 8 (quoting 60 Fed. Reg. at 22,462).

<sup>64</sup> *Id.* at 7.

<sup>65</sup> *Id.*

<sup>66</sup> *Id.* at 9. “Current licensing basis” (CLB) is defined as follows in 10 C.F.R. § 54.3:

*Current licensing basis* (CLB) is the set of NRC requirements applicable to a specific plant and a licensee’s written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR Parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and

(Continued)

The Commission chose, rather, to focus the NRC license renewal safety review “upon those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs,” which it considered “the most significant overall safety concern posed by extended reactor operation.”<sup>67</sup> The Commission in *Turkey Point* described some of the “Detrimental Effects of Aging and Related Time-Limited Issues” as follows:

By its very nature, the aging of materials “becomes important principally during the period of extended operation beyond the initial 40-year license term,” particularly since the design of some components may have been based explicitly upon an assumed service life of 40 years. *See* [Final Rule: “Nuclear Power Plant License Renewal,” 56 Fed. Reg. 64,943, 64,946 (Dec. 13, 1991)]; *see also* [60 Fed. Reg. at 22,479]. Adverse aging effects can result from metal fatigue, erosion, corrosion, thermal and radiation embrittlement, microbiologically induced effects, creep, and shrinkage. Such age-related degradation can affect a number of reactor and auxiliary systems, including the reactor vessel, the reactor coolant system pressure boundary, steam generators, electrical cables, the pressurizer, heat exchangers, and the spent fuel pool. Indeed, a host of individual components and structures are at issue. *See* 10 C.F.R. § 54.21(a)(1)(i). Left unmitigated, the effects of aging can overstress equipment, unacceptably reduce safety margins, and lead to the loss of required plant functions, including the capability to shut down the reactor and maintain it in a shutdown condition, and to otherwise prevent or mitigate the consequences of accidents with a potential for offsite exposures.<sup>68</sup>

The Commission has also described the focus of license renewal review as being on “plant systems, structures, and components for which current [regulatory] activities and requirements *may not* be sufficient to manage the effects of aging

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technical specifications. It also includes the plant-specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required by 10 CFR 50.71 and the licensee’s commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports.

The Commission has also described the CLB concept in its *Turkey Point* decision, as follows:

[“CLB” is] a term of art comprehending the various Commission requirements applicable to a specific plant that are in effect at the time of the license renewal application. . . . The [CLB] represents an “evolving set of requirements and commitments for a specific plant that are modified as necessary over the life of a plant to ensure continuation of an adequate level of safety.” 60 Fed. Reg. at 22,473. It is effectively addressed and maintained by ongoing agency oversight, review, and enforcement.

*Turkey Point*, CLI-01-17, 54 NRC at 9; *see also* 10 C.F.R. §§ 54.29, 54.30.

<sup>67</sup> *Turkey Point*, CLI-01-17, 54 NRC at 7.

<sup>68</sup> *Id.* at 7-8.

in the period of extended operation.’’<sup>69</sup> An issue can be related to plant aging and still not warrant review at the time of a license renewal application, if the issue is “adequately dealt with by regulatory processes” on an ongoing basis.<sup>70</sup> For example, if a structure or component is already required to be replaced “at mandated, specified time periods,” it would fall outside the scope of license renewal review.<sup>71</sup>

Finally, the Commission has stated that “[a]djudicatory hearings in individual license renewal proceedings will share the same scope of issues as our NRC Staff review, for our hearing process (like our Staff’s review) necessarily examines only the questions our safety rules make pertinent.”<sup>72</sup>

## **2. Environmental Issues in License Renewal Proceedings**

Regulatory provisions relating to the environmental aspects of license renewal arise out of the requirement that NEPA places on Federal agencies to “include in every recommendation or report on . . . major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on [] the environmental impact of the proposed action.”<sup>73</sup> As has been noted by the Supreme Court, the “statutory requirement that a federal agency contemplating a major action prepare such an environmental impact statement [EIS] serves NEPA’s ‘action-forcing’ purpose in two important respects”:

It ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.<sup>74</sup>

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<sup>69</sup> *Id.* at 10 (quoting 60 Fed. Reg. at 22,469) (alteration in original).

<sup>70</sup> *Id.* at 10 n.2.

<sup>71</sup> *Id.*

<sup>72</sup> *Id.* at 10.

<sup>73</sup> 42 U.S.C. § 4332(2)(C) (2000); see *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989).

<sup>74</sup> *Robertson*, 490 U.S. at 349 (citations omitted). The Court also noted that “NEPA itself does not mandate particular results, but simply prescribes the necessary process. . . . If the adverse environmental effects of the proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs.” *Id.* at 350 (citations omitted). As the Court also observed, in the companion case of *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989), “by focusing Government and public attention on the environmental effects of proposed agency action,” NEPA “ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.”

Part 51 contains NRC's rules relating to and implementing relevant NEPA requirements, and section 51.20(a)(2) requires that the NRC Staff prepare an EIS for issuance or renewal of a nuclear reactor operating license. Other sections relating to license renewal include, most significantly, 10 C.F.R. §§ 51.53(c), 51.95(c), and 51.103(a)(5), and Appendix B to Subpart A.

Although the requirements of NEPA are directed to Federal agencies and thus the primary duties of NEPA fall on the NRC Staff in NRC proceedings,<sup>75</sup> the initial requirement to analyze the environmental impacts of an action, including license renewal, is directed to applicants under relevant NRC rules.<sup>76</sup> Accordingly, section 51.53(c) requires a license renewal applicant to submit with its application an environmental report (ER), which must "contain a description of the proposed action, including the applicant's plans to modify the facility or its administrative control procedures as described in accordance with § 54.21," and "describe in detail the modifications directly affecting the environment or affecting plant effluents that affect the environment."<sup>77</sup>

The ER is not required to contain analyses of environmental impacts identified as "Category 1," or "generic," issues in 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1.<sup>78</sup> The basis of this is the Commission's 1996 "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (GEIS), adopted as required under 10 C.F.R. § 51.95(c). The GEIS is an extensive study of the potential environmental impacts of extending the operating licenses for nuclear power plants, which was published as NUREG-1437 and provides data supporting the table of Category 1 and 2 issues in Appendix B.<sup>79</sup> Issuance of the 1996 GEIS was part of an amendment of the requirements of Part 51 undertaken by the Commission to establish environmental review requirements for license renewals "that were both efficient and more effectively focused."<sup>80</sup>

Issues on which the Commission found that it could draw "generic conclusions applicable to all existing nuclear power plants, or to a specific subgroup of plants," were, as indicated above, identified as "Category 1" issues.<sup>81</sup> This categorization was based on the Commission's conclusion that these issues

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<sup>75</sup> See, e.g., 10 C.F.R. § 51.70(b), which states among other things that "[t]he NRC staff will independently evaluate and be responsible for the reliability of all information used in the draft environmental impact statement."

<sup>76</sup> See 10 C.F.R. § 51.41.

<sup>77</sup> 10 C.F.R. § 51.53(c)(2); see *id.* § 51.53(c)(1).

<sup>78</sup> See 10 C.F.R. § 51.53(c)(3)(i).

<sup>79</sup> See NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants (May 1996) [hereinafter GEIS]; Final Rule: "Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 61 Fed. Reg. 28,467 (June 5, 1996), *amended by* 61 Fed. Reg. 66,537 (Dec. 18, 1996); 10 C.F.R. Part 51, Subpart A, App. B n.1.

<sup>80</sup> *Turkey Point*, CLI-01-17, 54 NRC at 11.

<sup>81</sup> *Id.* (citing 10 C.F.R. Part 51, Subpart A, App. B).

involve “environmental effects that are essentially similar for all plants,” and thus they “need not be assessed repeatedly on a site-specific basis, plant-by-plant.”<sup>82</sup> Thus, under 10 C.F.R. § 51.53(c)(3)(i), license renewal applicants may in their site-specific ERs refer to and adopt the generic environmental impact findings found in Appendix B, Table B-1, for all Category 1 issues.<sup>83</sup>

Applicants must, however, address environmental issues for which the Commission was not able to make generic environmental findings.<sup>84</sup> An ER must “contain analyses of the environmental impacts of the proposed action, including the impacts of refurbishment activities, if any, associated with license renewal and the impacts of operation during the renewal term,” for those issues listed in 10 C.F.R. § 51.53(c)(3)(ii) and identified as “Category 2,” or “plant specific,” issues in Table B-1.<sup>85</sup> These issues are characterized by the Commission as involving environmental impact severity levels that “might differ significantly from one plant to another,” or impacts for which additional plant-specific mitigation measures should be considered.<sup>86</sup> For example, the “impact of extended operation on endangered or threatened species varies from one location to another,” according to the Commission, and is thus included within Category 2.<sup>87</sup> Another example is the requirement that “alternatives to mitigate severe accidents must be considered for all plants that have not [previously] considered such alternatives.”<sup>88</sup> Again,

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<sup>82</sup> *Id.* at 11.

<sup>83</sup> Even though a matter would normally fall within a Category 1 issue, ERs are also required to contain “any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware,” under 10 C.F.R. § 51.53(c)(3)(iv). The Commission has, however, ruled that such information is not a proper subject for a contention, absent a waiver of the rule in 10 C.F.R. § 51.53(c)(3)(i) that Category 1 issues need not be addressed in a license renewal. See *Turkey Point*, CLI-01-17, 54 NRC at 12; *Pilgrim*, LBP-06-23, 64 NRC at 288, 294-300; *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 155-59 (2006), *aff’d*, CLI-07-3, 65 NRC 13, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007). The *Pilgrim* and *Vermont Yankee* decisions have been appealed to the United States Court of Appeals for the First Circuit in *Commonwealth of Massachusetts v. NRC*, Docket Nos. 07-1482 and 07-1493 (1st Cir.).

<sup>84</sup> *Turkey Point*, CLI-01-17, 54 NRC at 11 (citing 10 C.F.R. Part 51, Subpart A, App. B).

<sup>85</sup> 10 C.F.R. § 51.53(c)(3)(ii).

<sup>86</sup> *Turkey Point*, CLI-01-17, 54 NRC at 11.

<sup>87</sup> *Id.* at 12.

<sup>88</sup> 10 C.F.R. Part 51, Subpart A, App. B, Table B-1 (Postulated Accidents); see 10 C.F.R. § 51.53(c)(3)(ii)(L). This requirement arises out of “NEPA’s demand that an agency prepare a detailed statement on ‘any adverse environmental effects which cannot be avoided should the proposal be implemented,’ 42 U.S.C. § 4332(2)(C)(ii),” implicit in which “is an understanding that the EIS will discuss the extent to which adverse effects can be avoided.” *Robertson*, 490 U.S. at 351-52. The basis for the requirement is that “omission of a reasonably complete discussion of possible mitigation measures would undermine the ‘action-forcing’ function of NEPA. Without such a discussion, neither the agency nor other interested groups or individuals can properly evaluate the severity of the adverse effects.” *Id.* at 352.

although the initial requirement falls upon an applicant, the ultimate responsibility lies with the NRC Staff, who must address these issues in a Supplemental Environmental Impact Statement (SEIS)<sup>89</sup> that is specific to the particular site involved and provides the Staff's independent assessment of the Applicant's ER.<sup>90</sup>

Finally, section 51.103 defines the requirements for the "record of decision" relating to any license renewal application, including the standard that the Commission, in making such a decision pursuant to Part 54, "shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable."<sup>91</sup>

## V. ANALYSIS AND RULINGS ON PETITIONERS' CONTENTIONS

With the preceding context regarding contention admissibility requirements and license renewal scope principles in mind, we turn now to the Petitioners' contentions, discussing each in turn. While some raise questions of interest in other contexts, and one involves issues that may warrant further action in the future, none meets all of the admissibility requirements discussed in section IV, *supra*. Accordingly, as we explain below, all must be denied.

### A. Technical Contention T-1 [TC-1]: Noncompliance with Fire Protection Requirements

Petitioners in their first contention state:

Given that the [Shearon Harris Nuclear Power Plant] has been out of compliance since at least 1992 with requirements to maintain the post-fire safe shutdown systems of the reactor that minimize the probability and effects of fires and explosions as required in its Current License Basis and is not expected to come into compliance until approximately 2015 or later, extending into the license renewal period, and given that in the event of a significant fire, continued non-compliance can lead to the loss of the operators' ability to achieve and maintain hot standby/shutdown conditions further resulting in significant accidental release of radiation and posing a severe threat to public health and safety, it is therefore imprudent and improper to even consider extending the operating license for the [plant] for an additional 20 years until the plant comes into full compliance with all relevant fire protection regulations.<sup>92</sup>

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<sup>89</sup> See 10 C.F.R. § 51.95(c).

<sup>90</sup> See *Turkey Point*, CLI-01-17, 54 NRC at 12 (citing 10 C.F.R. §§ 51.70, 51.73–74).

<sup>91</sup> 10 C.F.R. § 51.103(a)(5).

<sup>92</sup> Petition at 18-19.

### *1. Petitioners' Basis for Contention TC-1*

In support of this contention Petitioners emphasize the risks of and from a fire at a nuclear power plant, citing an NRC report for the statement that “based on plant operating experiences over the last 20 years . . . typical nuclear power plants will have three to four significant fires over their operating lifetime.”<sup>93</sup> According to the report, fires are “significant contributor[s] to the overall core damage frequency,” among other things because, “like many other external events, a fire event not only acts as an initiator but can also compromise mitigating systems because of its common-cause effect[ ].”<sup>94</sup>

Citing the Application in section 2.3.3.31, Petitioners note that “certain types of fire barriers” are described therein, and assert that these “include extensive applications of inoperable fire barrier systems consisting of Thermo Lag, Hemyc and MT,” materials which “were originally designated for the fire protection of electrical cables and conduits vital to the post fire safe shutdown systems.”<sup>95</sup> Petitioners contend that “subsequent fire tests” have established that “these fire barrier systems do not provide the level of required fire protection on standardized time and temperature industry fire tests under ASTM [standard] E119.”<sup>96</sup> Petitioners argue that NRC regulations, including 10 C.F.R. Part 50, § 50.48; Appendix A, General Design Criterion 3; and Appendix R, § III.G, III.J, and III.O, “mandate that nuclear power station operators physically protect emergency backup electrical systems, such as power, control and instrumentation cables, that are used to remotely shut down the reactor from the control room,” in addition to physical protections tested under ASTM standards and modified as necessary to assure compliance.<sup>97</sup> Petitioners also cite NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants,” § 9.5.1, in support of their argument on fire protection requirements and capacity to shut down the reactor.<sup>98</sup>

Urging that “[o]ne of the basic principles in the relicensing of a nuclear power plant is that the plant is substantially in compliance with all relevant

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<sup>93</sup> *Id.* at 19 (quoting NUREG-1150, “Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants,” Vol. 2, App. C at C-128 (Oct. 1990) (internal quotation marks omitted)).

<sup>94</sup> NUREG-1150, Vol. 2, App. C at C-128; *see also* Petition at 19.

<sup>95</sup> Petition at 19-20.

<sup>96</sup> *Id.* at 20. The acronym ASTM arises out of its origin as the American Society for Testing and Materials. Various NRC regulatory documents refer to ASTM standards, including, e.g., NUREG-0800, “Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants,” which refers to ASTM E-119 in Appendix I at I-245 and Appendix II at II-751.

<sup>97</sup> *Id.* at 20, 9-10.

<sup>98</sup> *Id.* at 20.

regulations,”<sup>99</sup> Petitioners argue that the “presumption that the regulatory system works is a rebuttable presumption” and that, as the plant at issue “has been out of compliance since 1992 . . . there is absolutely no reasonable assurance against cable and conduit fires and consequential impairment of the ability of the plant to safely operate, and in particular, to safely shutdown [*sic*] and maintain the reactor in emergency situations.”<sup>100</sup> In support of this argument, Petitioners cite a September 20, 2006, report prepared by themselves and others that sets forth a history and documentation of the plant’s noncompliance and failure to fulfill various promises to come into compliance with relevant fire protection requirements.<sup>101</sup>

Petitioners also refer to an enforcement petition that they and others submitted to the NRC pursuant to 10 C.F.R. § 2.206 (§ 2.206 Petition), seeking immediate shutdown of the plant, maximum fines for all violations, and investigation of the fire protection problems.<sup>102</sup> Petitioners agreed with an April 2, 2007, Proposed Director’s Decision to the extent that it concluded that the plant was indeed out of compliance with the fire regulations, but objected “to the Director’s proposed conclusion that the NRC staff was adequately enforcing these regulations.”<sup>103</sup> They expected that the Final Director’s Decision would be available by the time of any hearing in this proceeding, and it was in fact later issued, on June 13, 2007.<sup>104</sup>

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<sup>99</sup> *Id.* at 21. Petitioners cite the following Commission statement from its 1991 rulemaking on license renewal for the “basic principle” they rely on:

With the exception of age-related degradation unique to license renewal and possibly some few other issues related to safety only during extended operation, the regulatory process is adequate to ensure that the licensing bases of all currently operating plants provide and maintain an acceptable level of safety for operation so that operation will not be inimical to public health and safety or common defense and security.

*Id.* at 8 (citing 56 Fed. Reg. at 64,946).

<sup>100</sup> *Id.* at 21.

<sup>101</sup> *Id.* at 21-22 (citing “Delaying with Fire: The Shearon Harris Nuclear Plant and 14 Years of Fire Safety Violations” (Sept. 20, 2006)).

<sup>102</sup> *Id.* at 22. Petitioners also refer to, and incorporate by reference, various documents relating to the § 2.206 petition in support of this petition and contention, including the following (with their ADAMS accession numbers from the NRC document management system, “ADAMS,” available on NRC’s public website at [www.nrc.gov](http://www.nrc.gov)): § 2.206 Petition, Accession Nos. ML062640550 and ML062830089; Transcript of Proceedings of Petition Review Board (Nov. 13, 2006) [hereinafter 11/13/06 Review Board Transcript], ML063210488; § 2.206 Petition Supplements, ML062980107, ML063200168, ML063450098, and ML070510497; *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1) (Apr. 2, 2007) (“Proposed Director’s Decision”), ML070780537; and Petitioners’ Response to Proposed Director’s Decision, ML071230046.

<sup>103</sup> Petition at 22.

<sup>104</sup> *Id.* at 22 n.9; see also DD-07-3, 65 NRC 643 (2007) [hereinafter Final Director’s Decision] (ADAMS Accession No. ML071500403).

Referring to a November 13, 2006, Petition Review Board meeting on their section 2.206 Petition, Petitioners quote the following comments of NRC Nuclear Reactor Regulation Fire Protection Branch Chief Sunil Weerakkody:

This is Sunil Weerakkody. For Sharon [*sic*] Harris and all other plants that are transitioning to 805 [National Fire Protection Association or NFPA 805] we have a revised inspection procedure. And at a high level what I can say is, we have told inspectors to focus on the fire inspection infrastructure, like for example when inspectors go, you have the fire brigade, you have the suppression systems you know, and if the plant is transitioning to 805, in areas where we have basically said, our position is that they are not in compliance, we enable them to transition. In other words, there is no reason to go and reinspect things like operator manual actions where we believe that the licensee is not in compliance.<sup>105</sup>

Petitioners argue that “the showing of noncompliance and lack of further inspection clearly rebuts any presumption that the plant is operating safely.”<sup>106</sup> They also note that Congressman David Price from the State of North Carolina has requested the Government Accountability Office to investigate the “same issues that are at the heart of this contention,” namely:

- (1) the frequency and causes of recent fire emergencies at U.S. nuclear power plants;
- (2) the adequacy and acceptable duration of interim compensatory measures; and (3) whether the transition to risk-based fire safety standards has led to an over-reliance on such measures during the transition period.<sup>107</sup>

Petitioners project that the results of this study will be available at any evidentiary hearing that might be held in this proceeding.<sup>108</sup>

Asserting that CP&L “has relied on inoperable and inadequate fire safety systems for at least fifteen years at the [Shearon Harris plant] and has indicated that it may resolve some of the fire protection problems by 2015 or later,” Petitioners argue that this subjects people living in the vicinity of the plant to “severe and undue risks” and that therefore, “as a matter of law, the decision on the relicensing of the [plant] should be denied until the plant is fully in compliance with the fire regulations.”<sup>109</sup>

Petitioners support all of their contentions including TC-1 with additional argument in an Introduction section of the Petition, as well as a section thereof

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<sup>105</sup> Petition at 23 (quoting 11/13/06 Review Board Transcript at 49).

<sup>106</sup> *Id.* at 23.

<sup>107</sup> *Id.* at 23-24 (citing Letter from Congressman David Price to David M. Walker, Comptroller General of the United States (May 11, 2007), Attachment 3 to Petition).

<sup>108</sup> *Id.* at 23 n.11.

<sup>109</sup> *Id.* at 24.

entitled “Statutory and Regulatory Framework.”<sup>110</sup> In their introduction, Petitioners observe that the AEA “prohibits the NRC from issuing a license to operate a nuclear power plant if it would be ‘inimical to the common defense and security or to the health and safety of the public.’”<sup>111</sup> In the “Framework” section, Petitioners concede that “the AEA does not set a safety standard for license renewal,” stating as well that the “Commission generally interprets the AEA to require that it ‘must have ‘reasonable assurance’ that public health and safety are not endangered by its licensing actions.’”<sup>112</sup> Recognizing that the Commission has determined that the “regulatory process” serves to “ensure that [plants’ CLBs] provide and maintain an acceptable level of safety for operation so that operation will not be inimical to public health and safety or common defense and security,”<sup>113</sup> Petitioners note that “[t]hus, other than with respect to aging issues and issues that arise when significant new information becomes available, the NRC does not inquire into safety issues in the license renewal process but presumes that the current regulatory process is adequate.”<sup>114</sup> As indicated above, however, Petitioners view this as a presumption that is “rebuttable if it is shown that the current regulatory process is not adequate to protect public health and safety or if the plant is not in compliance with the relevant regulations or provisions of its license,” and provide a timeline of events they argue “clearly shows that despite numerous notices by the NRC staff about the failures of fire barriers and the need to comply with the Section III.G.2. standards, [CP&L] has not done so.”<sup>115</sup>

## **2. Positions of Applicant and NRC Staff on Contention TC-1**

Both the Applicant and NRC Staff view Contention TC-1 as inadmissible because it is outside the scope of this license renewal proceeding and fails to demonstrate a genuine dispute with the Application on a material issue of law or fact.<sup>116</sup>

Applicant argues that the contention is “beyond the scope of the proceeding because it does not relate to the potential effects of aging, which define the scope of

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<sup>110</sup> *Id.* at 2-5, 7-17.

<sup>111</sup> Petition at 2 (quoting 42 U.S.C. § 2133(d)).

<sup>112</sup> *Id.* at 8 (citing *Petition for Emergency and Remedial Action*, CLI-78-6, 7 NRC 400, 404 (1978) (citing *Power Reactor Development Co. v. International Union of Electrical, Radio and Machine Workers, AFL-CIO*, 367 U.S. 396, 402 (1961))).

<sup>113</sup> *Id.* (citing 56 Fed. Reg. at 64,946).

<sup>114</sup> *Id.* at 8.

<sup>115</sup> *Id.* at 8, 9.

<sup>116</sup> Applicant’s Answer at 11-16; Staff Response at 14-17.

the safety review in license renewal proceedings,”<sup>117</sup> and that it instead concerns the plant’s current licensing basis.<sup>118</sup> Further, Applicant argues, the contention is “not supported by a sufficient basis demonstrating a genuine dispute with the Application,” in that Petitioners fail to provide (1) “a ‘concise statement of the alleged facts or expert opinions’ supporting Contention [TC-1],” (2) “references to ‘specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue,’ as required by 10 C.F.R. § 2.309(f)(1)(i) and (v),” and (3) “‘the [technical] analyses and expert opinion’ or other information ‘showing why its bases support its contention.’”<sup>119</sup>

With respect to Petitioners’ contention and the Proposed Director’s Decision under 10 C.F.R. § 2.206, Applicant states that the proposed decision “in no way supports their claims” and in any event has been “superseded by a final Director’s Decision.”<sup>120</sup> “None of [Petitioners’] documents reference or relate to any portion of the Application or explain how the Application is deficient,” insists Applicant, nor does Congressman Price’s letter “suggest[ ] any problem with the Application, or with Harris’ fire protection program.”<sup>121</sup> Nor, Applicant argues, can Petitioners or this Board rely on a “potential future GAO Report,” the content of which is unknown.<sup>122</sup>

Applicant asserts that Petitioners’ section 2.206 Petition “involve[s] only the current licensing basis of Harris and Petitioners’ attack on the Commission’s fire protection regulations[,] how the NRC enforces those regulations,” and “the Commission’s approach to risk-based and performance-based fire protection.”<sup>123</sup> Noting that the Final Director’s Decision “rejects all of Petitioners’ claims,” Applicant argues that “Petitioners cannot attempt to collaterally attack the Final Director’s Decision and re-litigate it in this proceeding,” nor does this Licensing Board have jurisdiction to review it.<sup>124</sup> Moreover, Applicant urges, Petitioners have failed to point to specific portions of the Application “that are either deficient

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<sup>117</sup> Applicant’s Answer at 12 (citing *Millstone*, CLI-04-36, 60 NRC at 637); *see id.* at 12-13 (citing *Turkey Point*, CLI-01-17, 54 NRC at 7-8 (2001); *McGuire/Catawba*, CLI-02-26, 56 NRC at 363).

<sup>118</sup> *Id.* at 13 (citing 56 Fed. Reg. at 64,945-46; 60 Fed. Reg. at 22,473; *Turkey Point*, CLI-01-17, 54 NRC at 7-8).

<sup>119</sup> *Id.* at 13-14 (alteration in original) (quoting *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated and remanded*, CLI-95-10, 42 NRC 1 (1995)).

<sup>120</sup> *Id.* at 14 & n.7 (citing Proposed Director’s Decision; Final Director’s Decision).

<sup>121</sup> *Id.* at 14.

<sup>122</sup> *Id.* at 14 n.8 (citing *Millstone*, CLI-04-36, 60 NRC at 639).

<sup>123</sup> Applicant’s Answer at 14-15 & n.9.

<sup>124</sup> *Id.* at 15 & n.11 (citing Final Director’s Decision at 19); 10 C.F.R. § 2.206(c).

or do not comply with the Commission's regulations," or relate the content of their section 2.206 Petition to the Application.<sup>125</sup>

Finally, Applicant suggests that Petitioners have not "asserted that the alleged non-compliance with fire protection regulations described in the 2.206 Petition (and rejected by the Acting Director) constitutes a genuine dispute of fact in regard to whether Harris' license should be renewed, as required by Commission case law."<sup>126</sup> Therefore, according to Applicant, (1) "Contention [TC-1] is not material to this proceeding"; (2) "the resolution of the alleged dispute between Petitioners and Licensee *would not make a difference in the outcome* of the license renewal proceeding"; (3) Petitioners "have not demonstrated fault with the Application supported by sufficient basis"; and (4) the contention "must be rejected" because "[a] 'genuine dispute' does not exist 'with the applicant/licensee on a material issue of law or fact.'" <sup>127</sup>

The NRC Staff, quoting the Petitioners' characterizations of this contention as that "the [Shearon Harris plant] is currently not in compliance with fire protection regulations" and that the issues they raise in the contention are "the same" as those involved in their section 2.206 petition for enforcement action, urges that Petitioners' own assessment demonstrates "that the contention pertains to compliance with fire protection regulations under current operations, rather than license renewal."<sup>128</sup> Thus, Staff argues:

The Petition fails to demonstrate that the issue raised in the contention is within the scope of this license renewal proceeding; fails to demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the license renewal action; and fails to provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact in this proceeding.<sup>129</sup>

According to the Staff, the contention "is plainly outside the scope of the proceeding as it does not raise any aspect of the applicants' aging management review," and, "[i]n particular, it fails to show that current compliance with fire protection requirements is material to the findings the NRC must make for granting or denying license renewal."<sup>130</sup>

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<sup>125</sup> *Id.* at 15 (citing 10 C.F.R. § 2.309(f)(1)(vi); *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), LBP-02-4, 55 NRC 49, 80 (2002); *Millstone*, CLI-01-24, 54 NRC at 359-60).

<sup>126</sup> *Id.* (citing *Calvert Cliffs*, CLI-98-14, 48 NRC at 41; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998)).

<sup>127</sup> *Id.* at 16 (quoting 10 C.F.R. § 2.309(f)(1)(vi)).

<sup>128</sup> Staff Response at 14 (internal quotation marks omitted) (quoting Petition at 3).

<sup>129</sup> *Id.*

<sup>130</sup> *Id.* (citing *Turkey Point*, CLI-01-17, 54 NRC at 10).

The Staff challenges Petitioners' assertion that the "principle . . . that [a plant seeking relicensing] is substantially in compliance with all relevant regulations" is a "rebuttable presumption," stating that "the Petitioners offer absolutely no case [or regulatory] authority" for such argument.<sup>131</sup> In addition, Staff argues, "[t]o the extent the Petition argues that a 'rebuttable presumption' exists, it is an impermissible challenge to the Commission's rules, and cannot be used to support a contention in license renewal."<sup>132</sup>

Moreover, noting that the 1991 rulemaking was not the Commission's most recent statement on license renewal, Staff points out that the Commission did nonetheless then state explicitly that the license renewal rule "does not require submission of information relating to the adequacy of, or compliance with, the current licensing basis," and that in its later 1995 license renewal rulemaking it reaffirmed that "the conclusions . . . for the previous . . . rule remain valid" and that "special verification of CLB compliance in connection with the review of a license renewal application is unnecessary."<sup>133</sup>

More specifically, Staff observes, the Commission stated in 1991 that "Section 54.29, which defines the standard for issuance of a renewed license, does not require a finding regarding the adequacy of, or compliance with, the plant's licensing basis."<sup>134</sup> Even though it believed this guidance was clear, Staff says the Commission "decided to improve the rule," narrowing section 54.29 to the findings to be made for issuance of a renewed license, and adding section 54.30 "to address the licensee's responsibilities for addressing safety matters under its current license that are not within the scope of the renewal review" and "minimize any possibility of misinterpreting the scope of the renewal."<sup>135</sup> Regarding compliance with a plant's current licensing basis, the Staff quotes the following language from the 1995 rulemaking:

The Commission does not contend that all reactors are in full compliance with their respective CLBs on a continuous basis. Rather, as discussed in the SOC for the previous rule, the regulatory process provides reasonable assurance that there is compliance with the CLB. The NRC conducts its inspection and enforcement activities under the presumption that non-compliances will occur.<sup>136</sup>

Therefore, Staff insists, "any argument regarding the continued violation of the plant's current licensing basis is not material to the findings the NRC must

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<sup>131</sup> *Id.* at 15 (citing Petition at 21, 8).

<sup>132</sup> *Id.* at 17 (citing 10 C.F.R. § 2.335(a)).

<sup>133</sup> *Id.* at 15-16 & n.21 (quoting 56 Fed. Reg. at 64,961; 60 Fed. Reg. at 22,463, 22,474).

<sup>134</sup> *Id.* at 16 (quoting 56 Fed. Reg. at 64,961).

<sup>135</sup> *Id.* (citing 60 Fed. Reg. at 22,482).

<sup>136</sup> *Id.* at 16-17 (quoting 60 Fed. Reg. at 22,473-74).

make[, and] as such, the Petitioners' argument fails the materiality requirement of 10 C.F.R. 2.309(f)(1)(iv)."<sup>137</sup> "Accordingly," Staff argues, "inasmuch as Contention TC-1 addresses current compliance and fails to raise a matter that is properly within the scope of this license renewal proceeding, it is not admissible under license renewal and should be rejected."<sup>138</sup>

### 3. *Reply of Petitioners on Contention TC-1*

Petitioners in reply argue that this, like their other contentions, has a legal basis, as well as a "brief and concise explanation that is supported by competent evidence, readily available documents, alleged facts and/or proposed expert testimony," none of which has been questioned.<sup>139</sup> In addition, they refer to a portion of the NRC Staff's 2005 license renewal review plan, as follows:

In addition to the technical information required by 10 CFR 54.21, a license renewal application must contain general information (10 CFR 54.19), necessary technical specification changes (10 CFR 54.22), and environmental information (10 CFR 54.23). The application must be sufficiently detailed to permit the reviewers to determine (1) whether there is *reasonable assurance* that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB and (2) whether any changes made to the plant's CLB to comply with 10 CFR Part 54 are in accord with the Atomic Energy Act of 1954 and NRC regulations.<sup>140</sup>

From this, Petitioners draw the conclusion that the Staff's review "therefore needs to look at past noncompliances, present status and time lines to correct the problems."<sup>141</sup> Petitioners assert that, in addition to the Shearon Harris plant not currently being in compliance with fire protection regulations, CP&L has provided "no demonstration or firm commitment that the SHNPP will come into compliance with these regulations in the near future, during the remainder of its present license period or during the license extension period."<sup>142</sup>

On the materiality of this and their other contentions, Petitioners state:

Each of the contentions are [*sic*] material in that [they] go directly to the most crucial, and at the same time unresolved, threats to public health and safety from the

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<sup>137</sup> *Id.* at 16 (citing Petition at 10, 23, 24).

<sup>138</sup> *Id.* at 17.

<sup>139</sup> Petitioners' Reply at 5-6.

<sup>140</sup> *Id.* at 7-8 (citing NUREG-1800, "Standard Review Plan for Review of License Renewal Application for Nuclear Power Plants," Rev. 1 (2005) [hereinafter NUREG-1800 or SRP]) (emphasis provided by Petitioner) (ADAMS Accession No. ML052110007).

<sup>141</sup> Petitioners' Reply at 8.

<sup>142</sup> *Id.*

continuing operation of the [Shearon Harris plant]. The NRC simply cannot make its ultimate determination that the [plant] can be operated safely and protective of public health and safety during license extension without resolving the issues raised in each contention.<sup>143</sup>

Petitioners also ask to have the Final Director's Decision on their section 2.206 petition incorporated by reference into their current petition in this proceeding, arguing that the "findings of the Director are relevant to the relicensing as they show that the [Shearon Harris plant] has been out of compliance with the fire regulations since 1989 and that there is no time line for it to come into compliance."<sup>144</sup>

#### **4. Board Ruling on Contention TC-1**

Although we find that this contention raises a significant issue, under relevant law we further find that we must deny its admission as outside the scope of this license renewal proceeding. The Commission in the *Turkey Point* proceeding interpreted its license renewal rules to the effect that a plant's CLB is "effectively addressed and maintained by ongoing agency oversight, review and enforcement," and that "[i]ssues . . . which already are the focus of ongoing regulatory processes — do not come within the NRC's safety review at the license renewal stage."<sup>145</sup> This case law constitutes binding precedent on this licensing board in any case that is not distinguishable from it, absent higher binding legal authority to the contrary.<sup>146</sup>

We have learned in this proceeding that the Final Director's Decision, which to our knowledge the Commission has not elected to review, requires the Applicant to file, by June 2008,<sup>147</sup> the application it has stated it intends to file,<sup>148</sup> to amend its license pursuant to 10 C.F.R. § 50.48(c)(2)(vii) (which permits licensees that "wish to use performance-based methods for [certain] fire protection program elements and minimum design requirements" to apply for license amendments to allow for such use in lieu of other fire protection requirements). We are also aware, as discussed *supra* section IV.B.1 of this Memorandum and as pointed out

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<sup>143</sup> *Id.* at 11.

<sup>144</sup> *Id.* at 12.

<sup>145</sup> *Turkey Point*, CLI-01-17, 54 NRC at 9, 10; *see also* discussion *supra* section IV.B.1.

<sup>146</sup> *See South Carolina Electric & Gas Co. (Virgil C. Summer Nuclear Station, Unit 1)*, ALAB-710, 17 NRC 25, 28 (1983) ("licensing boards are bound to comply with [Commission adjudicatory decisions], whether they agree with them or not").

<sup>147</sup> *See* Final Director's Decision, DD-07-3, 65 NRC at 648-49.

<sup>148</sup> Tr. at 170-71.

by Staff, that 10 C.F.R. § 54.29 sets the “Standards for issuance of a renewed license.”

Taking into account these two factors (the requirement to file a license amendment application by June 2008 and the standards set forth in section 54.29), we would observe that, if the application in question is filed timely as required in the Final Director’s Decision, this would, in keeping with the Commission’s language quoted above from *Turkey Point*, seem to allow for “ongoing agency oversight” and “regulatory processes” to address the question whether, as required under 10 C.F.R. § 54.29(a), the Applicant has identified “actions [to be taken that are related to aging] such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB” — *provided* that the Staff in its license renewal review indeed looks at whether any new proposed fire protection program effectively addresses all relevant aging issues. This would seem to be a reasonable expectation, given that the Staff’s review of the current license renewal Application is projected to continue through 2008, and the Commission’s action on it into 2009.<sup>149</sup> In these circumstances, we find that Contention TC-1 is outside the scope of license renewal and thus does not meet the requirement of 10 C.F.R. § 2.309(f)(1)(iii).

Our denial of Contention TC-1 does not necessarily mean, however, that issues relating to fire protection at the Shearon Harris plant can never be addressed by Petitioners in an adjudication proceeding. The Applicant’s license amendment application regarding any proposed new fire protection program should produce an opportunity to petition to intervene in that license amendment proceeding and file contentions regarding any challenges Petitioners might have to the Applicant’s new proposed fire protection program. In addition, given the timing of the Staff’s and Commission’s review of the current license renewal application, there exists the possibility that the license amendment application might also trigger another opportunity to petition to intervene in the license renewal now at issue, if appropriate and adequate contentions are timely and properly submitted under relevant requirements including, *e.g.*, 10 C.F.R. § 2.309(c), (f)(1), (f)(2).<sup>150</sup>

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<sup>149</sup> See License Renewal Review Schedule, found on the NRC website at <http://www.nrc.gov/reactors/operating/licensing/renewal/applications/harris.html> (last visited Aug. 2, 2007). We note that the schedule in question is preceded by the following language:

These schedules reflect work plans that are subject to change. Early completion of a milestone may affect the target date of future milestones. Subsequent meetings and comment periods may change based on the revised schedule. This work plan will be updated on a periodic basis. Please see the NRC Public Meetings Page or contact the listed [Project Manager] for the latest information on meetings and status.

<sup>150</sup> See *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551 (2005); *Millstone*, LBP-05-16, 62 NRC 56 (2005); *Millstone*, CLI-04-36, 60 NRC 631 (2004); *Millstone*, LBP-04-15, 60 NRC 81 (2004).

If, on the other hand, the Applicant fails to file its intended license amendment application in time to allow for an aging review of any new proposed fire protection system, this would raise a significant question whether, as required under 10 C.F.R. § 54.29(a), the “actions . . . identified and . . . taken [on aging issues]” would in fact be “such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB,” at least with regard to fire protection systems, structures and components subject to aging review.<sup>151</sup> Such a reading and application of the rule is supported by the following statement of the Commission in its most recent rulemaking on license renewal (made in the context of discussing the non-applicability of the backfit rule in license renewal and an industry request to require a consideration of the costs of aging management in license renewal):

[T]he Commission sees no justification for requiring a consideration of costs among alternative aging management programs. The *renewal process* is designed such that a renewal applicant proposes the alternatives it believes manages the effects of aging for those structures and components defined by the rule. *The NRC staff has the responsibility of reviewing the applicant’s proposals and determining whether they are adequate such that there is reasonable assurance that activities authorized by the renewed license will continue to be conducted in accordance with the CLB.* The Commission believes that *this license renewal review* must necessarily be performed without regard to cost.<sup>152</sup>

This statement, which in fact concludes the Commission’s Statement of Considerations on its 1995 rulemaking, is consistent with a similar statement, pointed out to us by Petitioners<sup>153</sup> and found in the Introduction to the Staff’s Standard

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<sup>151</sup> In this regard, a related question indeed arises, how any license renewal could be viable when the current fire protection system referred to in the renewal application has been brought into question and no appropriate and legally authorized alternative system has been put in place. *See* Tr. at 178-83. We note that, while Applicant’s counsel challenged Petitioners’ characterization of the plant as being in “noncompliance,” and the Director’s Final Decision on the Petitioners’ section 2.206 petition discusses various past, present, and future efforts of the Applicant to compensate for and otherwise address problems, the Decision also makes repeated direct and implied references to the Applicant’s “noncompliances.” *See, e.g.,* Final Director’s Decision, DD-07-3, 65 NRC at 646, 647, 648, 649, 650, 651, 652, 653. Reviewing the currently configured system as to aging issues would not seem to satisfactorily address all *relevant* aging issues — i.e., those applicable to a future system that is now unknown, and which as a result cannot now be reviewed with regard to aging issues, at least in any complete or unequivocal manner.

<sup>152</sup> 60 Fed. Reg. at 22,490-91 (emphasis added). We note that we became aware of this language only after the July 17 oral argument, while reviewing the 1995 license renewal rulemaking, no party, including the Staff through its counsel, having brought it to our attention before or during oral argument.

<sup>153</sup> *See* Petitioners’ Reply at 7-8.

Review Plan for License Renewal, that “[t]he application must be sufficiently detailed to permit the reviewers to determine (1) whether there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB . . . .”<sup>154</sup>

Given the Commission’s indication that “[a]djudicatory hearings in individual license renewal proceedings will share the same scope of issues as our NRC

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<sup>154</sup>NUREG-1800 at 1 (emphasis added). We are also mindful of certain additional language from NUREG-1800 at 4.7-1 that could also lead a reasonable reader to conclude that, while the “adequacy of the measures for the term of the current license is not within the scope of the license renewal review” (emphasis added), the adequacy of such measures for the term of a renewal period might well be within the scope of license renewal.

We note as well, to the contrary, the suggestion made by Staff and Applicant at oral argument (after the parties had been directed to focus their oral arguments regarding Contention TC-1 on certain defined questions including the “reasonable assurance” issue, see 6/29/07 Order (Regarding Questions) at 1-2) to the effect that NUREG-1800 needs to be read in the context of the scoping process the Staff goes through with regard to any license renewal application, which involves first determining what systems, structures, and components need to be reviewed with respect only to aging-related issues. See Tr. at 102-05, 113-18. In this regard, however, we would observe that Chapter 2 of the same document, entitled “Scoping and Screening Methodology for Identifying Structures and Components Subject to Aging Management Review and Implementation Results,” also contains numerous instances of language that, while clearly addressed to the scoping process, suggests that, even if the Staff’s ultimate, most detailed review is on aging issues related to those systems, structures, and components that are identified as being “within the scope of license renewal,” its actual review process includes more than merely looking at aging issues.

For example, NUREG-1800 contains references to the Staff’s “review” of “the NRC’s safety evaluation report (SER) that was issued along with the operating license for the facility,” and various parts of the plant’s Updated Final Safety Analysis Report (UFSAR) and Probabilistic Risk Analysis (PRA), in addition to “the applicant’s docketed correspondence related to . . . 10 C.F.R. 50.48, ‘Fire Protection.’” NUREG-1800 § 2.1.3, at 2.1-2 and 2.1-3. Another example of what a Staff reviewer “should review” is that of “relevant sources of information” to “identify the set of plant-specific conditions of normal operation, DBAs, external events, and natural phenomena for which the plant must be designed to ensure [functions including] . . . [t]he capability to shut down the reactor and maintain it in a safe shutdown condition.” *Id.* § 2.1.3.1.1, at 2.1-5.

More importantly, however, as is stated in both the Introduction to NUREG-1800 and by the Commission in the 1995 license renewal rulemaking at 60 Fed. Reg. at 22,490-91 (see *supra* text accompanying note 152), the Staff would seem undisputedly to have some meaningful level of “responsibility” to determine whether the Applicant’s proposals on aging-related actions are “adequate such that there is reasonable assurance that activities authorized by the renewed license will continue to be conducted in accordance with the CLB.” And this is relevant to our consideration herein, not in any sense to second-guess how the Staff performs its functions, see *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516 (1980), but because, as indicated above, the Commission has stated that the issues in a license renewal adjudicatory proceeding “share the same scope of issues as our NRC Staff review.” *Turkey Point*, CLI-01-17, 54 NRC at 10 (emphasis added).

*Staff review*,<sup>155</sup> it would seem reasonable to suppose that, if the Staff has the “responsibility of reviewing the applicant’s proposals and determining whether they are adequate such that there is reasonable assurance that activities authorized by the renewed license will continue to be conducted in accordance with the CLB,” as stated by the Commission in 1995, this would likewise be within the scope of a license renewal adjudication proceeding, at least when “ongoing regulatory processes” fail to address a relevant issue — as would be the case if the Staff did not review any new proposed fire protection system with regard to aging issues. For it is undisputed, as stated in the Application at issue, that the fire protection system is within the scope of license renewal<sup>156</sup> and contains components that require an aging review.<sup>157</sup>

To be sure, we are aware of the Commission’s 1991 statement, pointed out to us by the Staff, that “Section 54.29, which defines the standard for issuance of a renewed license, does not require a finding regarding the adequacy of, or compliance with, the plant’s licensing basis.”<sup>158</sup> And we note the additional statements pointed out to us by Applicant and Staff, including the Commission’s indication in 1995 that “the regulatory process provides reasonable assurance that there is compliance with the CLB.”<sup>159</sup> But we cannot ignore the Commission’s concluding remarks to its 1995 Statement of Considerations, which we quote above.<sup>160</sup> And, significantly, if we analyze the two statements from the 1995 rulemaking together, we see that they can in fact be read to be consistent with each other, as well as with section 54.29 and *Turkey Point*, in the manner we discuss above, regarding “ongoing regulatory processes” and the “reasonable assurance” requirement.<sup>161</sup>

Of course, the rule itself, which has the force of law, prevails over guidance documents such as the Commission’s rulemaking Statement of Considerations and the Staff’s Standard Review Plan. Under the rule in question, *i.e.*, 10 C.F.R.

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<sup>155</sup> *Turkey Point*, CLI-01-17, 54 NRC at 10 (emphasis added); *see supra* section IV.B.1, at pp. 61-62.

<sup>156</sup> *See* Application § 2.3.3.31, at 2.3-116.

<sup>157</sup> *See id.* at 2.3-117 to 2.3-118.

<sup>158</sup> 56 Fed. Reg. at 64,961; *see* Staff Response at 16.

<sup>159</sup> 60 Fed. Reg. at 22,473-74; *see* Staff Response at 16-17.

<sup>160</sup> *See supra* text accompanying note 152; 60 Fed. Reg. at 22,490-91.

<sup>161</sup> *See supra* at pp. 75-78. By comparison, two fundamental rules of statutory construction are that a “statute’s provisions should be read to be consistent with one another, rather than the contrary,” *United Steelworkers of America, AFL-CIO-CLC v. North Star Steel Co., Inc.*, 5 F.3d 39, 43 (3d Cir. 1993), and “that ‘a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant,’” *TRW, Inc. v. Andrews*, 534 U.S. 19, 31 (2001) (quoting *Duncan v. Walker*, 533 U.S. 167, 174 (2001) (internal quotation marks omitted)).

§ 54.29,<sup>162</sup> a renewed license may be issued if “actions” related to aging (both managing the effects of aging and “time-limited aging analyses”) have been or will be taken “such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB” (and “that any changes made to the plant’s CLB in order to comply with this paragraph are in accord with the Act and the Commission’s regulations”).<sup>163</sup>

If, in this license renewal, the “actions” required in the rule do not include “actions” relating to the ultimate fire protection system that will at some point in the future be put in place, this would bring into doubt whether there could be any “reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB,” as required under the rule. In other words, there would seem to be a “genuine dispute” whether the “actions” required under section 54.29(a) would — or *could* — be “such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB,” as also required under section 54.29(a). And to the extent that ambiguity exists, the Commission’s concluding statement from its 1995 Statement of Considerations that is quoted above<sup>164</sup> would seem to be most directly on point as to the interpretation of 10

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<sup>162</sup> Section 54.29 provides as follows:

**§ 54.29 Standards for issuance of a renewed license.**

A renewed license may be issued by the Commission up to the full term authorized by § 54.31 if the Commission finds that:

(a) Actions have been identified and have been or will be taken with respect to the matters identified in Paragraphs (a)(1) and (a)(2) of this section, such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB, and that any changes made to the plant’s CLB in order to comply with this paragraph are in accord with the Act and the Commission’s regulations. These matters are:

(1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under § 54.21(a)(1); and

(2) time-limited aging analyses that have been identified to require review under § 54.21(c).

(b) Any applicable requirements of Subpart A of 10 CFR Part 51 have been satisfied.

(c) Any matters raised under § 2.335 have been addressed.

<sup>163</sup> We note also the provision in subsection (c) of section 54.29 referring to 10 C.F.R. § 2.335, which provides for a petition for waiver of a rule if “special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which the rule or regulation was adopted.” *See also* the Commission’s discussion in the *McGuire/Catawba* license renewal proceeding of the “vehicle by which a petitioner may seek to raise issues that would otherwise be beyond the scope of a license renewal proceeding” to be found in 10 C.F.R. [then] § 2.758 (now found in § 2.335). *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278, 291 (2002). However, no such petition has been filed with us.

<sup>164</sup> *See supra* text accompanying note 152; 60 Fed. Reg. at 22,490-91.

C.F.R. § 54.29(a): The “applicant’s proposals” as to aging must, according to the Commission’s 1995 interpretation, be “adequate such that [it can be determined] that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB.”<sup>165</sup> In the same vein, notwithstanding some references to “rebuttable presumptions” in their Petition, the essential thrust of Petitioners’ argument on Contention TC-1 is that, while they freely admit they do not challenge any aging issues,<sup>166</sup> they do claim that, whatever “actions” might at some point in the future be taken, these are *not* “adequate” to provide the requisite “reasonable assurance,” or indeed any “assurance” that “the licensing bas[i]s . . . provide[s] and maintain[s] an acceptable level of safety for operation so that operation will not be inimical to public health and safety or common defense and security.”<sup>167</sup>

With regard to the specific circumstances presented to us in Contention TC-1, we would note that, to our knowledge, the precise situation presented by this case has never before arisen in any license renewal proceeding — that is to say, a situation in which there is some possibility of the Staff *not being able* to “review[] the applicant’s proposals [on aging-related matters] and determin[e] whether they are adequate such that there is reasonable assurance that activities authorized by the renewed license will continue to be conducted in accordance with the CLB,”<sup>168</sup> *because* a viable system within the scope of license renewal is not yet in place.

We are aware that the Commission in the *McGuire/Catawba* license renewal proceeding stated, in CLI-02-14, that “[n]othing in our case law or regulations suggests that license renewal is an occasion for far-reaching speculation about unimplemented and uncertain plans” (referring to Duke’s plan to use MOX [mixed-oxide] fuel in a pilot program).<sup>169</sup> The Commission in reaching its ruling therein relied on section 54.29 and the rule’s “focus[] on the ‘current’ licensing basis,” noting that the definition of “current licensing basis” in section 54.3 includes “‘NRC requirements . . . that are docketed and in effect.’”<sup>170</sup> On this basis the Commission ruled that the MOX fuel issue was not ripe for consideration in that proceeding.<sup>171</sup>

By contrast, however, in this proceeding, Applicant has made a “written commitment” to apply for the license amendment in question, to “ensur[e]

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<sup>165</sup> 60 Fed. Reg. at 22,490-91 (emphasis added).

<sup>166</sup> *See* Tr. at 127.

<sup>167</sup> Petition at 8 (quoting 56 Fed. Reg. at 64,946); *see id.* at 11, 23, 24; Petitioners’ Reply at 7-8; Tr. at 75-77, 80-81, 82-87, 127, 155-57.

<sup>168</sup> 68 Fed. Reg. at 22,490-91.

<sup>169</sup> *McGuire/Catawba*, CLI-02-14, 55 NRC at 293.

<sup>170</sup> *Id.* (emphasis added).

<sup>171</sup> *Id.*

compliance with and operation within applicable NRC requirements and the plant-specific design basis . . . ,”<sup>172</sup> which would distinguish this case from the *McGuire/Catawba* case.

In such circumstances, a failure of the Applicant to file its intended license amendment application in time to allow for an aging-related review of whatever new fire protection system would otherwise be proposed and possibly approved, might arguably be occasion to submit a new request for hearing, petition to intervene, and contention(s) with regard to the renewal of the Shearon Harris license, possibly in conjunction with a petition for waiver of any exclusion of non-aging issues under 10 C.F.R. § 54.29, if it can be argued that the requirements of section 2.335 are met.<sup>173</sup>

We do not, of course, by making this observation mean to state or imply any future conclusions that might be reached on whether any such contention(s) would meet all of the requirements of 10 C.F.R. § 2.309(c), (f)(1), and/or (f)(2). But, in light of the preceding analysis, Petitioners may wish to follow the progress of the intended license amendment application. And in any event, given that the term of the current license does not end until 2027, there would seem to be more than sufficient time to address Petitioners’ concerns and thereby better assure that, going into any new license term, the plant will ultimately be fully in compliance with all relevant fire protection requirements, so as to protect the health and safety of the public — which, as Petitioners point out and the Commission observed early on in its existence, is what the NRC’s “licensing procedure is devoted to assuring.”<sup>174</sup>

#### **B. Environmental Contention EC-1: Failure To Address Aircraft Attacks**

Petitioners in this contention state:

The Environmental Report for the SHNPP license extension fails to satisfy NEPA because it does not address the environmental impacts of a successful attack by the deliberate and malicious crash of a fuel laden and/or explosive laden aircraft and the severe accident consequences of the aircraft’s impact and penetration on the facility. It is unreasonable for the NRC to dismiss the possibility of an aviation attack on the SHNPP in light of the studies by the NRC that this is a real possibility that could have devastating results.<sup>175</sup>

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<sup>172</sup> See 10 C.F.R § 54.3; 60 Fed. Reg. at 22,274.

<sup>173</sup> See *supra* note 163.

<sup>174</sup> *Petition for Remedial Action*, CLI-78-6, 7 NRC at 404.

<sup>175</sup> *Petition* at 24.

### *1. Petitioners' Basis for Contention EC-1*

In support of this contention Petitioners note that “[t]he EIS for the original [Shearon Harris plant] license did not evaluate the consequences of an aviation attack and the resulting impact, penetration, explosion and fire,” and argue that the “potential for accidents caused by deliberate malicious actions and the resulting equipment failures is not only reasonably foreseeable, but is likely enough to qualify as a ‘design-basis accident,’ i.e., an accident that must be designed against under NRC safety regulations.”<sup>176</sup> Petitioners also cite in support of this contention the Argonne National Laboratory’s analysis that was published in 1982 as NUREG-2859, “Evaluation of Aircraft Hazards Analysis for Nuclear Power Plants” [hereinafter NUREG-2859], but subsequently removed from the NRC’s public document room after the attacks of September 11, 2001.<sup>177</sup>

Noting that this study focused on accidental aircraft crashes, Petitioners argue that “the same threat analysis can and should be made for the impacts of deliberate malicious actions” directed at the plant.<sup>178</sup> Petitioners quote various portions of NUREG-2859 that address the threats and potential effects associated with aircraft crashes involving the collision of aircraft with power plant structures.<sup>179</sup>

In addition, Petitioners cite the NRC’s March 2000 request that the Turkey Point nuclear plant respond to certain questions about “expanded aircraft operations at the nearby Homestead Air Force Base,” the response thereto, and an October 2000 study of the spent fuel pool hazard at plants undergoing decommissioning, in support of Contention EC-1.<sup>180</sup> Petitioners also cite and discuss the NRC’s amendment of its “design basis threat” rule,<sup>181</sup> but challenge it as contrary to the earlier studies and information.<sup>182</sup>

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<sup>176</sup> *Id.* at 24-25.

<sup>177</sup> *Id.* at 25 (citing NUREG-2859). Petitioners indicate that in any evidentiary hearing in this proceeding they would seek to have this document introduced into the record “because it remains relevant to aircraft attacks, both accidents and deliberate malicious actions.” *Id.* at 25 n.12.

<sup>178</sup> *Id.* at 25.

<sup>179</sup> *Id.* at 25-27.

<sup>180</sup> *Id.* at 27-28 & nn.13, 14 (citing Letter from R.J. Hovey, Vice President–Turkey Point Plant, to NRC, Response to Request for Information Regarding the Potential Risk of the Proposed Civil and Government Aircraft Operation at Homestead Air Force Base on the Turkey Point Plant (May 2, 2000); NRC, Technical Study of Spent Fuel Pool Accident Risk at Decommissioning Nuclear Power Plants (Oct. 2000).

<sup>181</sup> *Id.* at 28 & n.15 (citing SECY-06-0219, Final Rulemaking To Revise 10 C.F.R. 73.1, Design Basis Threat (DBT) Requirements (Oct. 30, 2006) [hereinafter SECY-06-0219]).

<sup>182</sup> *Id.* at 29 & n.17 (citing Union of Concerned Scientists Issue Brief: The NRC’s Revised Security Regulations (Feb. 1, 2007), [http://www.ucsusa.org/assets/documents/clean\\_energy/20070201-ucs-aircraft-fire-hazards.pdf](http://www.ucsusa.org/assets/documents/clean_energy/20070201-ucs-aircraft-fire-hazards.pdf) (last visited Aug. 2, 2007)).

Finally, Petitioners point out that 10 C.F.R. § 51.53(c)(ii)(L) (apparently referring to 10 C.F.R. § 51.53(c)(3)(ii)(L)) requires license renewal applicants to consider alternatives to mitigate severe accidents, or “SAMAs,” and that SAMAs for aircraft impact have not been previously considered for the Shearon Harris plant.<sup>183</sup> Petitioners assert that the Applicant’s Environmental Report does not address SAMAs for aircraft impact, and therefore fails to satisfy 10 C.F.R. § 51.53(c)(3)(iii), “because it does not consider reasonable alternatives for avoiding or reducing the environmental impacts of this class of accidents.”<sup>184</sup> Thus, Petitioners argue, “the application is insufficient” and “cannot be approved without a full study of the threats from aviation attacks and implementation of the SAMAs required to prevent or mitigate the impacts from those attacks.”<sup>185</sup>

## **2. Positions of Applicant and NRC Staff on Contention EC-1**

The Staff’s response to Contention EC-1 is brief and to the point. In the Staff’s view, the contention raises concerns which are “clearly beyond the scope of this license renewal proceeding” under applicable and binding Commission case law authority.<sup>186</sup> Staff cites the Commission’s recent ruling in the *Oyster Creek* license renewal proceeding, in which the Commission upheld the Licensing Board’s decision rejecting a contention challenging an applicant’s failure to consider an aircraft attack scenario in its environmental report’s SAMA analysis.<sup>187</sup> Staff points out the Commission’s disagreement therein with, and decision not to follow in other Federal Circuits the 2006 decision of the United States Court of Appeals for the Ninth Circuit in *San Luis Obispo Mothers for Peace v. NRC*, that the NRC could not under NEPA categorically refuse to consider the consequences of a terrorist attack against a spent fuel storage facility.<sup>188</sup> Staff also notes the Commission’s further indication that

there is no basis for admitting a NEPA-terrorism contention in a license renewal proceeding, because the [GEIS] had already performed a discretionary analysis of terrorist acts in connection with license renewal, and concluded that the core damage

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<sup>183</sup> *Id.* at 29.

<sup>184</sup> *Id.* at 29-30.

<sup>185</sup> *Id.* at 30. We note that Petitioners provide additional argument relating to environmental issues in license renewal, SAMAs, and related issues in the Introduction to its Petition and in the section of it entitled “Statutory and Regulatory Framework.” See *id.* at 3-4, 13-17.

<sup>186</sup> Staff Response at 18-19.

<sup>187</sup> *Id.* at 19 (citing *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 128-29 (2007), *aff’g* LBP-06-7, 63 NRC 188 (2006)).

<sup>188</sup> *Id.* at 19 & n.25 (citing *Oyster Creek*, CLI-07-8, 65 NRC at 128; *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006), *cert. denied sub nom., Pacific Gas & Electric Co. v. San Luis Obispo Mothers for Peace*, 127 S. Ct. 1124 (2007)).

and radiological release from such acts would be no worse than the damage and release to be expected from internally initiated events.<sup>189</sup>

According to the Staff, the “Commission’s decision in *Oyster Creek* establishes binding precedent for the resolution of Contention EC-1 in this proceeding,” and Contention EC-1 must therefore be rejected.<sup>190</sup>

Applicant asserts that Contention EC-1 is inadmissible for essentially the same reasons, adding that it is also inadmissible “because the GEIS already addresses the environmental impacts of sabotage, and Petitioners neither request a waiver of the GEIS generic determination regarding sabotage nor do they provide new and significant information that would be required for such a waiver to be granted.”<sup>191</sup> Applicant also quotes, *inter alia*, the following language from the Commission’s *Oyster Creek* decision:

[A]s a general matter, NEPA “imposes no legal duty on the NRC to consider intentional malevolent acts . . . in conjunction with commercial power reactor license renewal applications.” . . . “The ‘environmental’ effect caused by third-party miscreants ‘is . . . simply too far removed from the natural or expected consequences of agency action to require a study under NEPA.’”<sup>192</sup>

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A license renewal proceeding is distinguishable from the situation considered in *San Luis Obispo Mothers for Peace*, where the NRC had before it a proposal to construct a dry cask storage facility at a nuclear reactor site. Unlike the situation in that case, a license renewal application does not involve new construction. So there is no change to the physical plant and thus no creation of a new “terrorist target.”<sup>193</sup>

In addition, Applicant notes Commission statements, also cited by Staff, to the effect that the GEIS concluded that any sabotage event would produce no

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<sup>189</sup> *Id.* at 19 (citing *Oyster Creek*, CLI-07-8, 65 NRC at 131).

<sup>190</sup> *Id.* at 19.

<sup>191</sup> Applicant’s Answer at 16-17. Applicant goes on to quote the following language of the Commission in the *Turkey Point* proceeding:

The Commission recognizes that even generic findings sometimes need revisiting in particular contexts. Our rules thus provide a number of opportunities for individuals to alert the Commission to new and significant information that might render a generic finding invalid, either with respect to all nuclear power plants or for one plant in particular. In the hearing process, for example, petitioners with new information showing that a generic rule would not serve its purpose at a particular plant may seek a waiver of the rule.

*Id.* at 20 (quoting *Turkey Point*, CLI-01-17, 54 NRC at 12) (citing *Entergy Nuclear*, CLI-07-3, 65 NRC at 20).

<sup>192</sup> Applicant’s Answer at 17 (citing *Oyster Creek*, CLI-07-8, 65 NRC at 129 (quoting *McGuire/Catawba*, CLI-02-26, 56 NRC at 364, 365); *Pilgrim*, LBP-06-23, 64 NRC at 300).

<sup>193</sup> *Id.* at 18 (citing *Oyster Creek*, CLI-07-8, 65 NRC at 130 n.25).

worse core damage or radiological release than would be expected from internally initiated events.<sup>194</sup> Thus, Applicant insists, “no separate NEPA analysis is required to evaluate the potential environmental impacts of a terrorist attack because the GEIS analysis of severe accident consequences bounds the potential consequences that might result from a large scale radiological release, regardless of the initiating cause.”<sup>195</sup>

Applicant also argues that Petitioners fail to “provide a concise statement of the alleged facts or expert opinion supporting the contention that a deliberate and malicious crash must be addressed separately or that the environmental impacts of such an act are not already encompassed within the GEIS”; fail to “explain how their assertions regarding Contention EC-1 would make a difference in the outcome of the licensing renewal proceeding;” and fail to “allege how the environmental impacts of a ‘deliberate and malicious crash of a fuel laden and/or explosive laden aircraft’ would differ from the environmental impacts of an ‘internally initiated severe accident.’”<sup>196</sup>

Petitioners’ arguments regarding SAMAs also lack merit, Applicant asserts, among other things because SAMAs are typically limited to damage to the reactor core, and Petitioners have not in any event referred to specific portions of the SAMA part of the Application or shown any genuine dispute with the Application in this regard.<sup>197</sup> In addition, Applicant challenges Contention EC-1 to the extent that it “suggest[s] that aviation attacks are design basis threats warranting back-fitting to protect the public health and safety,” arguing that “[s]uch allegations are not only beyond the scope of this license renewal proceeding because they are unrelated to aging, but [also because they are] impermissible challenges” to the NRC regulation on the design basis threat for nuclear power plants, found in 10 C.F.R. § 73.1, and are “barred by 10 C.F.R. § 50.13.”<sup>198</sup>

### 3. *Reply of Petitioners on Contention EC-1*

In addition to their general argument that their contentions are material and

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<sup>194</sup> *Id.* at 18 (citing *McGuire/Catawba*, CLI-02-26, 56 NRC at 365 n.24 (citations omitted)).

<sup>195</sup> *Id.* at 19.

<sup>196</sup> *Id.* at 24-25.

<sup>197</sup> *Id.* at 25-28.

<sup>198</sup> Applicant’s Answer at 22-24 (citing, *inter alia*, 10 C.F.R. § 2.335). Section 50.13 provides:

An applicant for a license to construct and operate a production or utilization facility, or for an amendment to such license, is not required to provide for design features or other measures for the specific purpose of protection against the effects of (a) attacks and destructive acts, including sabotage, directed against the facility by an enemy of the United States, whether a foreign government or other person, or (b) use or deployment of weapons incident to U.S. defense activities.

have a legal basis, explanations supported by evidence, documents, facts and/or proposed expert testimony, Petitioners question the Commission’s *Oyster Creek* decision on various grounds, including that it “ignores the mandate from the Supreme Court in *San Luis Obispo Mothers for Peace* . . . .”<sup>199</sup> Petitioners further challenge the “NRC staff’s conclusion that all aviation attacks are terrorism-related so therefore all contentions raising the issue of aviation attacks are not admissible” as “circular reasoning.”<sup>200</sup> Citing a definition of “terrorism” from the Federal Criminal Code,<sup>201</sup> Petitioners argue that “not all aviation attacks would be from ‘terrorists,’” that “it makes little difference to the disastrous outcome at the nuclear plant whether the motivation for the attack is political or psychotic,” and that, “[n]o matter what the motivation, the [Shearon Harris plant] is not designed to withstand the impacts of an aviation attack or its direct consequences.”<sup>202</sup>

Again noting the lack of any SAMAs in the Application for aircraft impacts, Petitioners urge that the legitimacy of any studies cited by the Staff is “a matter in dispute that should be left to the ASLB for adjudication,” in which the issues should be “whether the Commission has resolved these issues for the [plant], and whether during the . . . renewal period the risk to public health and safety from an aviation attack and its consequences will be mitigated.”<sup>203</sup>

#### **4. Board Ruling on Contention EC-1**

Based on the Commission’s ruling in the *Oyster Creek* proceeding, we find that Contention EC-1 is beyond the scope of this proceeding, therefore fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iii), (iv), (vi),<sup>204</sup> and is inadmissible. Petitioners are incorrect that we must interpret the U.S. Supreme Court’s denial of *certiorari* as a “mandate” endorsing the Ninth Circuit’s decision in *San Luis Obispo Mothers for Peace*.<sup>205</sup> The Supreme Court has made clear that a denial of

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<sup>199</sup> Petitioners’ Reply at 9.

<sup>200</sup> *Id.*

<sup>201</sup> *Id.* at 10 (quoting from 18 U.S.C. § 2331 as follows:

activities that involve violent . . . or life-threatening acts . . . that are a violation of the criminal laws of the United States or of any State and . . . appear to be intended (i) to intimidate or coerce a civilian population; (ii) to influence the policy of a government by intimidation or coercion; or (iii) to affect the conduct of a government by mass destruction, assassination, or kidnapping; and . . . (C) occur primarily within the territorial jurisdiction of the United States . . . [or] . . . (C) occur primarily outside the territorial jurisdiction of the United States . . .).

<sup>202</sup> *Id.* at 9-10.

<sup>203</sup> *Id.* at 10-11.

<sup>204</sup> See discussion *supra* at end of section IV.A.

<sup>205</sup> Petitioners’ Reply at 9.

*certiorari* “carries with it no implication whatever regarding the Court’s views on the merits of a case which it has declined to review.”<sup>206</sup>

Because the Supreme Court has neither endorsed nor rejected the reasoning of the Ninth Circuit, and because the Shearon Harris plant is located outside the jurisdiction of the Ninth Circuit, we are bound by the Commission’s decision in *Oyster Creek*, absent anything that would distinguish this case from that one. As we recognized in our ruling on Contention TC-1, Commission case law is clear that “licensing boards are bound to comply with [Commission adjudicatory decisions].”<sup>207</sup>

Petitioners’ assertion that the Commission’s decision in *Oyster Creek* is limited to aviation attacks perpetrated for “terrorism” purposes as the word is defined in the Federal Criminal Code, and that the NRC must consider nonterrorism “deliberate malicious actions,” must fail in light of the Commission’s specific exclusion from NEPA consideration in NRC license renewal proceedings any “intentional malevolent acts” or actions of “third-party miscreants.”<sup>208</sup> Moreover, Petitioners have failed to distinguish this proceeding from the *Oyster Creek* proceeding in any meaningful way.

Thus we are bound by the *Oyster Creek* decision, and must reject Petitioners’ invitation to “reconsider” its scope in the context of this relicensing proceeding,<sup>209</sup> and deny admission of Contention EC-1. In addition to being outside the scope of the proceeding and therefore not in compliance with 10 C.F.R. § 2.309(f)(1)(iii), it also does not meet the requirements of § 2.309(f)(1)(iv), (vi), which require a demonstration that the issue raised by the contention is “material to the findings the NRC must make to support the action that is involved in the proceeding,” and “sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact.”

We address below in section VI of this Memorandum the backfit issue raised by Petitioners.

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<sup>206</sup> *Maryland v. Baltimore Radio Show*, 338 U.S. 912, 919 (1950); see also *Excel Communications, Inc. v. AT&T Corp.*, 528 U.S. 946 (1999) (“The importance of the questions presented in this *certiorari* petition makes it appropriate to reiterate the fact that the denial of the petition does not constitute a ruling on merits”).

<sup>207</sup> *Virgil C. Summer*, ALAB-710, 17 NRC at 28.

<sup>208</sup> *Oyster Creek*, CLI-07-8, 65 NRC at 129 (citing *McGuire/Catawba*, CLI-02-26, 56 NRC at 365; *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 (2002)).

<sup>209</sup> See Petitioners’ Reply at 9.

## C. Environmental Contention EC-2: Failure To Address Fire Impacts of Air Attacks

Petitioners in this environmental contention state:

The Environmental Report for the SHNPP license extension fails to satisfy NEPA because it does not address a significant fire involving noncompliant fire protection features for both primary and redundant safe shutdown electrical circuits caused by a deliberate malicious action using a fuel-laden and/or explosive-laden aircraft on the facility.<sup>210</sup>

### 1. *Petitioners' Basis for Contention EC-2*

In support of this contention Petitioners rely on the same arguments as those put forth for Contentions TC-1 and EC-1, emphasizing in this contention that the collision of an aircraft into the plant could cause fires, with all their attendant risks.<sup>211</sup> Also cited in support of this contention is the NRC's recognition in amending the design basis rule that nuclear power plants "could only be protected by passive measures."<sup>212</sup> Petitioners argue that "significant fires caused by malicious acts are credible," referring to the structural damage caused by fires arising from the September 11, 2001, attacks on the World Trade Center, and assert that the "structures protecting the electric circuits for the control operation of the safe shutdown systems at [the plant] are similarly vulnerable."<sup>213</sup>

In addition, Petitioners contend, "[t]he fire protection regulations, even if met in full and nonexempted, are intended to deal with a single fire in a single room or area," with no other equipment damage presumed, and the "fire protection regulations are not designed for and are not adequate to deal with fires in multiple rooms and areas that can easily result from an aircraft crash."<sup>214</sup> Thus, Petitioners argue, Applicant's "noncompliance and violations of the fire protection regulations at the [plant] would be compounded by deliberate malicious actions."<sup>215</sup>

Finally, as with Contention EC-1, Petitioners assert that this contention brings into play the requirement in 10 C.F.R. § 51.53(c)(3)(ii)(L) for consideration of alternatives to mitigate severe accidents, or SAMAs.<sup>216</sup> Because Appendix E of the Applicant's ER does not address any such alternatives relating to "fires caused by aircraft impact," Petitioners argue the ER fails to satisfy 10 C.F.R.

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<sup>210</sup> Petition at 30.

<sup>211</sup> *Id.* at 30-33.

<sup>212</sup> *Id.* at 33 & n.22 (citing SECY-06-0219).

<sup>213</sup> *Id.* at 33-34.

<sup>214</sup> *Id.* at 34.

<sup>215</sup> *Id.*

<sup>216</sup> Petition at 34.

§ 51.53(c)(3)(iii), and the Application “cannot be approved without a full study of the risks associated with fires and explosions caused by aviation attacks and implementation of the SAMAs required to prevent or mitigate the impacts.”<sup>217</sup>

## **2. *Positions of Applicant and NRC Staff on Contention EC-2***

Both the Applicant and Staff submit that this contention is inadmissible for the same reasons they contend Contention EC-1 is inadmissible.<sup>218</sup>

## **3. *Reply of Petitioners on Contention EC-2***

Likewise, Petitioners provide the same argument in reply with regard to Contention EC-2 as for Contention EC-1.<sup>219</sup>

## **4. *Board Ruling on Contention EC-2***

For the same reasons set forth above with respect to Petitioners’ Contention EC-1, we find Contention EC-2 to be beyond the scope of this proceeding under relevant and binding case law, and therefore deny its admission.

## **D. Environmental Contention EC-3: Inadequacies in Evacuation Plan**

Petitioners in their final contention state:

Due to highly significant and unforeseen changes in circumstances, through dramatically increased populations and changing land uses, the evacuation plan for the SHNPP does not adequately protect the health and safety of the residents, students and workers around the plant.<sup>220</sup>

### **1. *Petitioners’ Basis for Contention EC-3***

In support of this contention Petitioners start with the requirement that, “[b]efore a nuclear plant is licensed to operate, the NRC must have ‘reasonable assurance that adequate protective measures can and will be taken in the event of a

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<sup>217</sup> *Id.* at 34-35; *see also id.* at 1-4, 7-17.

<sup>218</sup> Staff Response at 20; Applicant’s Answer at 28-31.

<sup>219</sup> *See* Petitioners’ Reply at 9-10.

<sup>220</sup> Petition at 35.

radiological emergency.’<sup>221</sup> Petitioners assert that, although the evacuation plan for the plant was found to provide “‘reasonable assurances’ that it would protect public health and safety” in 1987 when it was approved, “[i]t is apparent that this assurance cannot be relied upon for the entire 60-year period until the proposed relicensing period would expire.”<sup>222</sup> Thus, Petitioners insist, “[t]he opportunity to reassess the adequacy of the evacuation plan should be in the present ER and EIS as part of the relicensing review, and should focus on the significant changes with the plant and its environment, including the human environment.”<sup>223</sup>

Petitioners argue that the statutory and regulatory framework for license renewal establishes a “presumption that the present rules protect public health and safety,” which “can be rebutted with the presentation of significant new information.”<sup>224</sup> Petitioners contend that there is significant new information in this regard, arising out of “significant changes in circumstances surrounding the plant that impact the adequacy of the evacuation plan.”<sup>225</sup>

Petitioners support this argument, and their contention, with the affidavit of Steven Wing, Ph.D., Associate Professor of Epidemiology at the University of North Carolina at Chapel Hill School of Public Health.<sup>226</sup> According to Dr. Wing, there have been “significant population increases” in the area around the plant and within the 10-mile emergency planning zone (EPZ), and there will be additional increases through 2047, not only for the 10-mile zone but also for “the population within the 50-mile area around the plant.”<sup>227</sup> Because the original 1987 evacuation plan “did not foresee the magnitude of these increases, [it] is inadequate today [and] in the future.”<sup>228</sup>

Petitioners indicate that Dr. Wing “also is concerned that there are numbers of children, women of childbearing age, senior citizens and nursing home residents who may have special difficulties in the event of an evacuation and may be more susceptible to radiation emissions and other hazards that could occur in connection with evacuation and relocation.”<sup>229</sup> Other changes in circumstances asserted to be relevant in this proceeding are “increased vehicle use on the highways in the area to the point that the major thoroughfares used as evacuation routes may be

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<sup>221</sup> *Id.* (citing 10 C.F.R. Part 50, App. E and NUREG-0654, “Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants” (March 2002)).

<sup>222</sup> *Id.* at 35.

<sup>223</sup> *Id.*

<sup>224</sup> *Id.* at 35-36.

<sup>225</sup> *Id.* at 36.

<sup>226</sup> *Id.* (citing Attachment 4 to Petition).

<sup>227</sup> *Id.* at 36.

<sup>228</sup> *Id.*; *see also id.* at 37.

<sup>229</sup> *Id.* at 36.

impassible [*sic*] at most times of day,” which “reflects the significant increases in population as well as changes in land uses.”<sup>230</sup> Petitioners also argue that forecasts relating to vehicle use on highways planned to be used for evacuation “may be completely useless by 2027 without extensive new spending on highway expansions and improvements.”<sup>231</sup>

Petitioners point out that “local governments that have jurisdiction in the 10-mile and 50-mile EPZs have criticized the current emergency planning efforts because they do not have adequate planning, resources, training and staff to safely evacuate people within the EPZ during an emergency.”<sup>232</sup> Petitioners cite an October 3, 2006, resolution of the Orange County Board of Commissioners that “there is no coordinated emergency management and evacuation planning for the portion of the ingestion pathway beyond the area defined by the 10-mile radius around Shearon Harris.”<sup>233</sup> According to Petitioners, other local governments as well have expressed the same concerns.<sup>234</sup>

Petitioners provide, as an example of the “inability of local governments to meet the requirements for prompt and effective evacuation during an emergency,” the “response by the company and State and local officials to an accidental fire at a hazardous waste storage facility in Apex, North Carolina, part of which is within the EPZ.”<sup>235</sup> In this example, Petitioners state, the “flaws in evacuating nearby residents, even in potentially critical situations,” were demonstrated by the “woefully ineffective” local evacuation plan, and the fact that “it was apparent that the government officials and the members of the public had no knowledge of the evacuation plans.”<sup>236</sup>

Thus, Petitioners urge, the renewal Application “cannot be approved without a full study of the current and forecasted populations, including susceptible populations, and the ability of the evacuation plan to provide ‘reasonable assurance’ that all of these people will be provided adequate care in case of an accident.”<sup>237</sup>

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<sup>230</sup> *Id.* at 37.

<sup>231</sup> *Id.* (citing NC Department of Transportation, NC Statewide Transportation Plan, September 2004, available at <http://www.ncdot.org/doh/preconstruct/tpb/statewideplan/pdf/NCStatewideTransportationPlan.pdf> (last visited Aug. 2, 2007)).

<sup>232</sup> *Id.* at 37.

<sup>233</sup> *Id.* (quoting Orange County Board of Commissioners, “A Resolution Calling for Coordinated Emergency Management and Evacuation Planning Within the 60-Mile Radius Ingestion Pathway for Potential Discharge of Airborne Nuclear Waste Material from the Shearon Harris Nuclear Power Plant” (Oct. 3, 2006) (Attachment 5 to Petition)).

<sup>234</sup> *Id.* at 37-38.

<sup>235</sup> *Id.* at 38. Petitioners point out that the official study of the fire and evacuation by the State of North Carolina has not been completed, and attach to the Petition newspaper articles pointing to evidence that would become available in the near future. See Attachment 6 to Petition.

<sup>236</sup> Petition at 38.

<sup>237</sup> *Id.*

Petitioners also discuss, in the “Statutory and Regulatory Framework” section of their Petition, evacuation issues<sup>238</sup> as well as SAMAs,<sup>239</sup> but they do not mention or challenge any specific parts of the Applicant’s SAMA analysis that concern, e.g., the input data relating to population and evacuation that are utilized in the analysis.

## 2. *Positions of Applicant and NRC Staff on Contention EC-3*

Applicant argues that this contention is outside the scope of license renewal, an impermissible attack on Commission regulations, and insufficiently supported.<sup>240</sup> In support of its argument that the contention is out of scope for this proceeding, Applicant cites various Commission statements from the *Turkey Point* proceeding, including the following:

Issues like emergency planning — which already are the focus of ongoing regulatory processes — do not come within NRC safety review at the license renewal stage . . . .<sup>241</sup>

Also quoted by the Applicant is the following language from the Commission’s decision in the *Millstone* license renewal case:

[T]he primary reason we excluded emergency-planning issues from license renewal proceedings was to limit the scope of those proceedings to “age-related degradation unique to license renewal.” Emergency planning is, by its very nature, neither germane to age-related degradation nor unique to the period covered by the Millstone license renewal application. Consequently, it makes no sense to spend the parties’ and our own valuable resources litigating *allegations of current deficiencies* in a proceeding that is *directed to future-oriented* issues of aging.<sup>242</sup>

Regarding Petitioners’ characterization of Contention EC-3 as an environmental contention, Applicant asserts that Petitioners “fail to identify any deficiency in the Environmental Report and, therefore, Contention EC-3 must be rejected as fatally flawed.”<sup>243</sup> Applicant argues that Petitioners’ assertion “that the ER should

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<sup>238</sup> *Id.* at 12, 17.

<sup>239</sup> *Id.* at 13-17.

<sup>240</sup> Applicant’s Answer at 31.

<sup>241</sup> *Id.* at 32 (quoting *Turkey Point*, CLI-01-17, 54 NRC at 10; citing *id.* at 9; *Millstone*, CLI-04-36, 60 NRC at 640); see also Staff Response at 21-22 (citing *Turkey Point*, CLI-01-17, 54 NRC at 9-10).

<sup>242</sup> Applicant’s Answer at 32 (citing *Millstone*, CLI-05-24, 62 NRC at 560-61 (footnote omitted) (emphasis added)); see also Staff Response at 22 (quoting *Millstone*, CLI-05-24, 62 NRC at 560-61 (citing, *inter alia*, 56 Fed. Reg. at 64,961; 60 Fed. Reg. at 22,464)).

<sup>243</sup> Applicant’s Answer at 32 n.22 (citing *McGuire/Catawba*, LBP-02-4, 55 NRC at 78).

address the inability for [sic] the 1987 evacuation plan to protect the health and safety of the public” is but a “bald[ ]” and “conclusory assertion,” inadequate to support a contention.<sup>244</sup> “In any event,” Applicant avers, “Petitioners cannot claim a deficiency in the Environmental Report for its failure to address a matter outside the scope of the licensing action for which the Environmental Report was prepared.”<sup>245</sup>

Applicant argues that Petitioners’ references to susceptible populations such as homebound persons and children are collateral attacks on the Commission’s emergency planning rules in 10 C.F.R. § 50.47(b)(10), (c)(2), which “establish a plume-exposure pathway emergency planning zone (‘EPZ’) for nuclear power reactors of an area about 10 miles in radius.”<sup>246</sup> Applicant further asserts that the Petition “provides no documentary evidence or expert opinion in support of its broad claims of serious flaws in the evacuation plans,”<sup>247</sup> and challenges certain newspaper articles provided as Attachment 6 to the Petition, averring that they “do not support the Petitioners’ claim that the evacuation around Apex, NC indicates that the local evacuation plan ‘was woefully ineffective and it was apparent that the government officials and the members of the public had no knowledge of the evacuation plans.’”<sup>248</sup> “In fact,” Applicant asserts, “the articles identify that over 16,000 residents were evacuated . . . with no major injuries reported.”<sup>249</sup> Applicant also argues, regarding a report on the Apex fire that Petitioners state is yet to be completed, that “[p]romises to provide factual material at a later date in support of a proffered contention do not support the contention’s admissibility.”<sup>250</sup>

Challenging the expertise of Dr. Wing, Applicant also states that he “identifies no deficiencies in the Application,” asserting “only that [t]he 1987 evacuation plan needs to be closely reexamined to meet the current and projected population increases.”<sup>251</sup> Applicant argues that this “conclusory assertion, little more than a claim that the evacuation plan ought to be studied, is not an adequate basis for a contention,”<sup>252</sup> and points out that “emergency plans are periodically reviewed

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<sup>244</sup> *Id.* (citing Petition at 17; *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 246 (1993)).

<sup>245</sup> *Id.*

<sup>246</sup> *Id.* at 33 (citing Petition at 36; 10 C.F.R. § 50.47(c)(2); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987); *Citizens Task Force of Chapel Hill*, DPRM-90-1, 32 NRC 281, 290-92 (1990)).

<sup>247</sup> *Id.* at 34.

<sup>248</sup> *Id.* (citing Petition at 38).

<sup>249</sup> Applicant’s Answer at 34 (citing Attachment 6 to Petition at 5, 7, 2).

<sup>250</sup> *Id.* (citing Petition at 38 n.26; *Millstone*, CLI-04-36, 60 NRC at 639).

<sup>251</sup> *Id.* at 31, 34 (citing Petition at 36-37 & Attachment 4 to Petition ¶ 12).

<sup>252</sup> *Id.* at 34-35 (citing *Rancho Seco*, LBP-93-23, 38 NRC at 246).

to ensure they are ‘adequate throughout the life of any plant even in the face of changing demographics and other site related factors.’<sup>253</sup>

The Staff likewise cites Commission holdings “that emergency planning issues are not admissible in a license renewal proceeding,” stating also that, while “Petitioner labeled the emergency planning contention as ‘environmental,’” the “plain language of the contention shows the issue is safety.”<sup>254</sup> Staff further notes that, “[a]lthough Contention EC-3 is inadmissible, NRC regulations provide two other procedural mechanisms (10 C.F.R. §§ 2.206 and 2.802) by which Petitioners may pursue their concerns about the adequacy of the Applicants’ current emergency plan.”<sup>255</sup>

### **3. Reply of Petitioners on Contention EC-3**

In reply, in addition to their general argument that their contentions are material and have a legal basis, explanations supported by evidence, documents, facts and/or proposed expert testimony, Petitioners refer back to the Petition for its “length[y] discuss[ion]” showing that “the evacuation plans for the SHNPP are grossly inadequate because of the changing conditions.”<sup>256</sup> Stating that “[t]he population around the SHNPP has significantly increased from 1987 to the present, from the present to the end of the initial licensing period, and during the period of the licensing extension,” and relying on the same “reasonable assurance” argument they make regarding Contention TC-1, Petitioners argue that, “[s]imilarly . . . , there is no reasonable assurance that the current inadequacies of the plans, and the likely compounded inadequacies in the future, will be resolved in a manner that protects public health and safety.”<sup>257</sup>

### **4. Board Ruling on Contention EC-3**

The Commission has clearly stated that emergency planning issues are not within the scope of a license renewal proceeding as a safety issue. “Issues like emergency planning — which already are the focus of ongoing regulatory processes — do not come within the NRC’s safety review at the license renewal stage.”<sup>258</sup> However, a contention challenging the input data for certain parameters in a severe accident mitigation alternatives, or SAMA, analysis, which parameters

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<sup>253</sup> *Id.* at 35 n.23 (citing *Turkey Point*, CLI-01-17, 54 NRC at 9).

<sup>254</sup> Staff’s Response at 22.

<sup>255</sup> *Id.* at 23 n.29 (citing *Millstone*, CLI-05-24, 62 NRC at 562-63).

<sup>256</sup> Petitioners’ Reply at 11.

<sup>257</sup> *Id.*

<sup>258</sup> *Turkey Point*, CLI-01-17, 54 NRC at 10; *see also* *Millstone*, CLI-05-24, 62 NRC at 567.

are related to emergency planning issues, has been admitted in another license renewal proceeding, as an environmental issue.<sup>259</sup> In that proceeding, which involves the Pilgrim plant in Massachusetts, the licensing board admitted the contention to the extent that it concerned specific and supported challenges to SAMA input data in three areas — evacuation times, economic consequences, and meteorological patterns.<sup>260</sup> The board found that, by focusing on “the accuracy of certain assumptions and input data used in the SAMA computation and how they affect the validity of the SAMA analysis under NEPA,” the petitioners therein raised a valid environmental issue concerning severe accidents and SAMAs, which is a legitimate “category 2” environmental issue in a license renewal proceeding.<sup>261</sup> We are not aware of any other license renewal proceeding in which a contention relating in any way to emergency planning issues has been admitted.

In contrast to the contention that was admitted in *Pilgrim*, Petitioners herein do not challenge the input data in the SAMA analysis, nor indeed do they address those parts of the Application’s Environmental Report that address evacuation, population density, and related issues.<sup>262</sup> Thus they have failed to bring the contention within the scope of license renewal, failed to “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,” and failed to provide “sufficient information to demonstrate a genuine dispute with the applicant on a material issue of law or fact,” as required under 10 C.F.R. § 2.309(f)(1)(iii), (vi), and (vi). As such, we must deny the admission of Contention EC-3.

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<sup>259</sup> See *Pilgrim*, LBP-06-23, 64 NRC at 338-41.

<sup>260</sup> See *id.*

<sup>261</sup> *Id.* at 340.

<sup>262</sup> See, e.g., Application, Environmental Report at E-27 to E-29, E-129 to E-130, E-138 to E-141. In addition, we note that during oral argument Applicant’s counsel stated that Shearon Harris has its own emergency plan that does take into account updated population figures, contrary to Petitioners’ assertions about population growth. Tr. at 58-59. This Emergency Plan states that the

Evacuation Time Estimate (ETE) . . . will be considered valid until the population with the 10-mile EPZ has increased by greater than 10% since the last ETE was determined. If the population is found to have increased by greater than 10% than a revised ETE will be established using appropriate guidance in NUREG/CR-4831, “State of the Art in Evacuation Time Estimate Studies for Nuclear Power Plants.” An ETE update should be performed every five years to ensure the adequacy of other evacuation assumptions.

*Shearon Harris Nuclear Power Plant*, Docket No. 50-400/License No. NPF-63, Changes to Emergency Plan and Emergency Plan Implementing Procedures, Revision 52 (Jan. 3, 2007) (ADAMS Accession No. ML070100384).

## VI. PETITIONERS' REQUEST FOR BACKFITS RELATING TO AIR ATTACKS AND FIRES

Petitioners include as a final argument in their petition the assertion that, in light of their contentions, it is

evident . . . that a backfit is needed for all applications of inoperable fire barrier systems[,] including the rerouting of electrical cables out of fire zones as identified in NUREG-0800 BTP 9.5.1 and 10 C.F.R. 50 Appendix R Paragraph III.G.2 [as well as] upgrading inoperable fire barrier systems with qualified, maintainable and inspectable fire barrier systems to assure that post-fire safe shutdown systems will be maintained to be free of fire damage.’’<sup>263</sup>

Further, they argue, backfits are necessary in order “to prevent aviation attacks and the fires and explosions caused by those attacks [and] to minimize the risk to public health and safety from these deliberate malicious actions.’’<sup>264</sup> Finally, in the “Statutory and Regulatory Framework” section of their Petition, they cite 10 C.F.R. § 50.109(a)(5), which provides:

The Commission shall always require the backfitting of a facility if it determines that such regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public and is in accord with the common defense and security.<sup>265</sup>

The Applicant objects to Petitioners’ request for backfits on the basis that it is unrelated to aging and therefore beyond the scope of this proceeding, and that it is an impermissible challenge to the NRC regulation in 10 C.F.R. § 73.1, defining the radiological sabotage against which a licensee must defend.<sup>266</sup> The NRC Staff also objects to Petitioners’ backfit request, relying on a recent decision of the Commission on requests for backfits that were made to the Commission in the *Pilgrim* and *Vermont Yankee* license renewal proceedings.<sup>267</sup> Staff quotes the Commission’s ruling that such a request “amounts to a request for agency enforcement action, a request not suitable for a license renewal adjudication, but perhaps suitable for consideration under 10 C.F.R. § 2.206.’’<sup>268</sup> Staff argues that, just as in the situation presented in *Vermont Yankee*, the Petitioners’ request for

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<sup>263</sup> Petition at 38-39.

<sup>264</sup> *Id.* at 39.

<sup>265</sup> *Id.* at 17.

<sup>266</sup> Applicant’s Answer at 22-23 & n.16.

<sup>267</sup> Staff Response at 23-24 (citing *Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-06-26, 64 NRC 225, 226 (2006)).

<sup>268</sup> *Id.* at 23 (citing *Vermont Yankee*, CLI-06-26, 64 NRC at 226-27).

the imposition of backfit requirements is not a proper subject for consideration in this proceeding. Although backfitting might have been a proper subject for Petitioners' section 2.206 petition, Staff argues, their request for the imposition of backfit requirements as part of this license renewal proceeding should be rejected.<sup>269</sup>

As the Staff argues, the Commission has ruled that a petition for backfits is essentially a request for enforcement action under 10 C.F.R. § 2.206 and is not cognizable in a license renewal adjudication. Therefore, under the authority of CLI-06-26, we must DENY Petitioners' request for the same in this proceeding.

## VII. PETITIONERS' MOTION FOR STAY

During the July 17 oral argument on Contention TC-1, Petitioners' counsel moved to stay this proceeding until Applicant's intended license amendment request under 10 C.F.R. § 50.48(c)(2)(vii), to adopt as an alternative means of fire protection compliance for Shearon Harris NFPA Standard 805, has been filed and accepted.<sup>270</sup> As support for this motion Petitioners' cite the authority of the Board and Board chair under 10 C.F.R. §§ 2.321(c), 2.319(h), 2.307, and 2.323(g), relating to the duties and powers of licensing board and chairs, disposing of procedural requests, extension and reduction of time limits, and stays.<sup>271</sup>

The NRC Staff and Applicant urge denial of the motion for stay, citing case law for the principle that, only if one has been admitted as a "party" to a proceeding, through showing standing and submitting an admissible contention, can one have a request for stay considered by a presiding officer.<sup>272</sup> Applicant and Staff also point to certain factors that should be considered in ruling on any request for stay, namely: (1) whether the movant would otherwise be irreparably injured in the absence of a stay; (2) whether the movant demonstrates a "strong showing" that it will succeed on the merits; (3) whether a stay would be to the detriment of other parties; and (4) what is in the public interest.<sup>273</sup> Staff and Applicant point

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<sup>269</sup> *Id.* at 23-24.

<sup>270</sup> Tr. at 183.

<sup>271</sup> Motion for Stay at 1.

<sup>272</sup> Staff Response to Motion To Stay at 4-5 (citing *Vermont Yankee*, CLI-07-13, 65 NRC at 214-15); Applicant Response to Motion To Stay at 2-3 (citing *Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-2, 37 NRC 55, 57-58 n.2 (1993); *Vermont Yankee*, CLI-07-13, 65 NRC at 214-15; *In re Shieldalloy Metallurgical Corp. and NUREG-1757*, 2007 NRC LEXIS 11 at \*3-4 (Jan. 12, 2007)).

<sup>273</sup> Applicant Response Motion to Stay at 6; *see also id.* at 5-7 (citing *Virginia Petroleum Jobbers Ass'n v. Federal Power Commission*, 259 F.2d 921, 925 (D.C. Cir. 1958); *Comanche Peak*, CLI-93-2, 37 NRC at 58 n.2; *United States Department of Energy* (Clinch River Breeder Reactor Plant), ALAB-

(Continued)

out that these factors, which come from the opinion of the United States Court of Appeals for the District of Columbia Circuit in the *Virginia Petroleum Jobbers* case,<sup>274</sup> have been incorporated into the NRC rules as 10 C.F.R. § 2.342 and have been broadly applied by the Commission in ruling on stay requests.<sup>275</sup>

The Commission in the *Comanche Peak* proceeding, and subsequently in *Vermont Yankee*, CLI-07-13, did indicate that, in order to request a stay, the requestor must have been admitted as a party in a proceeding by showing standing and submitting an admissible contention.<sup>276</sup> In *Comanche Peak*, the Commission also noted that, even assuming that the requestor was a party, it had not met the four-factor test cited by Staff and Applicant.

In this proceeding, as we admit no contentions herein, Petitioners are not a “party” under the above case law, and therefore are not permitted to file a motion for stay. Moreover, they have not addressed the four-factor test specifically. Further, because it is possible their concerns will be met when the Applicant’s license amendment request must be filed, we cannot find that Petitioners would be irreparably injured by the absence of a stay at this time. Thus, notwithstanding their argument that the fact the current license at issue does not expire until 2027 suggests the Applicant will not be harmed by a stay, we must DENY Petitioners’ motion for stay.

## VIII. CONCLUSION AND ORDER

In conclusion, although we find that Petitioners have established standing in this proceeding, we further find that their petition may not be granted because they have not at this time submitted an admissible contention, for the reasons we have stated above.

Therefore, based on the preceding rulings, findings, and conclusion, it is, this 3d day of August 2007, ORDERED that the Petition To Intervene of North Carolina Waste Awareness and Reduction Network and Nuclear Information and Resource Service be DENIED and this proceeding be TERMINATED at this time.

Because we rule herein on an intervention petition, any appeal to the Commis-

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721, 17 NRC 539, 543 (1983)); *Alabama Power Co.* (Joseph M. Farley Nuclear Plant, Units 1 and 2), CLI-81-27, 14 NRC 795, 797 (1981); *Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-493, 8 NRC 253, 270 (1978)); Staff Response to Motion To Stay at 4 (citing *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 237 n.4 (2006)).

<sup>274</sup> 259 F.2d 921.

<sup>275</sup> Staff Response to Stay Motion at 4; Applicant Response to Stay Motion at 5-6.

<sup>276</sup> *Comanche Peak*, CLI-93-2, 37 NRC at 57-58; *Vermont Yankee*, CLI-07-13, 65 NRC at 214-15.

sion from this Memorandum and Order must be filed within ten (10) days after it is served, in accordance with the provisions of 10 C.F.R. § 2.311.

THE ATOMIC SAFETY AND  
LICENSING BOARD

Ann Marshall Young, Chair  
ADMINISTRATIVE JUDGE

Dr. Peter S. Lam  
ADMINISTRATIVE JUDGE

Dr. Alice Mignerey  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
August 3, 2007<sup>277</sup>

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<sup>277</sup> Copies of this Order were sent this date by Internet e-mail transmission to all participants or counsel for participants.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Dale E. Klein**, Chairman  
**Gregory B. Jaczko**  
**Peter B. Lyons**

**In the Matter of**

**Docket Nos. 50-387-OLA  
50-388-OLA**

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

**October 5, 2007**

**CONTENTIONS: ADMISSIBILITY**

Issues concerning alleged violations of State law or regulations were outside the scope of, and not material to, an NRC power uprate proceeding. The Board did not err in finding that the NRC's adjudicatory process was not the proper forum for investigating alleged violations that are primarily the responsibility of other Federal, state, or local agencies. *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 121-22 (1998).

**CONTENTIONS: ADMISSIBILITY**

Water use issues that are under the jurisdiction of another agency, and which are not affected by any NRC regulation, are outside the scope of an NRC proceeding.

**SAFETY**

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

The Board appropriately rejected the contention of a petitioner who failed to

support his premise that a river water intake valve is a safety-related system with information or expert opinion.

## MEMORANDUM AND ORDER

Eric Joseph Epstein appeals the Atomic Safety and Licensing Board's ruling denying him a hearing in the matter of PPL Susquehanna LLC's (PPL) application for a power uprate at the Susquehanna Steam Electric Station (SSES).<sup>1</sup> Although the Board found that Petitioner Mr. Epstein demonstrated standing, it found that he had offered no admissible contention, and therefore denied his hearing request. Because Mr. Epstein has not shown that the Board made any error of law or abused its discretion, we deny his appeal.

### I. PPL'S APPLICATION FOR AN EXTENDED POWER UPRATE

On October 11, 2006, PPL applied for an extended power uprate (EPU)<sup>2</sup> for the two nuclear reactors at the SSES on the banks of the Susquehanna River in Pennsylvania. SSES draws water from the river for all cooling associated with plant operations, and returns whatever is not lost through evaporation to the river. An 8-acre, 25 million gallon spray pond is the station's ultimate heat sink for the Engineered Safeguard Service Water System and supplies auxiliary cooling water.<sup>3</sup> The station also draws makeup water from the Susquehanna to keep the spray pond at the 25 million gallon level required by its licenses.<sup>4</sup>

The use of water from the Susquehanna River is controlled by the Susquehanna River Basin Commission (SRBC), an agency created by a compact between the Federal government and the states hosting the Susquehanna River.<sup>5</sup> After PPL submitted its EPU application to NRC, it applied to SRBC for approval to increase its water use to meet its increased water needs under the proposed uprate. PPL currently withdraws a maximum of 58 million gallons per day from the

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<sup>1</sup> LBP-07-10, 66 NRC 1 (2007).

<sup>2</sup> PPL has asked to increase power from 3489 megawatts thermal (MWt) to 3952 MWt, or approximately 13% over its current maximum authorized power. A power uprate between 7% and 20% is classified as an extended power uprate. See <http://www.nrc.gov/reactors/operating/licensing/power-uprates.html#definition>.

<sup>3</sup> Susquehanna Environmental Report, Extended Power Uprate, Susquehanna Steam Electric Station (March 2006) (ER) at 7-7.

<sup>4</sup> *Id.*

<sup>5</sup> Susquehanna River Basin Compact, Pub. L. No. 91-575, 84 Stat. 1509 *et seq.* (1970). See [http://www.srbc.net/docs/srbc\\_compact.pdf](http://www.srbc.net/docs/srbc_compact.pdf).

Susquehanna, and has asked SRBC to increase this limit to a maximum of 66 million gallons of water per day.<sup>6</sup> PPL's average consumptive water use at SSES (that is, water not returned to the river), is about 38 million gallons per day when both reactors are at full power.<sup>7</sup> According to PPL's EPU application, the uprate is expected to increase average consumptive use to 44 million gallons per day.<sup>8</sup> PPL currently has SRBC's approval for a maximum consumptive use of up to 48 million gallons per day, and it apparently has not asked SRBC to raise that limit.<sup>9</sup>

Mr. Epstein filed a timely petition to intervene, request for hearing, and proposed contentions on May 11, 2007. Both PPL and the NRC Staff opposed the intervention. The Board issued a prehearing order stating that, as an initial matter, it considered each of the proposed contentions to be "technical," as opposed to "environmental" contentions.<sup>10</sup> The Board held a prehearing conference by telephone on July 10, 2007.

In LBP-07-10, the Board found that none of the three proffered contentions raised a litigable issue in this licensing proceeding. Mr. Epstein appeals the Board's ruling with respect to two of those proposed contentions, but does not dispute the ruling on the third, which claimed that PPL failed to consider the consequences of an accident caused by the proposed uprate.

On July 27, 2007 — the same day the Board issued its ruling on standing and contentions — Mr. Epstein filed a "Notice of Intent To File a Petition in Opposition to PPL Susquehanna, Application for Surface Water Withdrawal Request To Modify Application 19950301-EPUL-0572"<sup>11</sup> with the SRBC. On August 1, 2007, he filed a petition with the SRBC opposing PPL's application for increased water usage.<sup>12</sup>

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<sup>6</sup> See Eric Joseph Epstein's Petition for Leave To Intervene, Request for Hearing, and Presentation of Contentions with Supporting Factual Data (May 11, 2007) (Petition for Intervention), Exhibit 1, PPL Susquehanna, LLC Application for Surface Water Withdrawal Request To Modify Application 19950301 EPUL-0578 (Dec. 20, 2006) (SRBC Application), at 2.

<sup>7</sup> ER at 7-7.

<sup>8</sup> *Id.*

<sup>9</sup> SRBC Application at 3. In addition to the 48 million gallon per day maximum, PPL currently must maintain a 30-day average consumptive use of 40 million gallons per day. Its SRBC application requested the elimination of this requirement. *Id.*

<sup>10</sup> Memorandum and Order (Initial Prehearing Order) at 2 (May 31, 2007).

<sup>11</sup> A copy is available on the Agencywide Documents Access and Management System (ADAMS), Accession No. ML072210358.

<sup>12</sup> A copy is available on ADAMS, ML072210363.

## **II. MR. EPSTEIN'S PROPOSED CONTENTIONS DID NOT RAISE A LITIGABLE ISSUE WITHIN THE SCOPE OF THE UPRATE PROCEEDING**

NRC rules of practice provide for an automatic right to appeal a Board decision denying a petition to intervene.<sup>13</sup> The Commission defers to the Board's rulings on admissibility of contentions, however, unless the appeal points to an error of law or abuse of discretion.<sup>14</sup> Here, Mr. Epstein largely ignores the Board's thorough explanations of why the contentions are outside the scope of the proceeding, do not present an issue material to the findings the NRC must make in its review, or are factually unsupported. Instead, he simply repeats or adds to his previous claims.

### **A. Contention TC-1: PPL Did Not Consider Impact of Uprate on Water Use Issues**

Mr. Epstein's first contention, which the Board designated TC-1, fails because it attempts to interject into this proceeding matters that are not material to the findings the agency must make on this application, and that are appropriately within the jurisdiction of other agencies. Contention TC-1 claimed that PPL did not consider the impact the uprate would have on the use of water from the Susquehanna River. It is telling that the contention cites Pennsylvania law and U.S. Environmental Protection Agency (EPA) regulations, but no NRC regulation:

PPL failed to consider the impact of the proposed uprate on certain state and federal water use issues, and the potential impact these regulations will have on water flow, water volume and surface water withdrawal for the SSES's cooling systems. The traditional implications of the Pennsylvania Public Utility Commission ("Pa PUC") policy and regulations relating to "withdraw and treatment" of water, i.e., referred to as "cost of water" under the Public Utility Code, Title 66, have to be factored in this application absent a Pa PUC proceeding as well as Act 220 water usage guidelines. PPL has not established (nor has the NRC reviewed) compliance milestones for EPA's Act 316(a) or 316(b) [*sic*]<sup>15</sup> and their impact on power uprates at the Susquehanna Electric Steam Station [*sic*] [footnote omitted].<sup>16</sup>

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<sup>13</sup> 10 C.F.R. § 2.311(b).

<sup>14</sup> *E.g.*, *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 121 (2006); *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 637 (2004).

<sup>15</sup> Mr. Epstein apparently intended to cite sections of the Federal Water Pollution Control Act, or "Clean Water Act," 33 U.S.C. § 1251 *et seq.*

<sup>16</sup> Eric Joseph Epstein's Petition for Leave To Intervene, Request for Hearing, and Presentation of Contentions with Supporting Factual Data (Petition for Intervention) at 10 (May 11, 2007).

The Board's decision also took into consideration Mr. Epstein's concerns as discussed during the July 10, 2007 prehearing conference. According to Mr. Epstein, in March 2008, the SRBC will complete a study of projected water use which could result in water rationing among permittees in areas where water use threatens to exceed supply.<sup>17</sup> Mr. Epstein contends that the uprate will require the use of additional water from the Susquehanna River, and, because it is unknown whether the SRBC will allow PPL to withdraw more water, PPL should submit an alternative plan to address that contingency.<sup>18</sup>

The Board found that this contention — as stated in Mr. Epstein's original pleading and as explained during the prehearing conference — was outside the scope of, and not material to, the proceeding, and lacked factual support.<sup>19</sup> The Board correctly explained that the NRC's adjudicatory process was not the proper forum for investigating alleged violations that are primarily the responsibility of other Federal, state, or local agencies.<sup>20</sup> Further, the Board observed that the potential restrictions in water use from the Susquehanna River did not present a safety issue, because the spray pond provides cooling in the case of an emergency, and the spray pond as ultimate heat sink is governed by technical specifications.<sup>21</sup> If SRBC were to impose water rationing, the Board acknowledged, PPL might have to reduce its power generation levels accordingly.<sup>22</sup> But the Board found that Mr. Epstein offered no factual support for the claim that "[p]eriodic modification of power generation levels . . . would be the type of unplanned reactor scram that has been identified as potentially resulting in safety significant challenges to reactor systems."<sup>23</sup>

Much of Mr. Epstein's argument on appeal consists of factual assertions, which, even if true, would provide no basis for overturning the Board's decision. For the most part, Mr. Epstein simply repeats the claims that the Board found to be outside the scope of the hearing, immaterial, or unsupported, without ever attempting to show that the Board erred or abused its discretion in so finding. But Mr. Epstein also makes claims of fact that go beyond his initial contentions.

For example, Mr. Epstein dedicated two pages of his appeal brief to arguing that PPL failed to obtain SRBC approval for increased water usage for an earlier

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<sup>17</sup> *Id.* at 12.

<sup>18</sup> *Id.* See also Eric Joseph Epstein's Appeal of the Atomic Safety & Licensing Memorandum and Order (Ruling on Standing and Contentions) (Appeal) at 15 (Aug. 5, 2007).

<sup>19</sup> LBP-07-10, 66 NRC at 27.

<sup>20</sup> *Id.*, citing *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 121-22 (1998).

<sup>21</sup> LBP-07-10, 66 NRC at 26-27.

<sup>22</sup> *Id.* at 27 n.19.

<sup>23</sup> *Id.*

uprate in 2001.<sup>24</sup> That claim never appeared in his original intervention petition, and Mr. Epstein first raised it in the prehearing conference.<sup>25</sup> Unless Mr. Epstein could show good cause why he did not raise the issue in his initial pleading, the argument came too late.<sup>26</sup> But even if Mr. Epstein had filed a timely contention on the issue, he would not be entitled to relief. Whether PPL needed any SRBC approval prior to the earlier uprate is a question for SRBC. The issue is outside the scope of the current licensing proceeding, and not material to any matters the NRC must decide herein.<sup>27</sup>

Mr. Epstein urges the NRC to coordinate with the SRBC and Pennsylvania authorities to resolve water use issues. We think, however, that the respective responsibilities of NRC, Pennsylvania PUC, SRBC, and the EPA in this area are clear. A contention that merely seeks to “advance generalizations regarding [a petitioner’s] particular view of what applicable policies ought to be” is not admissible.<sup>28</sup> And as the Board’s ruling recognized, it is clearly SRBC that is charged with determining whether increased water use from the Susquehanna River is permissible. The NRC’s consideration of the EPU application does not affect SRBC’s authority to grant or deny the permit for additional water usage.<sup>29</sup>

Similarly, Mr. Epstein asks NRC to “investigate the impact of the Environmental Protection Agency’s [Clean Water Act] 316(a) and 316(b) compliance milestones.” Mr. Epstein ignores the Board’s ruling, which pointed out that the EPA’s alternative thermal effluent limitations, issued pursuant to Clean Water Act § 316(a), do not apply to the SSES because it employs closed-cycle cooling, and that PPL’s environmental report had addressed section 316(b) compliance.<sup>30</sup> Again, Mr. Epstein’s argument does not show Board error, but simply sets forth what he believes NRC policy ought to be.

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<sup>24</sup> Appeal at 10-12.

<sup>25</sup> See Susquehanna Steam Electric Station Prehearing Conference (July 10, 2007), Tr. 12-13, 33, 41, 51.

<sup>26</sup> As is true in courts of law, litigants in NRC proceedings cannot raise entirely new arguments in a reply brief (see, e.g., *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225 (2004)), or on appeal, *USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 458 (2006), cf. 10 C.F.R. § 2.341. Similarly, an issue first raised in a prehearing conference comes even later in the proceeding than a reply brief, and its admission could defeat the Commission’s rules regarding timeliness of submissions. Therefore, a matter raised for the first time in a prehearing conference would only be admissible if the petitioner could satisfy the test for admitting late-filed contentions, found in 10 C.F.R. § 2.309(c).

<sup>27</sup> See, e.g., *Hydro Resources*, 48 NRC at 120-22.

<sup>28</sup> *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 n.33 (1974), citing *Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-128, 6 AEC 399, 401 (1973).

<sup>29</sup> Mr. Epstein seemed to recognize this when, shortly after the Board’s decision, he filed a petition before the SRBC opposing PPL’s application to increase its water use. SRBC Petition, *supra* note 12.

<sup>30</sup> LBP-07-10, 66 NRC at 27-28 n.20. See also ER at 7-8 to 7-9.

In short, we agree with the Board. Mr. Epstein did not show that information in PPL's application was inaccurate or insufficient to satisfy NRC regulations. He did not show that the Board misapplied the law or abused its discretion. He only claims that NRC ought to concern itself with water use matters within the jurisdiction of other state and Federal agencies. Mr. Epstein's water use complaints simply do not articulate any issue material to this proceeding, and he has shown no reason for us to otherwise overturn the Board's ruling.

#### **B. Contention TC-2: Failure To Disclose Needed Repairs in River Water Intake System**

Mr. Epstein's second proposed contention failed before the Board because it concerns matters that are entirely the concern of SRBC, and thus outside the scope of this uprate proceeding. Mr. Epstein claims PPL omitted information about the condition of the river water intake pipes in its application, and argues that the NRC should oversee repairs to correct constriction in the pipes. But Mr. Epstein has not shown that the Board erred or abused its discretion in finding that possible repairs to the river water intake pipes were not material to the uprate proceeding, and that there was no reason for PPL to include this information in its uprate application.

According to Mr. Epstein, PPL's EPU application "failed to disclose damaging information included in a hastily filed Application for Surface Water Withdrawal" that PPL filed with the SRBC.<sup>31</sup> The "information" to which the contention referred is that PPL discovered constriction in the pipes that take in water from the Susquehanna River, which had in turn caused errors in the calibration of meters used to monitor water withdrawal for the plant. According to PPL, the intake pipes are not clogged (and Mr. Epstein offered no evidence that they are).<sup>32</sup> PPL states that it now uses an alternative method for calculating how much river water the plant takes in to satisfy SRBC monitoring requirements.<sup>33</sup>

The Board rejected Mr. Epstein's claim that the problems with the river intake system reduced the margin of safety at the plant.<sup>34</sup> The Board pointed out that Mr. Epstein's concerns were based on the "misdirected premise that, in the context of this EPU application, the river intake system is a safety-related structure."<sup>35</sup> It appears that Mr. Epstein never disputed PPL's assertion that the water kept in the 25 million gallon spray pond is sufficient to cool the reactor and the spent fuel

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<sup>31</sup> Petition for Intervention at 19-20.

<sup>32</sup> See Tr. 62-63.

<sup>33</sup> SRBC Application at 3 and Attach. C. See also PPL Susquehanna's Answer to Eric Epstein's Petition for Leave To Intervene (June 5, 2007) at 25.

<sup>34</sup> LBP-07-10, 66 NRC at 29.

<sup>35</sup> *Id.* at 30.

pool for 30 days in an emergency.<sup>36</sup> In addition, the Board noted that Mr. Epstein's contention lacked any supporting expert opinion, and appeared to confuse various plant components.<sup>37</sup> In fact, the flow meters in the river intake structure are not used to meet an NRC requirement. For that reason, the Board found that repairs to the system fall under the purview of SRBC, not the NRC.<sup>38</sup>

In the brief discussion of this concern in his appeal, Mr. Epstein has not demonstrated that the Board erred in making these findings. We agree with the Board that neither problems with the river water intake flow meters, nor PPL's failure to include this information in its EPU application, are material to this proceeding. Mr. Epstein has not shown how a slight constriction in the intake pipes could have a safety-significant impact, given the 25 million gallon ultimate heat sink available in case of an emergency. We also agree with the Board that this issue falls properly within SRBC's jurisdiction to determine what steps PPL must take to verify its water use, and that this matter is outside the scope of our EPU proceeding. We therefore reject Mr. Epstein's suggestion that NRC take on the task of inspecting the river water intake pipes at the SSES.

For the foregoing reasons and for the reasons discussed in the Board's opinion, we deny Mr. Epstein's appeal.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 5th day of October 2007.

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<sup>36</sup> See PPL Answer to Eric Epstein's Petition for Leave To Intervene (June 5, 2007); see also Attachment 6 to PLA-6076, Power Uprate Safety Analysis Report, at 6-12.

<sup>37</sup> LBP-07-10, 66 NRC at 30-31 & n.21 (For example, Mr. Epstein was concerned that inability to gauge river water intake would threaten the standby liquid control system that uses borated water. But, as the Board pointed out, that system is separate from the intake system that feeds the cooling basin).

<sup>38</sup> *Id.* at 29.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Dale E. Klein**, Chairman  
**Gregory B. Jaczko**  
**Peter B. Lyons**

**In the Matter of**

**Docket No. 30-36974-ML**  
**(Materials License Application)**

**PA'INA HAWAII, LLC**

**October 24, 2007**

**MEMORANDUM AND ORDER**

This proceeding concerns a license application to possess and use byproduct material in a commercial pool type irradiator to be constructed in Honolulu, Hawaii, near the Honolulu International Airport. On August 31, 2007, the Atomic Safety and Licensing Board issued a Memorandum certifying questions to the Commission. The Board states that safety contentions proffered in this proceeding raise “several fundamental and overarching issues that appear to fall squarely in the cracks of the Commission’s . . . regulatory scheme for irradiators.”<sup>1</sup>

The Intervenor in this proceeding has proffered contentions addressing safety risks related to the proposed irradiator location. These “risks asserted to be endemic” to the proposed site include “aircraft crashes and natural phenomena,” such as earthquakes, hurricanes, and tsunamis.<sup>2</sup> At issue is the proper scope of an irradiator licensing proceeding, and whether it requires or otherwise encompasses analyses of such “endemic” site-related risks.

In an effort to clarify the intent of the regulations bearing on irradiator licensing, the Board twice posed questions to the parties in this proceeding. The Board’s recent order expresses some frustration and confusion over responses received,

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<sup>1</sup>Memorandum (Certifying Question to the Commission) (Aug. 31, 2007) (unpublished) (“Memorandum”) at 1, quoting Order (Posing Questions to the Parties) (Apr. 30, 2007) (unpublished) at 2.

<sup>2</sup>*Id.*

stating that the “Staff’s response did little to educate us as to how to handle the issues presented.”<sup>3</sup>

The Board’s order further notes that the NRC Staff, through a contractor, has prepared a report analyzing the likelihood and potential consequences of an aircraft crash, and the potential consequences of various natural phenomena at the proposed site.<sup>4</sup> Proffered safety contentions currently pending before the Board challenge that report.<sup>5</sup> The Board states that it earlier had the impression that this report was part of the Staff’s safety review of the license application, but that the Staff recently has explained that the report “was not intended to support the Staff’s safety review” and that “no such [siting-related] safety analysis is required.”<sup>6</sup> As the Staff described to the Board, this report on aircraft crash and natural phenomena risk “was produced with only the requirements of NEPA [National Environmental Policy Act] in mind,” and the Staff “has not drawn *safety* conclusions” from it.<sup>7</sup>

The Board’s recent order seeks clarification of the intent of the regulations governing irradiator licensing, namely, whether a safety “siting analysis” of risks asserted to be endemic to the proposed irradiator site is called for and litigable in this proceeding. Given the Board’s concern that relevant issues still may not have been sufficiently addressed,<sup>8</sup> the Commission invites the parties in this proceeding to submit initial and reply briefs addressing the following two questions presented by the Board:

Whether, in the circumstances presented, 10 C.F.R. § 30.33(a)(2) requires a safety analysis of the risks asserted to be endemic (i.e., aircraft crashes and natural phenomena) to the proposed irradiator site at the Honolulu International Airport?

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<sup>3</sup> *Id.* at 10; *see also id.* at 13-16.

<sup>4</sup> *See id.* at 5-6 (referencing a “Draft” and “Final” version of the “Topical Report on the Effects of Potential Aviation Accidents and Natural Phenomena at the Proposed Pa’ina Hawaii, LLC, Irradiator Facility”).

<sup>5</sup> The Board has yet to rule on the admissibility of the contentions challenging the Topical Report. Proffered Contention 13 challenges the aircraft crash analysis, and proffered Contention 14 challenges the natural phenomena analysis. The Board states that it will await the Commission’s response to the certified questions to rule on the admissibility of these proposed contentions.

<sup>6</sup> Memorandum at 2.

<sup>7</sup> *Id.* at 6 (emphasis added). The Board also has yet to rule on a motion to dismiss an admitted safety contention (Contention 7), which challenged the Pa’ina application’s failure to address the likelihood and consequences of an aircraft crash. After issuance of the draft Topical Report, the Applicant — supported by the Staff — moved to dismiss Contention 7 as moot. The Board states that given the Staff’s more recent statement that the Topical Report was only part of an environmental review, the Board’s resolution of the motion to dismiss “must now await the Commission’s ruling on [the] certified question.” *Id.*

<sup>8</sup> *See, e.g., Id.* at 10-13, 15-16.

What is the appropriate probability threshold (i.e., probability of an event for which consequences exceed regulatory limits) beyond which a site-related safety analysis is required?<sup>9</sup>

In answering these questions, the parties may wish to address pertinent regulatory history or any other matter relevant to the Board's certified questions.<sup>10</sup>

Initial briefs are limited to 30 pages, exclusive of title page, table of contents or table of authorities, and shall be filed within 14 calendar days of the date of this order. Reply briefs may be filed within 7 calendar days of the initial briefs' filing, and are limited to 15 pages. With good cause shown, parties may request an expansion of these page limits.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 24th day of October 2007.

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<sup>9</sup> Obviously, as the Board indicated, the Commission need not reach the second question unless it were to answer the first question affirmatively. *See id.* at 18.

<sup>10</sup> The Commission notes that the NRC Staff recently completed its licensing review of the Pa'ina irradiator application. Its safety review included issues relating to potential seismic events at the proposed site. *See Pa'ina Hawaii, LLC, Safety Review of the License Application (Aug. 17, 2007)* at 4 (ADAMS Accession No. ML072260186). The Staff therefore may wish to discuss the context in which this review was performed.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

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

**In the Matter of**

**Docket No. 50-293-LR**  
**(ASLBP No. 06-848-02-LR)**

**ENTERGY NUCLEAR GENERATION**  
**COMPANY and ENTERGY NUCLEAR**  
**OPERATIONS, INC.**

**(Pilgrim Nuclear Power Station)**

**October 17, 2007**

In this license renewal proceeding the Licensing Board denies the Applicant's motion for summary disposition of a contention involving whether leak detection through monitoring wells is necessary as part of the plant's aging management program to ensure that relevant components perform their intended safety functions during the license renewal period, but limits issues for litigation.

**RULES OF PRACTICE: SUMMARY DISPOSITION**

Section 2.1205(a) of 10 C.F.R. permits a party in a Subpart L proceeding to submit a motion for summary disposition; under section 2.1205(c), resolution of such a motion is governed by the standards for summary disposition set forth in Subpart G of 10 C.F.R. Part 2, which provides in section 2.710(d)(2) that a moving party shall be granted summary disposition "if the filings in the proceeding, . . . together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law."

**RULES OF PRACTICE: SUMMARY DISPOSITION**

Because motions for summary disposition are analogous to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure, they are generally evaluated according to the same standards used by Federal District Courts in ruling on motions for summary judgment. *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993).

**RULES OF PRACTICE: SUMMARY DISPOSITION**

The moving party for summary disposition in an NRC proceeding “bears the burden of showing the absence of a genuine issue as to any material fact,” and a licensing board ruling on a motion “must view the record in the light most favorable to the party opposing such a motion” and deny the motion if the moving party fails to meet its burden, even in the face of an inadequate response. *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102.

**RULES OF PRACTICE: SUMMARY DISPOSITION**

Facts are “material” if they will “affect the outcome of [a proceeding] under the governing law.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986).

**RULES OF PRACTICE: SUMMARY DISPOSITION**

If the filings demonstrate the existence of a genuine material fact, the evidence submitted in support of a motion fails to show the nonmoving party’s position is a sham or fails to foreclose the possibility of a factual dispute, or there is an issue as to the credibility of the moving party’s evidentiary material, a moving party will be found to have failed to meet its burden. *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 122 (2006); 10A Charles Alan Wright et al., *Federal Practice & Procedure* § 2727 (3d ed. 1998).

**RULES OF PRACTICE: SUMMARY DISPOSITION**

If the proponent of the motion meets its burden, an opponent must “set forth specific facts showing that there is a genuine issue,” and may not rely on “mere allegations or denials.” The opposing party does not have to show that it would prevail on the issues, but must “demonstrate that there is a genuine factual issue to be tried.” Any fact not controverted will be deemed admitted. *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102-03.

**RULES OF PRACTICE: SUMMARY DISPOSITION**

If a movant satisfies its initial burden and supports its motion by affidavit, “the opposing party must either proffer rebutting evidence or submit an affidavit explaining why it is impractical to do so,” and “[i]f the presiding officer determines from affidavits filed by the opposing party that the opposing party cannot present by affidavit the facts essential to justify its opposition, the presiding officer may order a continuance to permit such affidavits to be obtained, or may take other appropriate action.” *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 103; 10 C.F.R. § 2.710(c).

**RULES OF PRACTICE: SUMMARY DISPOSITION**

Even if the basic facts are uncontroverted, summary disposition is “inappropriate when the evidence is susceptible of different interpretations or inferences.” *Hunt v. Cromartie*, 526 U.S. 541, 553 (1999).

**RULES OF PRACTICE: SUMMARY DISPOSITION**

Summary disposition is not “a tool for trying to convince a Licensing Board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing.” *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001).

**RULES OF PRACTICE: SUMMARY DISPOSITION**

It is inappropriate at the summary disposition stage for a Board to attempt “to untangle the expert affidavits and decide ‘which experts are more correct.’” *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 80 (2005).

**RULES OF PRACTICE: SUMMARY DISPOSITION**

While “‘wholly conclusory statements for which no supporting evidence is offered’ need not be taken as true for summary judgment purposes,” a court “‘may not make credibility determinations or weigh the evidence’” at the summary judgment stage. *Banks v. District of Columbia*, 377 F. Supp. 2d 85, 89 (D.D.C. 2005).

**RULES OF PRACTICE: SUMMARY DISPOSITION**

Summary disposition may be a useful device to eliminate the need for the

time and cost of a hearing if the truth on a contested issue is clear and there is no genuine issue on any material fact, *Poller v. Columbia Broadcasting System, Inc.*, 368 U.S. 464, 467 (1962); but “if there is doubt as to whether the parties should be required to proceed further, [a motion for summary disposition] should be denied.” *Savannah River*, LBP-05-4, 61 NRC at 79.

#### **RULES OF PRACTICE: SUMMARY DISPOSITION**

Licensing board finds there are “genuine issues of material fact” that have been controverted by Intervenors and denies motion for summary disposition, but limits issues remaining to be litigated. In hearing on contention asserting that leak detection through monitoring wells is necessary as part of plant’s aging management program to ensure that relevant components perform their intended safety functions during the license renewal period, not in dispute and not to be litigated are (a) issues relating to any health effects of leaking radioactive liquid, and (b) any leakage from the spent fuel pool. Also, (c) leakage events at other plants are not directly relevant; while these events may provide relevant information regarding the potential usefulness of monitoring wells in detecting leaks, what is relevant is the uniqueness of the Pilgrim plant and what may be required with regard to it.

### **MEMORANDUM AND ORDER**

#### **(Ruling on Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 1, Regarding Adequacy of Aging Management Program for Buried Pipes and Tanks and Potential Need for Monitoring Wells To Supplement Program)**

This proceeding involves the application of Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc., to renew the operating license for the Pilgrim Nuclear Power Station for an additional 20-year period. In LBP-06-23, issued October 16, 2006, this Licensing Board granted the Petition To Intervene of, and admitted two contentions submitted by, the nonprofit citizens’ organization, Pilgrim Watch.<sup>1</sup> In this Memorandum and Order we deny Applicant Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 1,<sup>2</sup> finding that the

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<sup>1</sup> LBP-06-23, 64 NRC 257 (2006). The Town of Plymouth, Massachusetts, where the Pilgrim plant is located, is also participating in this proceeding as an interested local governmental body, pursuant to 10 C.F.R. § 2.315(c). *See id.* at 266.

<sup>2</sup> Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 1 (June 8, 2007), ADAMS Accession No. ML071640454 [hereinafter Entergy Motion].

Applicant has failed to demonstrate the absence of any genuine issue of material fact with regard to Contention 1, but also clarify the scope of issues remaining for litigation on Contention 1.<sup>3</sup>

Contention 1, as admitted, reads as follows:

The Aging Management program proposed in the Pilgrim Application for license renewal is inadequate with regard to aging management of buried pipes and tanks that contain radioactively contaminated water, because it does not provide for monitoring wells that would detect leakage.<sup>4</sup>

#### **A. Entergy's Grounds for Motion**

Citing 10 C.F.R. § 2.710(d)(2), Entergy asserts with regard to Contention 1 that “no genuine issue as to any material fact exists and, thus, Entergy is entitled to a decision as a matter of law.”<sup>5</sup> Entergy contends that “[t]here are no material facts in dispute that warrant holding a hearing on this contention.”<sup>6</sup> In its view, Contention 1 “provides no basis to dispute the adequacy of the [aging management programs, or] AMPs for underground pipes and tanks and, moreover, raises issues beyond the scope of this proceeding.”<sup>7</sup> Challenging Pilgrim Watch’s “fundamental[ understanding of] the purpose and scope of the AMPs for buried pipes and tanks implemented under 10 C.F.R. Part 54,” Entergy argues that this purpose “is not to prevent the radioactive contamination of the soil or groundwater, which is an ‘everday operational issue,’ but to manage the aging effects of critical plant functions that prevent and mitigate design basis accidents or other functions of principal importance to plant safety.”<sup>8</sup>

Entergy also avers that the program challenged by Pilgrim Watch “solely concerns the exterior surfaces of buried pipes and tanks and that wholly separate programs are designed to protect and ensure the integrity of the interior surfaces

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<sup>3</sup> In this Memorandum and Order we rule on one of two pending motions for summary disposition, the other of which concerns the one other contention we admitted in LBP-06-23. *See* Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 3 (May 17, 2007), ADAMS Accession No. ML071440321.

<sup>4</sup> LBP-06-23, 64 NRC at 315. We also noted in admitting the contention that, with respect to which actual pipes and tanks fall within the aging management program for the Pilgrim plant, “this is addressed to an extent in the Application, although further definition may be required as the adjudication of this case proceeds forward.” *Id.* at 315 n.261.

<sup>5</sup> Entergy Motion at 1.

<sup>6</sup> *Id.* at 3.

<sup>7</sup> *Id.* at 4.

<sup>8</sup> *Id.* (citing *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-06-4, 63 NRC 32, 37 (2006)).

of underground pipes and tanks.”<sup>9</sup> In addition, according to Entergy, “[o]nly the condensate storage system and possibly the salt service water system (‘SSW’) at [the Pilgrim plant] are within the scope of license renewal and have buried components containing radioactive water,” and neither of those contain buried tanks.<sup>10</sup> Entergy makes several arguments to the effect that certain comparisons made by Pilgrim Watch in its original Contention 1 are not relevant to these systems or to any asserted susceptibility to radioactive leakage at the Pilgrim plant.<sup>11</sup> Arguing that a monitoring system such as that sought by Pilgrim Watch in Contention 1 is “not within the scope of license renewal,” Entergy insists that the system is instead a matter involving the plant’s current licensing basis, or CLB,<sup>12</sup> and that the “existing regulatory process maintains the performance of . . . [relevant] buried pipes and tanks that may contain radioactively contaminated water in order to keep any exposures to radiation below applicable regulatory limits for normal operations.”<sup>13</sup>

Entergy concludes that, because Pilgrim Watch has allegedly “failed to dispute ‘facts that might affect the outcome of the suit under the governing law,’ . . . its remaining ‘irrelevant or unnecessary’ claims should ‘not be counted’ ” in ruling on Entergy’s motion for summary disposition.<sup>14</sup> Entergy also supports its motion with, among other things, discussions of the function and purpose of license renewal AMPs and Pilgrim’s AMP for buried pipes and tanks;<sup>15</sup> a “Response to the Issues Raised in Pilgrim Watch Contention 1,” in which it repeats some of the arguments summarized above;<sup>16</sup> a Statement of Material Facts;<sup>17</sup> and the Declaration of Alan Cox, the Technical Manager for License Renewal of the Pilgrim plant, who has a bachelor’s degree in nuclear engineering and a master’s degree in business administration.<sup>18</sup>

Entergy’s Statement of Material Facts includes the following (all supported by the Cox Declaration):

- That the purpose of Pilgrim’s aging management program — which includes the “Buried Piping and Tanks Inspection Program, the Water

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<sup>9</sup> *Id.* (citing Entergy Motion, Attached Declaration of Alan Cox in Support of [Entergy Motion] ¶¶ 25-27, 32, 34) (June 5, 2007) [hereinafter Cox Declaration].

<sup>10</sup> *Id.* & n.6 (citing Cox Declaration ¶ 19 n.3).

<sup>11</sup> Entergy Motion at 4-5.

<sup>12</sup> *Id.* at 5.

<sup>13</sup> *Id.* at 16.

<sup>14</sup> *Id.* at 5 (citing *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)).

<sup>15</sup> *Id.* at 5-14.

<sup>16</sup> *Id.* at 14-24.

<sup>17</sup> Statement of Material Facts (June 8, 2007) [hereinafter Entergy Statement].

<sup>18</sup> Cox Declaration ¶¶ 1, 2.

Chemistry Control-BWR [boiling water reactor] Program, the Service Water Integrity Program, and the One-Time Inspection Program”<sup>19</sup> — is “to manage the effects of aging so that the intended function(s) of systems, structures, and components will be maintained consistent with the [CLB] for the period of extended operation.”<sup>20</sup>

- That the “objective of the AMPs as applied to buried pipes and tanks is to maintain the pressure boundary of the buried pipes and tanks so as to ensure that the systems containing the buried pipes and tanks can perform their system intended functions.”<sup>21</sup>
- That preventing leakage of radioactive liquid from buried pipes and tanks “is not an intended safety function or other license renewal intended function,” and that such leakage “is not a design basis event that could cause accident consequences comparable to those referred to in §§ 50.34(a)(1), 50.67(b)(2) or 100.11.”<sup>22</sup>
- That the only system at the Pilgrim plant that falls within the scope of license renewal under 10 C.F.R. § 54.4, and has buried pipes or tanks designed to contain radioactive liquid, is the condensate storage system, which provides a source of water to the reactor core isolation cooling (RCIC) and high pressure coolant injection (HPCI) pumps; that radioactive contamination of the salt service water (SSW) system, which “functions as the ultimate heat sink for the reactor building closed cooling water and turbine building closed cooling water systems during plant operations” and is “designed to contain only non-radioactive water but cools systems that contain radioactive liquid, is highly unlikely”; and that other buried pipes and tanks relevant to license renewal neither contain radioactive liquid nor “interact with any systems that contain radioactivity.”<sup>23</sup>
- That buried pipes in the condensate storage system are made of stainless steel; that buried SSW pipes are made of titanium and carbon steel; and that preventive measures such as protective coatings and “periodic and opportunistic inspections” — *i.e.*, inspection during any maintenance excavations, at least one additional inspection during the ten years prior to entering the proposed extended license period, and one “focused” inspection during the first ten years of the extended period “unless an opportunistic inspection occurs within this ten-year period” — are used to manage the effects of corrosion of these pipes.<sup>24</sup>

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<sup>19</sup> Entergy Statement ¶ 17.

<sup>20</sup> *Id.* ¶ 1.

<sup>21</sup> *Id.* ¶ 18; *see also id.* ¶ 36.

<sup>22</sup> *Id.* ¶¶ 4, 5.

<sup>23</sup> *Id.* ¶¶ 7-9, 13, 14.

<sup>24</sup> *Id.* ¶¶ 12, 15, 19, 24.

- That the preventive measures at Pilgrim are “in accordance with standard industry practice”; supported by industry operating experience; and confirmed by operating experience at the Pilgrim plant, which also demonstrates that “the periodicity of periodic and opportunistic inspections” at Pilgrim is sufficient to insure protection against external corrosion and “maintain the intended functions of the buried components.”<sup>25</sup>
- That the water chemistry control program at Pilgrim — which is “based on Electric Power Research Institute BWR water chemistry guidelines,” confirmed by industry and Pilgrim operating experience, and will be supplemented by visual inspection of representative samples of interior piping surfaces (in the “One-Time Inspection Program”) — minimizes the potential for internal corrosion of buried components; and that the Service Water Integrity Program, which provides for routine inspection for internal corrosion and “other aging mechanisms that can degrade the SSW system,” has been “successfully implemented.”<sup>26</sup>
- That Pilgrim is a BWR with an above-grade spent fuel pool in the reactor building, which “makes a leak from the spent fuel pool readily detectable by plant personnel and unrelated to AMPs for buried pipes and tanks.”<sup>27</sup>
- That leakage events at other nuclear power plants “had nothing to do with the leakage of buried components that were in contact with a soil environment and had experienced aging as a result of this environment,” and have not been “identified as having conditions that are analogous or relevant to the configuration or design of the buried piping containing radioactively contaminated water” at the Pilgrim plant.<sup>28</sup>
- That “NRC Bulletin 88-05 alerted utilities to potential counterfeit and substandard pipe fittings and flanges, and the previous [Pilgrim] owner and operator identified, located and remediated, as appropriate, any counterfeit and substandard pipe fittings and flanges.”<sup>29</sup>

## B. NRC Staff’s Response to Motion

The Staff in its Response to Entergy’s Motion refers to the limited scope of license renewal proceedings, the objective of which is to “determine whether the detrimental effects of aging, which could adversely affect the functionality of systems, structures, and components that the Commission determines require

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<sup>25</sup> Entergy Statement ¶¶ 20-23, 26.

<sup>26</sup> *Id.* ¶¶ 27-30.

<sup>27</sup> *Id.* ¶ 37.

<sup>28</sup> *Id.* ¶¶ 38, 42; *see id.* ¶¶ 39-41.

<sup>29</sup> *Id.* ¶ 44.

review for the period of extended operation, are adequately managed.”<sup>30</sup> Staff cites two basic principles of license renewal:

(1) [W]ith the possible exception of the detrimental effects of aging on the functionality of certain plant systems, structures, and components in the period of extended operation and possibly a few other issues related to safety only during extended operation, the regulatory process is adequate to ensure that the licensing bases of all currently operating plants provides and maintains an acceptable level of safety so that operation will not be inimical to public health and safety or common defense and security.

(2) “[T]he plant-specific licensing basis must be maintained during the renewal term in the same manner and to the same extent as during the original licensing term” . . . through application of age-related degradation management for systems, structures, and components that are important to license renewal.<sup>31</sup>

Staff argues that these two principles taken together assure that, “so long as the aging effects are adequately managed through the period of extended operation, the current licensing basis ensures adequate safety for design basis events, and therefore need not be considered in a license renewal review.”<sup>32</sup>

Staff agrees with Entergy that there are no material facts in dispute, stating that in its view Entergy has correctly identified relevant pipes and tanks subject to aging management, and that “installing a system to monitor possible leakage of radioactively contaminated water from buried pipes and tanks is beyond the scope of this proceeding.”<sup>33</sup> Moreover, Staff argues, “there is no basis to find that the AMPs for the buried pipes and tanks are inadequate,” noting that it has “reviewed the [Application] and performed an onsite audit of the AMPs” and “concluded that they will adequately manage the effects of aging.”<sup>34</sup>

### C. Pilgrim Watch Response to Entergy’s Motion and to Staff

Pilgrim Watch points out that Entergy in its Motion raises some of the same arguments previously made in its response to Contention 1, and suggests that these

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<sup>30</sup> NRC Staff Response to [Entergy Motion] at 5 (June 28, 2007), ADAMS Accession No. ML071800059 [hereinafter Staff Response]; *see id.* at 4-5 (citing Final Rule: “Nuclear Power Plant License Renewal; Revisions,” 60 Fed. Reg. 22,461, 22,464 (1995)).

<sup>31</sup> *Id.* at 5-6 (citing 60 Fed. Reg. at 22,464).

<sup>32</sup> *Id.* at 6 (citing 60 Fed. Reg. at 22,464).

<sup>33</sup> *Id.* at 7.

<sup>34</sup> *Id.* at 8-9.

arguments are the primary ones Entergy now provides.<sup>35</sup> Intervenors dispute all but two of Entergy's submitted material facts,<sup>36</sup> and supports its Answer with the Declaration of David Ahlfeld, Ph.D., Professor at the University of Massachusetts in the Department of Civil and Environmental Engineering, and minutes of the Town of Duxbury's annual town meeting, supporting Pilgrim Watch's call for monitoring wells.<sup>37</sup>

Prof. Ahlfeld states that radioactive contaminants could leak from the condensate storage system, offgas system piping, and the salt service water system. He notes that, while Entergy "describes the several methods they use to prevent leaks from occurring," it "has not demonstrated that [the plant has] sufficient means of detecting leaks if they occur."<sup>38</sup> Noting that leaks can and do occur, at various rates, Prof. Ahlfeld indicates among other things that such leaks are "virtually impossible to detect without the use of direct sampling methods such as monitoring wells."<sup>39</sup>

Pilgrim Watch disputes some of Entergy's stated material facts as irrelevant, controverts some more directly, and responds to some by expressing a different emphasis — for example, in response to Entergy's statement to the effect that preventing leakage is not an intended safety function of relevant buried pipes and tanks, by indicating that the inspections of buried piping and tanks that are described in the Application in sections A.2.1.2 and B.1.2 "utilize methods to assure the integrity of the pipes/tanks — so that they will function and will not leak."<sup>40</sup>

In response to Entergy's statements concerning which systems may contain radioactive liquid, Intervenors state that it is "important to consider systems . . . with buried pipes or tanks that contain radioactive liquid . . . BOTH by design and not by design," and explains in some detail that, in addition to the condensate storage system and the salt service water system, the offgas system has the potential for radioactive water to enter and collect in it when the plant shuts down, noting that in 2006 there was an incident involving a radioactive particle being found in front of the Augmented Offgas Building.<sup>41</sup> Pilgrim Watch also asserts among other things that in some of its statements Entergy omits pertinent

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<sup>35</sup> Pilgrim Watch's Answer Opposing [Entergy Motion] at 4 (June 27, 2007), ADAMS Accession No. ML071840038 [hereinafter Pilgrim Watch Answer].

<sup>36</sup> *Id.* at 5-37.

<sup>37</sup> Attachments to Pilgrim Watch Answer.

<sup>38</sup> Declaration of David Ahlfeld, PhD, PE In Support of Pilgrim Watch's Response Opposing [Entergy's Motion] at 1 (June 18, 2007) [hereinafter Ahlfeld Declaration].

<sup>39</sup> Ahlfeld Declaration at 1.

<sup>40</sup> Pilgrim Watch Answer at 8; *see id.* at 14.

<sup>41</sup> *Id.* at 9-11.

information, including information pertaining to “uncontrolled, unplanned, and unmonitored releases of radioactively contaminated water into the ground.”<sup>42</sup>

Intervenors contest how extensively and satisfactorily underground piping is in fact inspected, and states, in response to Entergy’s statement regarding pipe coatings, that prior replacement of some of these pipes indicates past corrosion, which in turn “indicates the importance of supplementing the aging management program with a monitoring well system.”<sup>43</sup> Regarding Entergy’s various AMPs, Intervenors state among other things that, although Entergy may have programs to prevent leaks, it “has not demonstrated they have sufficient means to detect leaks if they occur.”<sup>44</sup> Intervenors emphasize that, in addition to the objective of maintaining the pressure boundary of pipes and tanks to assure they can perform their intended functions, AMPs also have the purpose of assuring the integrity of such systems “so that there are no unmonitored leaks.”<sup>45</sup>

Intervenors dispute that Pilgrim’s AMPs provide sufficient preventative measures to assure no leaks, refer to its earlier discussion of the “wear-out phase” of components, and emphasize the untested aspects of Pilgrim AMPs as well as information that has not been provided about numbers of joints and turns in pipes.<sup>46</sup> Also challenged are the “standard industry practice,” “industry operating experience,” and Pilgrim operating experience cited by Entergy, which Intervenors contend are untested for the length of time involved with a renewed license.<sup>47</sup> Pilgrim Watch emphasizes that “without monitoring wells they do not know with any certainty what pipes have or have not leaked.”<sup>48</sup>

In response to Entergy’s statement to the effect that Pilgrim’s operating experience “demonstrates the sufficiency of the protection provided by the protective coatings,” Intervenors note specific operating experience found in the Application indicating corrosion of SSW pipes resulting from the degradation of rubber pipe lining, which continues to be used.<sup>49</sup> Intervenors dispute that future inspections, protective coatings, the water chemistry program, and other AMPs will in fact prevent corrosion or provide adequate protection of public health and safety in the license renewal term, without monitoring wells to supplement existing measures.<sup>50</sup>

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<sup>42</sup> *Id.* at 14; *see id.* at 13-14.

<sup>43</sup> *Id.* at 15; *see id.* at 21-22.

<sup>44</sup> *Id.* at 17.

<sup>45</sup> *Id.*; *see also id.* at 32.

<sup>46</sup> Pilgrim Watch Answer at 18-19 (citing Request for Hearing and Petition To Intervene by Pilgrim Watch at 1.3.3 (May 25, 2006), ADAMS Accession No. ML061630125).

<sup>47</sup> *Id.* at 19-21.

<sup>48</sup> *Id.* at 21.

<sup>49</sup> *Id.* at 22 (citing Application § B.1.2).

<sup>50</sup> *See id.* at 24-29.

Regarding Entergy's "Response to the Issues Raised in Pilgrim Watch Contention 1," intervenors suggest again that Entergy essentially re-argues the issues already resolved in LBP-06-23, relying among other things on its responses to Entergy's specific statements of material fact, and on previously noted parts of the report issued by the Tritium Task Force recognizing the difficulties involved in detecting leaks from underground pipes.<sup>51</sup>

Pilgrim Watch concludes that Entergy has "fail[ed] to establish that a genuine issue of material dispute has ceased to exist," noting that any doubt must be resolved by denying the motion for summary disposition.<sup>52</sup> Intervenors' position is that Pilgrim's aging management program is "inadequate with regard to aging management of buried pipes and tanks that may contain radioactively contaminated water, because it does not provide for monitoring wells that would detect leakage," requests for which are "simple, straightforward and not expensive," and the importance of which is demonstrated by the support of the Town of Duxbury.<sup>53</sup>

We note that, in response to Entergy's stated facts Pilgrim Watch also addresses some of the environmental consequences of any leaks,<sup>54</sup> but, because we admitted this contention as a safety and not an environmental contention, we do not find such statements to be relevant to Contention 1. We discuss this further in our ruling, below, following our discussion of the legal standards for summary disposition.

In response to the NRC Staff, Pilgrim Watch among other things notes with regard to a Staff Expert's statement that "industry practice has shown that properly applied coatings will prevent corrosion . . . unless there is damage during application of the coating and handling of the pipe," that human error "is always a factor that needs to be addressed" and that "damage could have happened at Pilgrim and gone undetected or could happen in the future."<sup>55</sup>

#### **D. Legal Standards Governing Summary Disposition Motions**

NRC regulations in 10 C.F.R. § 2.1205(a) permit a party in a Subpart L proceeding such as this one to submit a motion for summary disposition. Under section 2.1205(c), resolution of such a motion is governed by the standards for summary disposition set forth in Subpart G of 10 C.F.R. Part 2, which provides in

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<sup>51</sup> *Id.* at 30-37.

<sup>52</sup> Pilgrim Watch Answer at 38.

<sup>53</sup> *Id.* at 39.

<sup>54</sup> *See, e.g., id.* at 8, 30-31.

<sup>55</sup> Pilgrim Watch's Answer to [Staff Response] at 7 (July 6, 2007), ADAMS Accession No. ML072010095 (quoting Affidavit of Dr. James A. Davis Concerning [Entergy Motion] at 16 (June 28, 2007)).

10 C.F.R. § 2.710(d)(2) that a moving party shall be granted summary disposition “if the filings in the proceeding, . . . together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.”

The standard of whether a movant for summary disposition has shown the “absence of a genuine issue of material fact” comes from Rule 56 of the Federal Rules of Civil Procedure. Under NRC case law, this standard is relevant because motions for summary disposition are analogous to motions for summary judgment under Rule 56 in Federal District Courts, and are therefore generally evaluated according to the same standards used by such trial courts in ruling on motions for summary judgment.<sup>56</sup>

Facts are “material” if they will “affect the outcome of [a proceeding] under the governing law.”<sup>57</sup> The moving party for summary disposition in an NRC proceeding “bears the burden of showing the absence of a genuine issue as to any material fact,” and a licensing board ruling on a motion “must view the record in the light most favorable to the party opposing such a motion” and deny the motion if the moving party fails to meet its burden, even in the face of an inadequate response.<sup>58</sup> It has been held in an NRC proceeding that a moving party

fails to meet its burden when the filings demonstrate the existence of a genuine material fact, when the evidence introduced does not show that the nonmoving party’s position is a sham, when the matters presented fail to foreclose the possibility of a factual dispute, or when there is an issue as to the credibility of the moving party’s evidentiary material.<sup>59</sup>

If the proponent of the motion meets its burden, an opponent must “set forth specific facts showing that there is a genuine issue,” and may not rely on “mere allegations or denials.”<sup>60</sup> The opposing party does not, however, have to show that it would prevail on the issues, but rather must “demonstrate that there is a genuine

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<sup>56</sup> See *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993).

<sup>57</sup> *Anderson*, 477 U.S. at 248.

<sup>58</sup> *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102.

<sup>59</sup> *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 122 (2006) (citing 10A Charles Alan Wright et al., *Federal Practice & Procedure* § 2727 (3d ed. 1998) [hereinafter 10A Wright]).

<sup>60</sup> *Id.* (citing 10 C.F.R. § 2.710(b); *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102).

factual issue to be tried.”<sup>61</sup> Any fact not controverted will be deemed admitted.<sup>62</sup> And even if the basic facts are uncontroverted, summary disposition would be “inappropriate when the evidence is susceptible of different interpretations or inferences.”<sup>63</sup>

Nor is summary disposition “a tool for trying to convince a Licensing Board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing.”<sup>64</sup> As has been noted by another Licensing Board in ruling on a summary disposition motion in the *Oyster Creek* license renewal proceeding, “summary judgment is not appropriate if it would require a judge to assess the correctness of facts and conclusions that are embodied in the competing, well-founded opinions of the parties’ experts.”<sup>65</sup> Similarly, as the *Oyster Creek* board also observed (quoting the U.S. Supreme Court)

Summary judgment is not appropriate if it would require a judge to engage in the making of “[c]redibility determinations, the weighing of the evidence, [or] the drawing of legitimate inferences from the facts,” because the performance of such functions signals the existence of a genuine factual issue whose resolution should be based on a hearing, not a summary judgment motion.<sup>66</sup>

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<sup>61</sup> *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102; see also *American Manufacturers Mutual Insurance Co. v. American Broadcasting — Paramount Theaters, Inc.*, 388 F.2d 272, 280 (2d Cir. 1967). In addition, if a movant satisfies its initial burden and supports its motion by affidavit, “the opposing party must either proffer rebutting evidence or submit an affidavit explaining why it is impractical to do so,” and “[i]f the presiding officer determines from affidavits filed by the opposing party that the opposing party cannot present by affidavit the facts essential to justify its opposition, the presiding officer may order a continuance to permit such affidavits to be obtained, or may take other appropriate action.” *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 103. These provisions are incorporated in the NRC rules as 10 C.F.R. § 2.710(c).

<sup>62</sup> *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102-03.

<sup>63</sup> *Hunt v. Cromartie*, 526 U.S. 541, 553 (1999).

<sup>64</sup> *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001); see also *Vermont Yankee*, LBP-06-5, 63 NRC at 121; *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), Memorandum and Order at 5 (Aug. 10, 2007) (unpublished), ADAMS Accession No. ML072220410 [hereinafter *Vermont Yankee* License Renewal Proceeding Summary Disposition Ruling].

<sup>65</sup> *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), Memorandum and Order (Denying AmerGen’s Motion for Summary Disposition) at 4 (June 19, 2007) (unpublished), ADAMS Accession No. ML071700768 [hereinafter *Oyster Creek* Summary Disposition Ruling] (citing *United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 722-23 (2d Cir. 1993); *Norfolk Southern Corp. v. Oberly*, 632 F. Supp. 1225, 1243 (D. Del. 1986), *aff’d*, 822 F.2d 388 (3d Cir. 1987); *Private Fuel Storage*, LBP-01-39, 54 NRC at 509-10).

<sup>66</sup> *Oyster Creek* Summary Disposition Ruling at 4 (quoting *Anderson*, 477 U.S. at 255).

This principle has been recognized in other NRC proceedings as well.<sup>67</sup> Although “bare assertions and general denials are insufficient to defend against a properly supported motion for summary disposition,”<sup>68</sup> it is inappropriate at the summary disposition stage for a Board to attempt “to untangle the expert affidavits and decide ‘which experts are more correct.’”<sup>69</sup> Likewise, this is consistent with Federal Court rulings that, while “‘wholly conclusory statements for which no supporting evidence is offered’ need not be taken as true for summary judgment purposes,” a court “‘may not make credibility determinations or weigh the evidence’” at the summary judgment stage.<sup>70</sup>

On the other hand, the Fifth Circuit Court of Appeals has held that, in a case heard by a judge without a jury, a judge may be warranted in drawing inferences “‘without resort to the expense of trial’” and “‘may grant summary judgment if trial would not enhance its ability to draw inferences and conclusions,’” if there are “‘no issues of witness credibility’” and “‘a trial on the merits would reveal no additional data.’”<sup>71</sup>

In sum, summary disposition may be a useful device to eliminate the need for the time and cost of a hearing if the truth on a contested issue is clear and there is no genuine issue on any material fact,<sup>72</sup> but “‘if there is doubt as to whether the

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<sup>67</sup> See *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 80 (2005); *Vermont Yankee*, LBP-06-5, 63 NRC at 122; *Vermont Yankee* License Renewal Summary Disposition Ruling at 6.

<sup>68</sup> *Savannah River*, LBP-05-4, 61 NRC at 81.

<sup>69</sup> *Id.* at 80 (citing *Private Fuel Storage*, LBP-01-39, 54 NRC at 510); *Vermont Yankee*, LBP-06-5, 63 NRC at 122; *Vermont Yankee* License Renewal Summary Disposition Ruling at 6.

<sup>70</sup> *Banks v. District of Columbia*, 377 F. Supp. 2d 85, 89 (D.D.C. 2005) (citations omitted); see also *More v. Snow*, 480 F. Supp. 2d 257, 274 (D.D.C. 2007); *Mobley v. Continental Casualty*, 405 F. Supp. 2d 42, 47 (D.D.C. 2005); *San Carlos Apache Tribe v. United States*, 272 F. Supp. 2d 860, 880 (D. Ariz. 2003).

<sup>71</sup> *Nunez v. Superior Oil Co.*, 572 F.2d 1119, 1123-24 (5th Cir. 1978); see also *Houston North Hospital Properties v. Telco Leasing, Inc.*, 680 F.2d 19, 22 (5th Cir. 1982). Additionally, the First Circuit has held that, where parties cross-move for summary disposition on stipulated facts and have in effect submitted their case “as a case stated,” in a nonjury case a “district court is freed from the usual constraints that attend the adjudication of summary judgment motions.” *Reich v. John Alden Life Insurance Co.*, 126 F.3d 1, 6 (1st Cir. 1997) (citations omitted); see also *United Paperworkers International Union, Local 14, AFL-CIO-CLC v. International Paper Co.*, 64 F.3d 28, 31 (1st Cir. 1995). The Sixth Circuit has recognized the same principle, quoting Wright’s *Federal Practice and Procedure* for the statement that this “‘procedure amounts to a trial of the action and technically is not a disposition by summary judgment,’” which it deemed appropriate only “‘if it is clear that there is nothing else to be offered by the parties and there is no prejudice in proceeding in this fashion.’” *B.F. Goodrich Co. v. U.S. Filter Corp.*, 245 F.3d 587, 593 n.3 (6th Cir. 2001) (quoting 10A Wright § 2720).

<sup>72</sup> See, e.g., *Poller v. Columbia Broadcasting System, Inc.*, 368 U.S. 464, 467 (1962); *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 384 (2001);

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parties should be required to proceed further, [a motion for summary disposition] should be denied.’’<sup>73</sup>

#### **E. Licensing Board Ruling on Motion for Summary Disposition of Contention 1**

Because we find that there are “genuine issues of material fact” that have been controverted by Intervenors with regard to Contention 1, we deny Entergy’s motion for summary disposition of this contention. In rendering this ruling, however, we do not accept material portions of the Intervenors’ characterizations of the matters at issue.

We find there is a genuine dispute on the central and material issue of whether those Pilgrim aging management programs, or AMPs, that relate to relevant buried pipes and tanks are adequate on their own, without need of any leak detection devices (Intervenors propose monitoring wells), to assure that the pipes and tanks in question will perform their intended functions and thereby protect public health and safety. Although Contention 1 as we admitted it does not utilize this specific wording — referring instead to whether Pilgrim’s broad, overall aging management program is “inadequate with regard to aging management of buried pipes and tanks that contain radioactively contaminated water, because it does not provide for monitoring wells that would detect leakage” — it implicitly addresses the adequacy of the AMPs to assure that the pipes and tanks perform as intended to perform.

In considering the parties’ arguments, we note their differing perspectives in some significant respects. Entergy argues that the *only* purpose of the AMPs is to maintain the pressure boundaries of relevant pipes and tanks so that they can perform as intended; and that operating experience both at Pilgrim and at other plants shows that the various programs — involving coatings, inspections, water chemistry, etc. — are sufficient to assure the maintenance of such pressure boundaries.<sup>74</sup> Intervenors, on the other hand, in addition to suggesting that another purpose of the AMPs is to prevent leaks and controverting the proposition that the AMPs on their own will assure the components do not leak and do perform as intended, discuss how leaks could “harm public health”<sup>75</sup> and the environment,<sup>76</sup>

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*Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-23, 49 NRC 485, 491 (1999); *Tennessee Valley Authority* (Browns Ferry Nuclear Plant, Units 1, 2, and 3), LBP-73-29, 6 AEC 682, 688 (1973).

<sup>73</sup> *Savannah River*, LBP-05-4, 61 NRC at 79 (citing *General Electric Co.* (GE Morris Operation Spent Fuel Storage Facility), LBP-82-14, 15 NRC 530, 532 (1982)).

<sup>74</sup> See, e.g., Entergy Motion at 4, 8-9, 12, 15.

<sup>75</sup> See, e.g., Pilgrim Watch Answer at 7.

<sup>76</sup> See *supra* note 54.

which Entergy contends is not relevant to aging and therefore should not be permitted to be litigated.<sup>77</sup>

It is evident that some clarification is in order. To begin with, we note that prevention of leaks *per se* is not a stated objective of any relevant aging management program. On the other hand, prevention of an aging-induced leak large enough to compromise the ability of buried piping or tanks to fulfill their intended safety function is indeed a clear goal of an AMP. Thus, at issue here is the following fundamental question: Do the AMPs for buried pipes and tanks, by themselves, ensure that such safety-function-challenging leaks will not occur, or must some sort of leak detection devices such as the monitoring wells proposed by Intervenor be installed to meet that obligation?

We note in this regard that some AMPs involve measures to prevent and detect corrosion, which, if not prevented and/or timely detected, will result in leakage. Thus, while leak prevention is not a stated objective, it is an implicit element of those AMPs. At this point, leak detection is not, however, an AMP element. Contention 1 involves the challenge that leak detection is a necessary AMP element to ensure continuing safety function performance. Whether this is or is not the case is the matter in dispute, involving experts who disagree. The pertinent issue in dispute<sup>78</sup> is whether leak detection via a system of monitoring wells is necessary as part of Pilgrim's aging management program to ensure that relevant components perform their intended functions during the license renewal period.<sup>79</sup> Thus, the only issue remaining before this Licensing Board regarding Contention 1 is whether or not monitoring wells are necessary to assure that the buried pipes and tanks at issue will continue to perform their safety function during the license renewal period — or, put another way, whether Pilgrim's existing AMPs have elements that provide appropriate assurance as required under relevant NRC regulations that the buried pipes and tanks will not develop leaks so great as to cause those pipes and tanks to be unable to perform their intended safety functions.

For clarity, we also note that the following matters are not in dispute:

- (a) Our statement in ruling on the admissibility of Contention 1, that (while doses not in violation of NRC regulations could not be litigated)

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<sup>77</sup> See, e.g., Entergy Motion at 16-17.

<sup>78</sup> Also in dispute is the ancillary matter of whether the SSW system and offgas system piping may contain radioactive liquid and should therefore be considered vis-à-vis proposed safety-function-failure leak detection.

<sup>79</sup> A system of monitoring wells, appropriately placed taking into account actual geological conditions and locations of relevant components that could contain radioactive liquid, might well, by detecting leaks, allow for earlier and/or more effective detection and correction of any problems that might compromise the intended functions of relevant components.

issues relating to doses in violation of NRC regulations ‘‘may be litigated,’’<sup>80</sup> should not be interpreted to mean that we see any relevant, litigable dispute at this point regarding any health effects of leaking radioactive liquid.<sup>81</sup>

(b) Also not in dispute is any leakage from the spent fuel pool.

(c) Similarly, leakage events at other plants are not directly relevant to the issue at hand. While these events may provide relevant information regarding the potential usefulness of monitoring wells in detecting leaks, what is relevant, as Pilgrim Watch appears to agree,<sup>82</sup> is the uniqueness of the Pilgrim plant and what may be required with regard to it.

Based on the preceding analysis, we DENY Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 1, and will allow litigation of the matters at issue regarding the contention as clarified above, to the extent that it is not otherwise resolved by agreement between the parties.

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD

Ann Marshall Young, Chair  
ADMINISTRATIVE JUDGE

Dr. Paul B. Abramson  
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
October 17, 2007<sup>83</sup>

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<sup>80</sup> LBP-06-23, 64 NRC at 315.

<sup>81</sup> It goes without saying that detection of leaks would indeed protect the public health — whether by assuring that components perform intended functions, by otherwise preventing doses to the public in violation of NRC regulations, and/or by any other means. But issues concerned with monitoring of radiological releases, or determinations of how leakage could harm health or the environment, are not legitimately in dispute here, because they do not relate to aging and/or because they are addressed as part of ongoing regulatory processes. *See, e.g.*, LBP-06-23, 64 NRC at 275-77.

<sup>82</sup> *See* Pilgrim Watch Answer at 33.

<sup>83</sup> Copies of this Memorandum and Order were sent this date by Internet e-mail transmission to all counsel or representatives for parties.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Ann Marshall Young, Chair<sup>1</sup>**  
**Dr. Paul B. Abramson**  
**Dr. Richard F. Cole**

**In the Matter of**

**Docket No. 50-293-LR**  
**(ASLBP No. 06-848-02-LR)**

**ENTERGY NUCLEAR GENERATION  
COMPANY and ENTERGY NUCLEAR  
OPERATIONS, INC.**

**(Pilgrim Nuclear Power Station)**

**October 30, 2007**

In this license renewal proceeding the Licensing Board grants the Applicant's motion for summary disposition of a contention involving the Applicant's handling of its Severe Accident Mitigation Alternatives (SAMA) analysis concerning (1) evacuation times, (2) economic consequences, and (3) meteorological patterns.

**RULES OF PRACTICE: SUMMARY DISPOSITION**

The determinative factor in a summary disposition motion is whether there is any genuine issue of *material* fact remaining in dispute — and that determination is made through examination of the filings in respect of the motion. The determination as to materiality in any given instance is controlled by the governing law for the particular issue involved. “As to materiality, the substantive law will identify which facts are material. Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of

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<sup>1</sup> Judge Young's dissent from this Order is set out below.

summary judgment. Factual disputes that are irrelevant or unnecessary will not be counted.’’ *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986) (citing generally 10A C. Wright, A. Miller, & M. Kane, *Federal Practice & Procedure* § 2727, at 93-95 (1983)).

**RULES OF PRACTICE: SUMMARY DISPOSITION  
(MATERIALITY)**

For this Agency the inquiry becomes whether or not there is at issue any fact which can materially influence the determination the NRC (resting upon the technical evaluation by the Staff) must make. We believe, therefore, that the regulations of the NRC (which are the governing law for this case and what *Anderson* requires guide us) clearly teach that a fact cannot be “material” to *our* ruling here unless its consideration could materially affect the decision of the NRC vis-à-vis implementation of any particular SAMA.

**RULES OF PRACTICE: SUMMARY DISPOSITION (PLEADING  
REQUIREMENTS)**

NRC regulations require specificity and support for the positions parties take in their filings. *See, e.g.*, 10 C.F.R. § 2.710(b) (requiring that affidavits “set forth facts which would be admissible in evidence,” and that opponents may not rest their arguments on “mere allegations or denials”); *compare* 10 C.F.R. § 2.309(f) (establishing the minimum required support for original contention admissibility). In our view, the conditions set out in 10 C.F.R. § 2.309(f) serve as minimum specificity standards for “specific facts showing there is a genuine issue of fact” (as described in 10 C.F.R. § 2.710(b)).

**RULES OF PRACTICE: SUMMARY DISPOSITION (BURDEN OF  
PROOF)**

Of course, a party is not required to prove its case in making or opposing a motion for summary disposition. But if the support a party offers to demonstrate that a genuine dispute exists as to a material fact indicates that, after expanding that support to its logical limits, it cannot support a finding of fact material to the determination the Agency must make, that party’s position cannot prevail. The rendering of a determination regarding any motion for summary disposition thus requires a thorough examination of the potential materiality of the support offered by the Parties for their positions.

#### **RULES OF PRACTICE: SUMMARY DISPOSITION**

“There is no issue for trial unless there is sufficient evidence favoring the nonmoving party for a jury to return a verdict for that party. . . . If th[at] evidence . . . is not significantly probative, summary judgement may be granted.” *Anderson*, 477 U.S. at 249. Furthermore, “the judge must ask himself . . . whether a fair minded jury could return a verdict for the [nonmovant] on the evidence presented[,]” *id.* at 252, and “if there is no evidence upon which a reasonable mind might fairly conclude [for the nonmovant], the motion must be granted.” *Id.* at 253. Finally, “we agree . . . that the trial judge must direct a verdict (*i.e.* grant summary disposition) if, under the governing law, there can be but one reasonable conclusion as to the verdict.” *Id.* at 250. Formerly, it was held that where there was a “*scintilla* of evidence in support of a [nonmovant’s] case, the judge was bound to leave it to the jury, but recent decisions . . . have established a more reasonable rule that . . . there is a preliminary question for the judge . . . whether there is any [evidence] upon which a jury could properly proceed to find a verdict for the [nonmovant].” *Id.*

#### **RULES OF PRACTICE: SUMMARY DISPOSITION (BOARD RESPONSIBILITY)**

A licensing board cannot make a determination of whether there is a genuine issue of material fact without carefully examining the evidence presented in the parties’ affidavits. “For example, there is no genuine issue if the evidence presented in the opposing affidavits is of insufficient caliber or quantity to allow a rational finder of fact to find [for the nonmovant].” *Anderson*, 477 U.S. at 254.

#### **REGULATIONS: SEVERE ACCIDENT MITIGATION ALTERNATIVES**

NRC Regulations require, at the operating license renewal stage, that “[i]f the staff has not previously considered severe accident mitigation alternatives for the applicant’s plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided.” 10 C.F.R. § 51.53(c)(3)(ii)(L).

**NUCLEAR REGULATORY COMMISSION: RESPONSIBILITIES  
UNDER NEPA**

**REGULATIONS: SEVERE ACCIDENT MITIGATION  
ALTERNATIVES**

The SAMA analysis is an obligation of the Staff in fulfillment of its National Environmental Policy Act (NEPA) obligations, and, therefore it is set out in the environmental portions of NRC regulations, and, because it is part of an environmental effects analysis, the requirement is that the Staff accurately characterize and “consider” these alternatives. That Part 51 is a part of this Agency’s efforts to satisfy its NEPA obligations is made crystal clear by 10 C.F.R. § 51.2, as well as the fact that the required finding is set out in Table B-1 of Appendix B to Subpart A of Part 51, entitled “Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants.”

**REGULATIONS: SEVERE ACCIDENT MITIGATION  
ALTERNATIVES**

The requirement for SAMA analysis is made more explicit in Table B-1 of Appendix B to Subpart A of Part 51 in the section entitled “Postulated Accidents,” wherein NRC regulations require an analysis of “[t]he probability weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to ground water, and societal and economic impacts from severe accidents . . . ,” and consideration of “alternatives to mitigate” these sorts of accidents; thus our regulations require the use of probabilistic (as opposed to deterministic) methodology.

**REGULATIONS: SEVERE ACCIDENT MITIGATION  
ALTERNATIVES**

The underlying SAMA analyses require modeling of extremely complex time- and physical condition-dependent phenomena, which all those familiar with the field know are generally not amenable to accurate modeling. Therefore, this Agency has wisely determined that these effects and potential benefits of mitigation be examined using “probability weighted consequences.”

**LICENSING BOARD(S): REVIEW OF NRC STAFF’S ACTIONS**

It is necessary for the Staff to take a uniform approach to its review of such analyses by license applicants and for performance of its own analyses, and it would be imprudent for the Staff to do otherwise without sound technical

justification. Where these analyses are customarily prepared using the MACCS2 code, and where this code has been widely used and accepted as an appropriate tool in a large number of similar instances, the Staff is fully justified in finding, after due consideration of the manner in which the code has been used, that analysis using this code is an acceptable method for performance of SAMA analysis.

**NUCLEAR REGULATORY COMMISSION: SEVERE ACCIDENT  
MITIGATION ALTERNATIVES**

The manner in which this Agency meets its obligation to “consider” these alternatives is to perform a cost-benefit analysis, comparing the estimated equivalent dollar amount of computed reduction in the risk of a severe accident associated with implementation of a particular mitigation alternative with the estimated potential cost of implementation of that alternative.

**RULES OF PRACTICE: SUMMARY DISPOSITION (BOARD  
RESPONSIBILITY)**

In addressing the Motion and the opposition thereto, we must examine the substance of the information provided by the parties, for, at its heart, such a motion rests upon whether or not there is evidence upon which a trier of fact might reasonably find for the nonmoving party.

**RULES OF PRACTICE: SUMMARY DISPOSITION  
(MATERIALITY)**

For a fact to be “material” in the present context, we have taken our guidance from the procedures for contention admissibility, which provide that the issue proffered by a petitioner must be “material to the findings the NRC must make to support the action that is involved in the proceeding.” 10 C.F.R. § 2.309(f)(1)(iv).

**RULES OF PRACTICE: SUMMARY DISPOSITION (SUPPORT  
REQUIRED)**

We find foundation for our threshold criteria regarding the level of support required for summary disposition in those same contention admissibility provisions — requiring a proponent of a position to provide facts or expert support for its position. *See, e.g.*, 10 C.F.R. § 2.309(f)(1)(v).

**RULES OF PRACTICE: SUMMARY DISPOSITION (SUFFICIENCY OF SUPPORTING EVIDENCE)**

For the express purposes of summary disposition, mere allegations are insufficient — and we take that to include allegations which are in the nature of speculation or bare conclusory statements by an expert. *See, e.g.*, 10 C.F.R. § 2.710(b).

**RULES OF PRACTICE: SEVERE ACCIDENT MITIGATION ALTERNATIVES (EVACUATION)**

Where it is shown that even with no evacuation a SAMA is still not cost-effective it clearly demonstrates that any errors in assumptions regarding the evacuation time or pattern cannot reasonably be expected to rise to a level necessary to cause implementation of any SAMA to become cost-effective. Thus it is clear that a trier of fact could not reasonably find that the result of this Agency’s determination regarding whether or not any (not implemented) SAMA is cost-effective could be affected by errors in assumptions regarding evacuation.

**RULES OF PRACTICE: SUMMARY DISPOSITION (MATERIALITY)**

We note that for a fact to be material with regard to the SAMA analysis, it must be a fact which can reasonably be expected to impact the Staff’s conclusion that any particular mitigation alternative may (or may not) be cost-effective.

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**MEMORANDUM AND ORDER**  
**(Ruling on Motion To Dismiss Petitioners’ Contention 3**  
**Regarding Severe Accident Mitigation Alternatives)**

**I. INTRODUCTION**

This proceeding involves the application of Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc. (Entergy) to renew its operating license for the Pilgrim Nuclear Power Station (PNPS) for an additional 20-year period. In LBP-06-23, issued October 16, 2006, this Licensing Board granted the Petition To Intervene of, and admitted two contentions submitted by, the nonprofit citizens’ organization, Pilgrim Watch.<sup>2</sup> In this Memorandum and Order we grant Applicant Entergy’s Motion seeking Summary Disposition of one of those contentions (Pilgrim Watch Contention 3), finding that the Applicant has demonstrated the absence of any genuine issue of material fact with regard thereto.

**II. BACKGROUND**

Contention 3 challenged the Applicant’s handling of Severe Accident Mitigation Alternatives [hereinafter “SAMAs”] and, as admitted, reads as follows:

Applicant’s SAMA analysis for the Pilgrim plant is deficient in that the input data concerning (1) evacuation times, (2) economic consequences, and (3) meteorological patterns are incorrect, resulting in incorrect conclusions about the costs versus benefits of possible mitigation alternatives, such that further analysis is called for.<sup>3</sup>

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<sup>2</sup>LBP-06-23, 64 NRC 257 (2006). The Town of Plymouth, Massachusetts, where the Pilgrim plant is located, is also participating in this proceeding as an interested local governmental body, pursuant to 10 C.F.R. § 2.315(c). *See id.* at 266.

<sup>3</sup>LBP-06-23, 64 NRC at 341.

Not at issue here, as discussed below in more depth, because these matters were raised and eliminated at the contention admissibility stage, are issues related to: (1) the adequacy of the computer code (MACCS2) used to perform the SAMA computations; (2) the use for SAMA analyses of probabilistic (as opposed to deterministic) methodologies; and (3) the health effects of low doses of radiation.

#### **A. Entergy's Grounds for Motion**

Entergy's motion rests upon its argument that it has "performed a series of sensitivity studies to evaluate the effects of changes in the input parameters challenged by Pilgrim Watch on the results of the SAMA analysis," which demonstrate that the effect of the changes to the input parameters are "negligible and immaterial to the results of the SAMA analysis." Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 at 10 (May 17, 2007) [hereinafter "Entergy Motion"]. Entergy supports its motion with expert declarations arguing that the claims in Contention 3 are without merit, asserting that Pilgrim Watch's claims in Contention 3 are immaterial because the maximum increase in benefit from implementation of additional SAMAs would be less than 4%, while in order for the additional SAMAs to actually become cost-effective the benefit would have to increase by over 100%. *Id.* Entergy asserts, therefore, that pursuant to 10 C.F.R. § 2.710(d)(2) it "is entitled to a decision as a matter of law" since "no genuine issue as to any material fact exists." *Id.* at 1.

#### **B. NRC Staff's Response to Motion**

The Staff in its Response to Entergy's Motion advises this Board that, in its view, "the information Pilgrim Watch sought to have considered in Entergy's SAMA analysis has now been considered, as demonstrated by the additional information supplied by Entergy, thus rendering the first part of the contention moot." NRC Staff Response to Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 at 6 (July 29, 2007) [hereinafter "Staff Response"]. Furthermore, the Staff agrees that Entergy has adequately shown that the additional factors would not change the results of the SAMA analysis, and that, under 10 C.F.R. § 2.710(b), it is now up to Pilgrim Watch in its Response to show that these conclusions are incorrect. *Id.* at 6. The Staff advises that its own review of the "reports, declarations and list of material facts that form the basis of Entergy's Motion," indicates that there "are no genuine issues of material fact that require litigation." *Id.* Finally, Staff advise that after examining the fifty-nine material facts listed by Entergy, they agree with forty-five and their disagreements with the remaining fourteen are minor and would not change the results of the SAMA analysis.

### C. Pilgrim Watch Response to Motion and to Staff

Pilgrim Watch responds that Entergy's Motion raises primarily the same arguments it used in its original response to Contention 3. They aver that Entergy does not bring up "new compelling or overwhelming evidence which would absolutely negate Pilgrim Watch's issues and concerns already determined by the Board to be litigable," and therefore the Motion should be denied. Pilgrim Watch's Answer Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 at 4 (June 29, 2007). Pilgrim Watch disputes Entergy's assertion that there is no dispute regarding each of the material facts listed by Entergy to not be at issue, and, in the second portion of their Response, discuss in detail their arguments regarding the three aspects of Contention 3: meteorology, evacuation time estimates, and economic consequences.

Additionally, Pilgrim Watch filed an Answer to the Staff Response in which Pilgrim Watch raises four fundamental issues it sees in the Staff Response: (1) The Staff does not define what are "the parameters, consequences and duration of a 'severe accident,'" Pilgrim Watch's Answer to NRC Staff Response to Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 at 1 (July 9, 2007);<sup>4</sup> (2) the Staff failed to consider the actual meteorology in the area affected by PNPS; (3) the evacuation delay time and times estimates are inaccurate because they (a) are in too narrow a geographic area, (b) do not reflect how people actually react to disasters, and (c) ignore how the wind blows in a coastal area; and (4) in terms of economic consequences, Pilgrim Watch asserts that important inputs are underestimated or ignored, and that the data are entered into an inappropriate model. *Id.* at 1-2. Overall, Pilgrim Watch asserts that it has demonstrated that a genuine dispute on a material fact exists because the information it wanted to be considered was ignored by Entergy and the Staff.

### III. LEGAL STANDARDS

A discussion of the legal standards for summary disposition is set out in our ruling on the Motion for Summary Disposition of Contention 1, *see* LBP-07-12, 66 NRC 113 (2007), and we do not repeat that discussion here. The determinative factor here is whether there is any genuine issue of *material* fact remaining in dispute — and that determination is made through examination of the filings in respect of the motion. The determination as to materiality in any given instance is controlled by the governing law for the particular issue involved. "As to

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<sup>4</sup>Pilgrim Watch argues that since a SAMA analysis looks at mitigating effects of a "severe accident," it is important to define the term. Pilgrim Watch also asserts that there "should be separate SAMA analyses for each level of accident release and duration — from mild to severe." *Id.* at 2.

materiality, the substantive law will identify which facts are material. Only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment. Factual disputes that are irrelevant or unnecessary will not be counted.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986) (citing generally 10A C. Wright, A. Miller, & M. Kane, *Federal Practice & Procedure* § 2727, at 93-95 (1983)). For this Agency, as we see it, the inquiry becomes whether or not there is at issue any fact which can materially influence the determination the NRC (resting upon the technical evaluation by the Staff) must make;<sup>5</sup> i.e., in the case of Contention 3 challenging SAMA analyses, the determination rests on whether or not there are facts at issue which can affect whether or not a particular SAMA is cost-effective.

NRC regulations require specificity and support for the positions parties take in their filings. *See, e.g.*, 10 C.F.R. § 2.710(b) (requiring that affidavits “set forth facts that would be admissible in evidence,” and that opponents may not rest their arguments on “mere allegations or denials”); *compare* 10 C.F.R. § 2.309(f) (establishing the minimum required support for original contention admissibility).<sup>6</sup> Of course, a party is not required to prove its case in making or opposing a motion for summary disposition. But if the support a party offers to demonstrate that a genuine dispute exists as to a material fact indicates that, after expanding that support to its logical limits, it cannot support a finding of fact material to the determination the Agency must make,<sup>7</sup> that party’s position cannot prevail.<sup>8</sup> The rendering of a determination regarding any motion for summary

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<sup>5</sup> As we noted in our ruling on the Motion for Summary Disposition of Contention 1, 10 C.F.R. § 2.710(d)(2) provides that a moving party shall be granted summary disposition “if the filings in the proceeding . . . together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law.” We believe, therefore, that the regulations of the NRC (which are the governing law for this case and what *Anderson* requires guide us) clearly teach that a fact cannot be “material” to *our* ruling here unless its consideration could materially affect the decision of the NRC vis-à-vis implementation of any particular SAMA.

<sup>6</sup> In our view, the conditions set out in 10 C.F.R. § 2.309(f) serve as minimum specificity standards for “specific facts showing there is a genuine issue of fact” (as described in 10 C.F.R. § 2.710(b)).

<sup>7</sup> Uncontroverted material factual assertions by the moving party shall be admitted. *See* 10 C.F.R. § 2.710(a).

<sup>8</sup> “There is no issue for trial unless there is sufficient evidence favoring the nonmoving party for a jury to return a verdict for that party. . . . If th[at] evidence . . . is not significantly probative, summary judgement may be granted.” *Anderson*, 477 U.S. at 249 (citations omitted). Furthermore, “the judge must ask himself . . . whether a fair minded jury could return a verdict for the [nonmovant] on the evidence presented[.]” *id.* at 252, and “if there is no evidence upon which a reasonable mind might fairly conclude [for the nonmovant], the motion must be granted.” *Id.* at 253. Finally, the Court said “we agree . . . that the trial judge must direct a verdict (*i.e.* grant summary disposition) if, under the governing law, there can be but one reasonable conclusion as to the verdict.” *Id.* at 250. Formerly, it

(Continued)

disposition thus requires a thorough examination of the potential materiality of the support offered by the Parties for their positions.<sup>9</sup> The foregoing principles have guided our findings herein.

#### IV. SAMA ANALYSIS — THE REQUIREMENT AND THE METHODOLOGY

NRC regulations require, at the operating license renewal stage, that “[i]f the staff has not previously considered severe accident mitigation alternatives for the applicant’s plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided.” 10 C.F.R. § 51.53(c)(3)(ii)(L).

Several facts that are not in dispute color this requirement:

- a. This is an obligation of the Staff<sup>10</sup> in fulfillment of its National Environmental Policy Act (NEPA) obligations,<sup>11</sup> and, therefore it is set out in the environmental portions of NRC regulations, and, because it is part of an environmental effects analysis, the requirement is that the Staff accurately characterize and “consider” these alternatives.
- b. The requirement is made more explicit in Table B-1 of Appendix B to Subpart A of Part 51 in the section entitled “Postulated Accidents,” wherein NRC regulations require an analysis of “[t]he probability weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to ground water, and societal and economic impacts from severe accidents . . . ,” and consideration of “alternatives to mitigate” these sorts of accidents; thus our regulations require the use of probabilistic (as opposed to deterministic) methodology.

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was held that where there was a “*scintilla* of evidence in support of a [nonmovant’s] case, the judge was bound to leave it to the jury, but recent decisions . . . have established a more reasonable rule that . . . there is a preliminary question for the judge . . . whether there is any [evidence] upon which a jury could properly proceed to find a verdict for the [nonmovant].” *Id.* (citing *Improvement Co. v. Munson*, 14 Wall. 442, 448, 20 L. Ed. 867 (1872)).

<sup>9</sup> “For example, there is no genuine issue if the evidence presented in the opposing affidavits is of insufficient caliber or quantity to allow a rational finder of fact to find [for the nonmovant].” *Anderson*, 477 U.S. at 254. A licensing board cannot make such a determination without carefully examining the evidence presented in the parties’ affidavits.

<sup>10</sup> This requirement is implemented, in the first instance, by a requirement for certain information to be included in the Applicant’s Environmental Report.

<sup>11</sup> That Part 51 is a part of this Agency’s efforts to satisfy its NEPA obligations is made crystal clear by 10 C.F.R. § 51.2, as well as the fact that the required finding is set out in Table B-1 of Appendix B to Subpart A of Part 51, entitled “Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants.”

- c. The underlying analyses require modeling of extremely complex time- and physical condition-dependent phenomena, which all those familiar with the field know are generally not amenable to accurate modeling.<sup>12</sup> Therefore, this Agency has wisely determined that these effects and potential benefits of mitigation be examined using “probability weighted consequences.”
- d. The analyses presented here were prepared using the MELCOR Accident Consequence Code System 2 (MACCS2) computer code, whose development was sponsored by the NRC. MACCS2 is the current standard for performing SAMA analysis. In this instance, MACCS2 was used to compute hundreds of scenarios which were then weighted according to their probabilities and then to develop a distribution of probabilities of the consequences and risks. Affidavit of Joseph A. Jones and Dr. Nathan Bixler Concerning Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 3, ¶ 18 (June 25, 2007) [hereinafter “Jones-Bixler Affidavit”]; O’Kula Decl. ¶¶ 7, 15-17; Radiological Dispersion and Consequence Analysis Supporting Pilgrim Nuclear Power Station Severe Accident Mitigation Alternative Analysis, Revision 1 at 4, 5-7 (May 2007) [hereinafter “WSMS Report”]. In our view, it is necessary for the Staff to take a uniform approach to its review of such analyses by license applicants and for performance of its own analyses, and it would be imprudent for the Staff to do otherwise without sound technical justification. Where, as here, these analyses are customarily prepared using the MACCS2 code, and where this code has been widely used and accepted as an appropriate tool in a large number of similar instances, the Staff is fully justified in finding, after due consideration of the manner in which the code has been used, that analysis using this code is an acceptable method for performance of SAMA analysis. Furthermore, a general challenge to the adequacy of this code to make these computations was mounted by

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<sup>12</sup> Specifically, for example, actual variations in wind speed and direction are not predictable, nor are actual time-dependent releases from such a hypothetical accident (as the releases are dependent upon the evolution of an accident and how the various components of a power reactor respond). Similarly, the wide seasonal variations in population density can only be treated in a generic sense, the response of the population to actual evacuation efforts may well be fundamentally unpredictable despite all due efforts of law enforcement, and long-term economic effects are dependent upon variables such as individual and mass psychological reaction. Thus, deterministic modeling of these, and many other variables is simply not possible, and therefore such variables are treated probabilistically. The approach taken by users of MACCS2 is to perform numerous computations with the code using a wide variation in code input to develop a set of results with statistical significance. Declaration of Kevin R. O’Kula ¶¶ 7-16 (May 16, 2007) [hereinafter “O’Kula Decl.”].

Pilgrim Watch *ab initio*, and rejected by this Board. LBP-06-23, 64 NRC at 340.

- e. The manner in which this Agency meets its obligation to “consider” these alternatives is to perform a cost-benefit analysis, comparing the estimated equivalent dollar amount of computed reduction in the risk of a severe accident associated with implementation of a particular mitigation alternative with the estimated potential cost of implementation of that alternative.<sup>13</sup>

## V. THE INSTANT DISPUTE

We are presented with a Motion for Summary Disposition with regard to Pilgrim Watch Contention 3, which, as admitted and expressly limited at the time of its admission by this Board, states: “Applicant’s SAMA analysis for the Pilgrim plant is deficient in that the input data concerning (1) evacuation times, (2) economic consequences, and (3) meteorological patterns are incorrect, resulting in incorrect conclusions about the costs versus benefits of possible mitigation alternatives, such that further analysis is called for.” LBP-06-23, 64 NRC at 341. Thus what remains at issue in this part of this proceeding are three explicit challenges to “input” to the MACCS2 code.

We begin by noting that certain matters are not at issue here, having been eliminated at the contention admissibility stage. The original contention was considered in light of the submitted bases (technical, legal, factual, and expert information) supporting its admission, and narrowed to the specific statement set out above. Pilgrim Watch, for example, initially: (a) argued that probabilistic modeling was insufficient (arguing, therefore, that deterministic modeling must be used), Request for Hearing and Petition To Intervene by Pilgrim Watch at 28-31 (May 25, 3006) [hereinafter Pilgrim Petition]; (b) mounted a generalized attack on the computer code used by the Applicant to perform the SAMA computations (including explicit references to work of David I. Chanin), *id.* at 31; and (c) urged that cancers caused by low doses of radiation should be considered. *id.* at 79, 84, 87-88. All of these matters were considered by this Board at the contention admissibility stage and rejected. *See* LBP-06-23, 64 NRC at 338-41 (wherein we

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<sup>13</sup>In the instant case, Staff advises that it considered 281 potential mitigation alternatives, using Probabilistic Risk Assessment techniques to evaluate the reduction in probability (core damage frequency — and therefore in population dose and property damage, etc.) which would be associated with implementation of each alternative and comparing the estimated dollar value of the reduced societal and economic impact with the cost of actual implementation of that alternative. *See* NRC Staff’s Response to Request for Hearing and Petition To Intervene Filed by Pilgrim Watch at 26-27 (June 19, 2006).

expressly admitted the contention “as so limited” and expressly reformulated the admitted contention to be as set out above). Thus, to the extent that Pilgrim Watch recycles these arguments in opposition to the Motion for Summary Disposition of the narrowed, as-admitted contention, they are inapplicable, as they offer no information which supports the opposition to the particular matters remaining at issue. Furthermore, it is clear on the face of the Pilgrim Petition that the only economic impact computations it intended to challenge were those relating specifically to loss of economic activity, loss of economic infrastructure, and loss of tourism income (and not the economic costs relating to the effects of low levels of radiation upon human health). *See* Pilgrim Petition at 43-45.

In addressing the Motion and the opposition thereto, we must, as we stated above, examine the substance of the information provided by the parties, for, at its heart, such a motion rests upon whether or not there is evidence upon which a trier of fact might reasonably find for Pilgrim Watch. For a fact to be “material” in the present context, we have, as noted, taken our guidance from the procedures for contention admissibility, which provide that the issue proffered by a petitioner must be “material to the findings the NRC must make to support the action that is involved in the proceeding.” 10 C.F.R. § 2.309(f)(1)(iv). Similarly, we find foundation for our threshold criteria regarding the level of support required for summary disposition in those same contention admissibility provisions — requiring a proponent of a position to provide facts or expert support for its position. *See, e.g.*, 10 C.F.R. § 2.309(f)(1)(v). And, for the express purposes of summary disposition, mere allegations are insufficient — and we take that to include allegations which are in the nature of speculation or bare conclusory statements by an expert. *See, e.g.*, 10 C.F.R. § 2.710(b); *see also Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 253 (2007); *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 80 (2005) (citing *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-90 (1993)); *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003). With the foregoing as background for our ruling, we now address the three specific matters at issue here.

#### **A. Evacuation Times**

As to the first of Pilgrim Watch’s challenges — regarding the time assumed for evacuation — the Applicant’s MACCS2 Sensitivity Case 6, assuming no evacuation at all, was performed by the Applicant after admission of the subject contention, and forms a material portion of the foundation for the instant motion. This analysis, whose results are not substantively challenged by Pilgrim Watch, when considered together with the other analyses in the record, convincingly demonstrates that the evacuation time assumptions (i.e., the input regarding

evacuation time) cannot make any difference in determining whether a SAMA analysis would be cost-effective. There are three phases of consequence analysis in the MACCS2 models: (1) an emergency phase — covering the period from initiation of release through 7 days after the accident; (2) an interdiction phase — covering the period from the end of the emergency phase through the date 5 years after the accident; and (3) a long-term phase — extending to 30 years after the accident. *See* O’Kula Decl. ¶ 10; WSMS Report at 6. Applicant’s analyses indicate that 83% of the population dose occurs during the interdiction and long-term phases. *See* O’Kula Decl. ¶¶ 11, 24; WSMS Report at 8 and Table 3 at 10. Thus, only 17% of the population dose occurs in the first 7 days, during which evacuation (and, for that matter, the wind which carries the plume) are relevant to estimating the cost effects of population dose. Sensitivity Case 6, assuming no evacuation whatsoever, indicated only a 6% change in the population dose risk (PDR), resulting in a 2% increase in Overall Economic Cost Risk (OECR) (because the PDR represents only 1/3 of the total risk). *See* O’Kula Decl. ¶¶ 11, 26; WSMS Report at 26. The estimated benefit associated with implementing SAMA 8 (the least costly SAMA — approximately \$5 million implementation cost — not determined to be cost-effective to implement) is in the range of \$2.5 million. O’Kula Decl. ¶ 44. Sensitivity Case 6 clearly demonstrates that any errors in assumptions regarding the evacuation time or pattern cannot reasonably be expected to rise to a level necessary to cause implementation of any SAMA to become cost-effective.<sup>14</sup> Thus it is clear that a trier of fact could not reasonably find that the result of this Agency’s determination regarding whether or not any (not implemented) SAMA is cost-effective could be affected by errors in assumptions regarding evacuation.

## **B. Economic Impact**

As to the “economic impact” challenge, we note at the outset that cost-related effects in SAMA analyses are customarily (and were in the instant SAMA analyses) separated into those relating to population dose and those relating to offsite economics. Here, the admitted arguments of Pilgrim Watch were that the estimates of economic cost impact failed to properly account for “loss of economic activity” or for “loss of economic infrastructure and tourism.” Pilgrim Petition at 44-45. Thus the contention admitted here did not raise, and thus does not

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<sup>14</sup> If the potential error in evacuation times can lead only to a 2% error in computed overall economic effect of the event, that translates to changing the overall economic benefit of the implementation of SAMA 8 by \$50,000 (from \$2.5 million to \$2.55 million) — which, even if the computations were off by an order of magnitude (as to which there is no evidence) could not raise the overall economic benefit to anything close to the \$5 million cost of implementation of SAMA 8 (the least costly SAMA which has not been selected for implementation).

pertain to, the cost-equivalent effects of radiation upon the health of individuals which is now raised by Pilgrim Watch for the first time in its opposition to the instant motion.<sup>15</sup> Further to the point raised by the relevant portion of Contention 3 as admitted, Pilgrim Watch offers no counterpoints to the results of Entergy's newly supplied analyses examining larger impact from loss of regional economic activity, including effects on business and tourism, which clearly indicate that the size of the changes in economic impact cannot approach the increment required to make any not-implemented SAMA cost-effective.

### C. Meteorological Patterns

As to the challenges to meteorologic patterns, these are generally an attack on probabilistic modeling, as these arguments are supported by affidavits arguing, in effect (and, to a large part explicitly) that deterministic modeling must be used to accurately capture the time-dependent effects of variations in meteorology. As such, these attacks have been previously rejected, and, in addition, they offer no express challenge to the "input" to the MACCS2 code relating to meteorology. Furthermore, Sensitivity Case 6 renders some of Pilgrim Watch's concerns with meteorological patterns moot. Pilgrim Watch raises several issues concerning the impact of various wind patterns, including the effects of sea breeze and the selected plume shape on the SAMA analysis balancing. We note that the SAMA analyses incorporate a wide variation in average wind speeds and plume sizes, *see* O'Kula Decl. ¶¶ 9, 15, 16; WSMS Report at 13-15, and account for wind direction, atmospheric stability and mixing, NUREG-1437, Supp. 29, Vol. 1, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" at G-19 (July 2007) [hereinafter "NUREG-1437, Supp. 29"], thereby incorporating effects of a full spectrum of wind speeds and meteorological patterns. Thus, to the extent that Pilgrim Watch contends errors in wind and meteorological modeling: *first*, modeling *per se* is not at issue here; and *second*, the effects of variations in wind speed and direction, meteorological patterns, and plume shape are fully encompassed by the stochastic/statistical methods used in the SAMA analysis; and therefore, Sensitivity Case 6 (when considered together with the other analyses submitted by Entergy) demonstrates the lack of effect upon the economic viability of any not-implemented SAMA of any potential errors in wind and meteorological modeling during the evacuation phase or thereafter.

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<sup>15</sup> Furthermore, this Board rejected, *ab initio*, Pilgrim Watch's arguments that the effects of low doses of radiation must be considered, and that argument is the fundamental precept of the "support" Pilgrim Watch offers through the Beyea testimony discussed below.

## **VI. PILGRIM WATCH'S OPPOSITION TO THE MOTION FOR SUMMARY DISPOSITION AND THE ARGUMENTS IN RESPECT THEREOF**

Pilgrim Watch, in its Answer, argues that there are certain erroneous assumptions and model limitations which cause the computed societal and environmental consequences to be erroneous. We find, however, as is set out in detail below, that Pilgrim Watch's opposition to the Motion for Summary Disposition is unsupported by any information which indicates that the factual matters they point to are in any manner whatsoever material to the Agency's determination in this proceeding — which is, in this particular instance, whether or not any individual SAMA is cost-effective.<sup>16</sup> In this regard, the Applicant notes that the SAMA which comes closest to being cost-effective produces an estimated benefit of approximately \$2.5 million, whereas implementation of the related modifications to the facility is estimated to cost approximately \$5 million. *See* O'Kula Decl. ¶ 44. Thus, in the best of circumstances from the perspective of Pilgrim Watch, the flaws in the SAMA analyses would need to be the sources of errors aggregating nearly 100% in the estimated benefit of implementation, for such a fact to be material. In a series of bounding analyses presented by Entergy in response to admission of the subject contention, they demonstrate (and Staff concurs with their conclusions) that the maximum change which these alleged oversights or errors could produce is on the order of 2%. *See* O'Kula Decl. ¶ 43; WSMS Report at 39. Pilgrim Watch offers no evidence which contradicts this conclusion. Thus none of the purported errors or flaws are material to the determination the Agency must make. The following discussion describes the Pilgrim Watch petition and its support as we see it.

In support of its assertions, Pilgrim Watch offers affidavits from the following individuals:

- a. Jan Beyea, a Ph.D. in nuclear physics from Columbia University who describes one of his specialties to be geographic exposure modeling of toxic releases. Dr. Beyea's affidavit certifies an attached report he prepared for the Massachusetts Attorney General on potential releases from spent-fuel-pool fires — including such fires at Pilgrim. The Applicant has moved to strike this portion of Pilgrim Watch's answer because it merely delivers into this proceeding a report provided to the Attorney General in support of his petition to intervene, which this Board denied and the Commission

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<sup>16</sup>The Staff's Draft Supplement to its Environmental Impact Statement sets out in Chapter 5 and Appendix G its SAMA analysis. It observes that five SAMAs are sufficiently cost beneficial to warrant further examination. *See* NUREG-1437, Supp. 29 at 5-8 to -9. The costs and benefits of various SAMAs were assessed by the Staff and the results set out in detail in Appendix G.

affirmed, and the “cover declaration” from Dr. Beyea makes no connection whatsoever to the issues in the present proceeding. Entergy’s Motion To Strike Portions of Pilgrim Watch’s Answer Opposing Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 3 at 9-10 (July 9, 2007) [hereinafter “Applicant MTS”]. In addition, the Applicant moves to strike portions of Pilgrim Watch’s Answer which seek to argue an error by the Applicant in quantifying the equivalent dollar amount of damages relating to cancer caused by a severe accident, which are based entirely upon the Beyea Report, as outside the scope of this proceeding. Applicant MTS at 3-5. In this regard, the Applicant is correct that the scope of the admitted contention does not include errors in estimating the dollar-equivalent of cancers caused by a severe accident — such costs are simply not reasonably inferable as part of either “loss of economic activity” or for “loss of economic infrastructure and tourism.” In fact, in the Pilgrim SAMA analyses, treatment of the effects of “population dose” was expressly separated from treatment of “Economic Costs,” *see, e.g.*, O’Kula Decl. ¶43; WSMS Report at 7-10, and there is no reason to believe that these two concepts were commingled in Pilgrim Watch’s Contention 3 as formulated and supported by them. Thus the Beyea Report and its covering affidavit present matters which are outside the scope of this proceeding, proffering no information regarding the facts at issue. Therefore such materials are unresponsive of Pilgrim Watch’s opposition to the instant motion.<sup>17</sup>

- b. Pilgrim Watch also provides a one-page affidavit from David I. Chanin, who asserts that he “was primary developer of the MACCS and MACCS2 computer codes . . . while working at Sandia National Laboratories (“SNL”) from 1982-1996,” and asserts in attached materials gathered by Pilgrim Watch from a blog relating to MACCS2,<sup>18</sup> “[s]peaking as the sole individual who was responsible for writing the FORTRAN in question . . . I think it is foolish to think that any useful cost estimates can be obtained with the cost models built into MACCS2.” *Id.* at 6. Mr. Chanin goes on to assert that “[t]he economic cost numbers produced by MACCS2 have absolutely no basis.” *Id.*

Mr. Chanin’s affidavit and attached materials are, at their root, a generalized attack on the MACCS2 computer code, which was rejected

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<sup>17</sup>The information provided therein is simply not relevant to the present determination. Furthermore, the entire foundation of the Beyea report rests upon arguments that effects of very low levels of radiation be considered — arguments, as we stated earlier, which were rejected by this Board when they were raised at the contention admissibility stage.

<sup>18</sup>Attachments to Affidavit of Chanin.

*ab initio*, see *supra* at pp. 144-45; therefore these portions of Pilgrim Watch's reply are outside the scope of this proceeding. If, in any event, we were to consider the proffered material originating with Mr. Chanin, we find that none of the statements attributed to or made by Mr. Chanin indicate any specific error or flaw in MACCS2 or any input or assumptions made by the Applicant in its use in this proceeding,<sup>19</sup> and therefore offer no information regarding the three specific input errors alleged. Finally, we note that Applicant's motion is based in large part upon additional analyses performed by the Applicant in response to Pilgrim Watch's admitted Contention 3, which Applicant posits address the asserted shortcomings by performing conservative computations which envelope the alleged shortcomings, and there is not a single statement by Mr. Chanin addressing any specific result obtained by the Applicant or addressing the Applicant's input or computations in this instance or any other instance in any manner, or indicating, even broadly, that the results obtained by the Applicant are not conservative. This affidavit, therefore, fails to provide any indication that there is a material fact at issue.

- c. On meteorological impacts, evacuation timescales, and certain economic matters, Pilgrim Watch submits the following materials:
  - (1) Certain correspondence from Richard Rothstein (largely dated in 2005 and 2006, with the most recent being an e-mail dated January 2007), in which he addresses his general concerns with meteorological and evacuation modeling, but none of which addresses any specific portion of the Applicant's SAMA modeling or any potential flaws or errors in the SAMA analysis. Thus this material is unoppositional to an opposition to the Motion for Summary Disposition because it fails to identify any material fact at issue regarding the SAMA analysis.
  - (2) An affidavit of Bruce Egan (an asserted expert in meteorological modeling) who asserts that the MACCS2 Code has inherent flaws in that it (a) fails to use boundary-layer meteorological parameterization; and (b) uses a Gaussian plume model which is not the basis for advanced meteorological modeling. He challenges the general approach of MACCS2 of using a large set of computations each

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<sup>19</sup>The computations performed by MACCS2 and the results obtained depend, nearly entirely, upon the input parameters and information provided by the code user. See, e.g., NUREG-1437, Supp. 29 at G-3 to -4. AND the contentions admitted relate singularly to the input in three very specific areas, none of which is challenged by Mr. Chanin's materials. Mr. Chanin's various broad nonspecific, unsupported (and therefore bare) challenges to the results one might expect to obtain with MACCS2 are simply insufficient to support the opposition to the motion for summary disposition.

using a randomly chosen meteorological condition as opposed to inputting meteorological conditions as a function of time. Finally, he observes that “models may appear conservative but have incorrect simulations of the underlying physics” and “[s]imilarly, sensitivity studies do not add useful information if the primary model is flawed.” Declaration of Bruce A. Egan, Sc.D., CCM, in Support of Pilgrim Watch’s Response Opposing Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 3 at 5 (June 20, 2007) [hereinafter “Egan Decl.”]. From these he concludes that the Applicant “has relied upon incorrect meteorological assumptions and models and this has caused it to draw incorrect conclusions about the costs versus benefits of possible mitigation alternatives.” *Id.* at 7. Mr. Egan, in substance, argues that the general approach used in the MACCS2 code is not what one would use in modeling time-dependent wind behavior and boundary-layer phenomena, asserting that it is error to believe that randomly chosen meteorological conditions would give the same results as inputting meteorological conditions as a function of time. *See* Egan Decl. at 5. Thus, the fundamental assertion by Mr. Egan is that SAMA analyses should use what is customarily referred to by the reactor safety analysis community (and this Agency) as “deterministic” analyses. However, this is, at its foundation, nothing more than a general attack on the stochastic/statistical (probabilistic) approach taken by users of the MACCS2 code<sup>20</sup> — an argument which was rejected by this Board. *See supra* at p. 146. Even were we to consider this approach with regard to the Motion for Summary Disposition, his affidavit proffers no support for a challenge to the input to, or the particular results of, the analytical results which lead to the evaluation of the cost-effectiveness of any SAMA. His bare conclusion that the use of the established approach mandated by our regulations leads to erroneous conclusions was rejected *ab initio* because it challenges the use of probabilistic methodologies (and asserts that deterministic methodologies must be used). Furthermore, even that proposition is entirely without support, failing to address

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<sup>20</sup>We have no doubt that modeling a steady meteorological pattern for the entirety of an event is not representative of what may be expected from any particular event, but neither is it possible to predict with any confidence how the meteorological patterns would change during an event. Not only is the sort of “deterministic” modeling which is purported to be required impossible, but it has been rejected by this Agency because of the enormity of variation in such scenarios, which, in any event, is accommodated fully by the probabilistic approach this Agency has adopted. It therefore does not offer any useful information to this Board.

the underlying uncertainties and the customary methods used by scientists to deal with them, and failing to address whether or not the approach taken by users of the MACCS2 code is technically sound or produces, as Entergy and Staff aver, conservative results. The dissent's concern that there may be wind patterns which might carry the dose to a wider region, or cause the dose to be differently distributed simply fails to recognize the undisputed fact that the probabilistic methods used by Applicant sample the entire range of wind data, *see* O'Kula Decl. ¶ 16, and incorporate those data into hundreds of computations from which the overall statistics and probabilistic results are obtained, and thereby subsumes all reasonably possible meteorologic patterns.

As to the criticisms of the Gaussian plume model used in the PNPS MACCS2 SAMA analysis, the use of a Gaussian plume model in the hundreds of computations performed to develop the probabilities, *see, e.g.*, O'Kula Decl. ¶¶ 13-15, and the resulting risks, is a fundamental part of the approach used in these analyses and, as we mentioned earlier, a challenge to the use of probabilistic methodologies and/or the modeling used was rejected by this Board. Furthermore, as we said at the outset, what remains at issue are challenges to the *input* to the code in these three specific arenas, not the modeling itself. In addition, both NRC Staff and Entergy agree that the Gaussian plume model results are in good agreement with and generally more conservative than the results obtained by more sophisticated models, *see, e.g.*, Jones-Bixler Affidavit ¶ 8; O'Kula Decl. ¶ 17, and the MACCS2 code was conservatively applied to the Pilgrim SAMA analysis to cause it to produce overall conservative results. *See* O'Kula Decl. ¶ 18. Mr. Egan offers no challenge to Entergy's assertion that the computations prepared by the Applicant are conservative (i.e., they predict worse consequences, and, therefore, higher costs of any particular event), and he certainly presents no specific information which indicates otherwise.<sup>21</sup> Thus, we have before us uncontroverted testimony indicating that the Applicant's analyses maximize the effects of the radiation carried by the meteorological pattern in each of the hundreds of particular scenarios computed. Furthermore, Applicant's analyses encompass any particular scenario which might incorporate the time-dependent

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<sup>21</sup> *See, e.g.*, Egan Decl. at 5. Egan simply notes that models can be conservative and still have incorrect simulations of the underlying physics. This is precisely the point he is making — that only deterministic modeling would capture the details (physics). He does not, however, challenge the statements by Entergy that the results of its SAMA analyses are conservative.

effects of the ‘sea breeze’ or localized time-dependent wind patterns. *See* WSMS Report at 19-22. Entergy’s conservative analyses assuming no evacuation at all maximizes, for each specific computation included in the probabilistic analyses, the short-term dose to the population which does not evacuate, and, finally, Pilgrim Watch offers not a single specific criticism or contradiction of the newly submitted Entergy analyses providing the foundation for the instant motion. Thus failing to provide any technical support for the proposition that the input at issue are in error or that the results of the cost-benefit analysis prepared by the Applicant are in error, Mr. Egan’s affidavit fails to provide any relevant support for the opposition to the subject motion.<sup>22</sup>

- d. Excerpts from the apparent minutes of the Annual Town Meeting of the Town of Duxbury from March 10, 2007, certified by Nancy Oates, Town Clerk, wherein the Town agreed that it would support a change in the plume transport model from a Gaussian straight-line model to a more complex model. This material provides no support for any challenge to any material fact.
- e. The declaration of Andre Martecchini, Chairman of the Board of Selectmen of the Town of Duxbury, taking issue with the effectiveness of siren notification, and the estimated speed of evacuation. *See* Declaration of Andre Martecchini in Support of Pilgrim Watch’s Response Opposing Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 3. However, Mr. Martecchini fails to address the assumptions in, and conclusions of, the new studies performed by the Applicant, in particular Sensitivity Case 6 wherein the Applicant assumed no evacuation at all in an effort to bound the effects of potential errors in such assumptions. Thus, we find that Mr. Martecchini’s declaration fails to identify or challenge any material fact which is at issue, and fails to offer any support for Pilgrim Watch’s opposition to the subject motion.<sup>23</sup>

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<sup>22</sup>We note that for a fact to be material with regard to the SAMA analysis, it must be a fact which can reasonably be expected to impact the Staff’s conclusion that any particular mitigation alternative may (or may not) be cost-effective. Mr. Egan’s vague conclusory statement that the approach used in MACCS2 to modeling changing and uncertain meteorological patterns has caused the Applicant to draw *incorrect* cost-benefit conclusions fails entirely to address whether the errors he suggests are present would (or even could) cause the results to be less conservative or, in fact, to be nonconservative.

<sup>23</sup>*See supra* pp. 150-51 for our discussion of the criticism of the Gaussian plume model.

- f. The declaration of Matthew Patrick, State of Massachusetts Representative for the 3d Barnstable District, noting the wind patterns in the area of the plant, raising the difficulty of evacuation in the event of a severe accident, and noting that the computations of severe accident consequences must consider summer population increases as well as expected increases in population during the extended license period.<sup>24</sup> *See* Declaration of Representative Matthew C. Patrick in Support of Pilgrim Watch's Response Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3. However, Mr. Patrick's declaration fails to take issue with any specific aspect of or mention any potential error in, the SAMA analysis, or to address any of the input at issue here. Therefore, Mr. Patrick's declaration fails to identify any material fact which is at issue, and fails to offer any support for Pilgrim Watch's opposition to the subject motion.
- g. The declaration of Dr. Donald Zeigler describing a study he performed of the evacuation following the accident at Three Mile Island, and recommending that evacuation planning take into account the natural inclination of people to attempt to evacuate, even if not instructed to do so. *See* Declaration of Dr. Donald J. Zeigler, Ph.D. Professor of Geography, Old Dominion University, in Support of Pilgrim Watch's Response Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3. However, Dr. Ziegler's declaration fails to take issue with any specific aspect of, or mention any potential error in, the SAMA analysis, and therefore, fails to contravene any material fact which is at issue and fails to offer any support for Pilgrim Watch's opposition to the subject motion.
- h. The declaration of Richard W. Finnegan, certifying and attaching a table of assessed property values for certain real property in the Town of Duxbury. *See* Declaration of Richard W. Finnegan, MAA Deputy Assessor, Town of Duxbury, Massachusetts Regarding Pilgrim Watch's Response Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3. Because Mr. Finnegan's declaration merely certifies certain data, and does not take issue with any specific aspect of or mention any potential error in, the SAMA analysis, it fails to identify any material fact which is at issue and fails to offer any support for Pilgrim Watch's opposition to the subject motion.
- i. The declaration of Timothy Warren, chief executive officer of the Warren Group, attaching a table of median sales prices for certain residential

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<sup>24</sup>We note Entergy explicitly asserts that these variations were in fact analyzed, *see* Entergy Motion at 15; *see id.* at 17-24, and Mr. Patrick has not disagreed with Entergy's assertion.

property in the towns of Duxbury and Plymouth for the years 1988 through 2007. *See* Declaration of Timothy Warren in Support of Pilgrim Watch's Response Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3. Mr. Warren's declaration merely certifies certain data, and fails to take issue with any specific aspect of or mention any potential error in, the SAMA analysis (or any property valuation used therein); therefore, it fails to identify any material fact which is at issue and fails to offer any support for Pilgrim Watch's opposition to the subject motion.

## VII. FINDING

We find that Entergy's Motion for Summary Disposition, which is supported by the Staff, arguing that there remains no genuine issue of any material fact, sets out a thorough and complete response to Contention 3 as originally admitted, curing any omissions and responding to the alleged shortcomings in a manner which makes all thereof moot. We find that Pilgrim Watch has failed to provide any support for their proposition that, after considering Entergy's submitted additional analyses, a material fact remains in dispute. Furthermore, in examining the substance of the pleadings here, we find that: (1) the evidence is not susceptible to different interpretations or inferences that would support a finding that any particular SAMA could become cost-effective; (2) there are no issues of witness credibility that need to be resolved by assessing the witnesses in person at a hearing; and (3) a trial on the merits would neither reveal additional data implying, nor enhance our ability to draw inferences supporting the conclusion, that any particular SAMA could become cost-effective.<sup>25</sup> Therefore, we find that Pilgrim Watch's Answer fails to indicate or present any material fact over which there is a genuine issue.

## VIII. ORDER

Based, therefore, upon the preceding rulings, findings, and conclusion, it is, on this 30th day of October 2007, ORDERED that Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 is granted.

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<sup>25</sup> We note that our colleague in her dissent, argues that we might all benefit from further exploration of the merits of these three matters, but we are persuaded, as is set out fully in this ruling, that there is insufficient evidence to suggest that a trier of fact might, under any circumstances, find for Pilgrim Watch on any of the challenges in its admitted contention. And, in this instance (under the NRC's adjudicatory system), the trier of fact will be this Board, i.e., the same individuals now examining the appropriateness of a grant of summary disposition.

This Order is subject to appeal to the Commission in accordance with the provisions of 10 C.F.R. § 2.341. Any petitions for review meeting applicable requirements set forth in that section must be filed within fifteen (15) days of service of this Memorandum and Order.

THE ATOMIC SAFETY AND  
LICENSING BOARD

Dr. Paul B. Abramson  
ADMINISTRATIVE JUDGE

Dr. Richard F. Cole  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
October 30, 2007<sup>26</sup>

The dissenting opinion of Judge Young is set forth below.

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<sup>26</sup> Copies of this Memorandum and Order were sent this date by internet e-mail transmission to all counsel or representatives for the parties.

### **Dissenting Opinion of Administrative Judge Ann Marshall Young**

I dissent from the majority decision because I find it to be in conflict with relevant legal authority on the proper standards for ruling on a motion for summary disposition.

In reaching their conclusion that Entergy has “demonstrated the absence of any genuine issue of material fact” regarding Contention 3,<sup>1</sup> my colleagues focus on “whether there is any genuine issue of *material* fact . . . in dispute,”<sup>2</sup> and determine that, because they do not view Intervenors as having disputed any material fact — i.e., any fact that might affect “whether or not a particular SAMA is cost-effective”<sup>3</sup> and thereby affect the outcome of this proceeding — Entergy’s motion should be granted. In order to reach this determination, however, the majority indicates that they have found it necessary to look to whether, after “expanding [the information Intervenors provide in opposition to Entergy’s motion] to its logical limits[,] it can[] support a finding of fact material to the determination the Agency must make.”<sup>4</sup> They state that it is thus also necessary to undertake a “thorough examination of the potential materiality of the support offered by the Parties for their positions” and a “careful examin[ation of] the evidence presented in the parties’ affidavits.”<sup>5</sup> I find the majority’s extensive examination of the facts to constitute the sort of weighing of evidence that is not appropriate in a summary disposition context under relevant and binding case law, as I explain in more detail below. Before addressing specifically these legal standards, however, I summarize some of the basic facts and circumstances relating to the motion at issue and the response to it.

The majority states that, because they were already “raised and eliminated at the contention admissibility stage,” the following matters are not at issue: (1) “the adequacy of the computer code (MACCS2) used to perform the SAMA computations; (2) the use for SAMA analyses of probabilistic (as opposed to deterministic) methodologies; and (3) the health effects of low doses of radiation.”<sup>6</sup> Also indicated not to be in dispute are that NRC regulations “require the use of probabilistic (as opposed to deterministic) methodology”; that the analyses related to postulated severe accidents “require modeling of extremely complex time- and physical condition-dependent phenomena, which all those

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<sup>1</sup> See Majority Decision at p. 137.

<sup>2</sup> *Id.* at p. 139.

<sup>3</sup> *Id.* at p. 140; *see id.* at p. 154.

<sup>4</sup> *Id.* at p. 140.

<sup>5</sup> *Id.* at p. 141 & note 9.

<sup>6</sup> *Id.* at p. 138. (The reference to health effects of low doses of radiation is presumably based on the fact that we did not admit Intervenors’ Contention 5. *See* LBP-06-23, 64 NRC at 341-48.) I discuss *infra* at pp. 160-62 questions I have concerning some of the majority’s statements about the nature of certain information submitted by Intervenors.

familiar with the field know are generally not amenable to accurate modeling”; and that therefore NRC has determined “that these effects and potential benefits of mitigation be examined using ‘probability weighted consequences.’”<sup>7</sup> Providing examples including that “actual variations in wind speed and direction are not predictable,” the majority states that “[t]hus, deterministic modeling of these, and many other variables is simply not possible, and therefore such variables are treated probabilistically,” noting as well that “[t]he approach taken by users of MACCS2 is to perform numerous computations with the code using a wide variation in code input to develop a set of results with statistical significance.”<sup>8</sup>

In the preceding context, the majority finds that Pilgrim Watch’s opposition to Entergy’s motion for summary disposition is “unsupported by any information which indicates that the factual matters they point to are in any manner whatsoever material to the Agency’s determination in this proceeding — which is, in this particular instance, whether or not any individual SAMA is cost-effective.”<sup>9</sup> Because Intervenors have offered “no evidence [to] contradict[ the] conclusion” that “the maximum change which [Intervenors’] alleged oversights or errors [in Entergy’s SAMA analysis] could produce is on the order of 2%,” when such flaws would have to be the source of “errors aggregating nearly 100% in the estimated benefit of implementation[ ] for such a fact to be material,” they fail to show any genuine issue of material fact sufficient to overcome Entergy’s motion, according to the majority.<sup>10</sup>

I consider the preceding findings and conclusions of the majority in light of the following:

Intervenors support their challenge to the input data regarding meteorological patterns with declarations including those of: Bruce Egan, who has an S.M. in Engineering and Applied Physics and an Sc.D. in Environmental Health Sciences from Harvard University and “over 35 years of experience as a manager and an environmental scientist on projects involving the development and application of atmospheric dispersion models to complex topographic situations”;<sup>11</sup> Richard Rothstein, who has an M.S. in Meteorology/Air Resources Engineering from New York University and 35 years of experience in various meteorological projects

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<sup>7</sup> Majority Decision at pp. 141-42.

<sup>8</sup> *Id.* at p. 1423 n.12.

<sup>9</sup> *Id.* at p. 147.

<sup>10</sup> *Id.*; *see also id.* at p. 138.

<sup>11</sup> *See* Pilgrim Watch’s Answer Opposing Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 3 (June 29, 2007) [hereinafter Pilgrim Watch 6/29/07 Answer], Attached Declaration of Bruce A. Egan (June 20, 2007) [hereinafter Egan Declaration] at 2. During his time at Harvard Dr. Egan, whose doctoral thesis was on the subject of “Numerical Modeling of Urban Air Pollutions Transport Phenomena,” also took courses in meteorology from M.I.T. *Id.*

for government agencies, utilities, and industry;<sup>12</sup> and Jan Beyea, who has a Ph.D. from Columbia University in nuclear physics, has taught environmental studies at Holy Cross College, has done research at Princeton University's Center for Energy and Environmental Studies "modeling the consequences of nuclear accidents," and among other things has a specialty in "geographic exposure modeling of toxic releases."<sup>13</sup> Intervenors support their challenge to input data regarding costs with the declaration and certain supporting material provided by David Chanin, who states that he "was the primary developer of the MACCS and MACCS2 computer codes under sponsorship of the U.S. NRC and DOE while working at Sandia National Laboratories 1982-1996," and who according to his resume has co-authored several articles on the MACCS2 code as well as three NRC guidance documents including NUREG/CR-6613, Vol. 1, the NRC's User's Guide to the Code Manual for MACCS2.<sup>14</sup>

Experts Egan, Rothstein, and Beyea challenge, among other things, the plume and dispersion model used in the MACCS2 code. According to Dr. Egan, "[d]ispersion models rely upon the adequacy of the input meteorological data to represent the important air flow regimes," and "very significant improvements have been made in the parameterization of the atmospheric boundary layer wind profiles, temperature profiles and variations of turbulent mixing rates with height above the ground surface," resulting in "the development of improved models including those defined as guideline models AERMOD and CALPUFF," which "are now routinely used for regulatory applications and for risk assessments."<sup>15</sup> By comparison, the "straight line, steady state Gaussian plume [model used in the MACCS2 code] assumes that meteorological conditions are steady in time and uniform spatially across the study region for each time period of simulation," thereby does not allow for spatially varying winds and wind speeds such as those over the ocean and land near the Pilgrim plant, and "[t]hus the presences of sea breeze circulations which dramatically alter air flow patterns are ignored by the model."<sup>16</sup> In particular, according to Dr. Egan, at a coastal site the sea breeze "would draw contaminants across the land and inland subjecting the population to potentially larger doses."<sup>17</sup> Dr. Egan has used the improved models in his own

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<sup>12</sup> Pilgrim Watch 6/29/07 Answer, Attached Declaration of Richard Rothstein in Support of Pilgrim Watch's Response Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 (June 19, 2007) [hereinafter Rothstein Declaration].

<sup>13</sup> Pilgrim Watch 6/29/07 Answer, Attached Declaration and Report of Jan Beyea, Ph.D. (May 24, 2007) [hereinafter Beyea Declaration].

<sup>14</sup> Pilgrim Watch 6/29/07 Answer, Attached Declaration and Attachments of David I. Chanin (May 27, 2007) [hereinafter Chanin Declaration].

<sup>15</sup> Egan Declaration at 3.

<sup>16</sup> *Id.*

<sup>17</sup> *Id.* at 6.

work and finds they would produce a better result for the Pilgrim SAMA analysis, and that, because the model used by the Applicant is flawed, its sensitivity analysis likewise does not provide “useful information.”<sup>18</sup>

Mr. Rothstein suggests that “Entergy should design, develop, and deploy adequate and appropriate meteorological monitoring equipment and improved air quality dispersion models to help enhance offsite airborne effluent plume tracking capability, and enhance the ability to make and assess reliable dose predictions.”<sup>19</sup> In addition, he states, although “the system and procedures that Entergy currently has in place compl[y] with the *minimum* applicable [ ]NRC regulatory requirements,” and “while [ ]NRC regulatory guidance does identify the circumstances for when coastal-sited nuclear power plants might need to expand their regional meteorological monitoring network beyond just onsite,” this guidance does “not tell the affected licensees how to accomplish that.”<sup>20</sup> Moreover, he notes, NRC guidance “does suggest that changes in the existing onsite meteorological monitoring systems could be warranted if [a licensee has] not provided a reliable indication of meteorological conditions that are representative within the 10 mile plume exposure emergency planning zone.”<sup>21</sup>

Mr. Rothstein observes that the Pilgrim plant’s “onsite meteorological tower data, by themselves, may not always adequately and properly represent the variable wind flow conditions throughout southern Plymouth County, especially during the spring and summer months such as when sea breeze conditions are prevalent.”<sup>22</sup> He points out that the consequence of this could be that, “[i]n the event of a fast-breaking incident requiring immediate protective actions for the public, a situation should not be created where the public is being advised to evacuate, and they inadvertently end up driving right into the path of the radioactive plume.” He compares this situation as being “akin to inadvertently driving right into the right-front semi-circle of a hurricane’s projected path after being told by emergency officials to simply evacuate a region, but not [having been provided] sufficient guidance as to where *not* to drive.”<sup>23</sup> Rothstein recognizes that to quantify, develop, and implement the improvements that he and Mr. Egan suggest “could require considerable time and resources,” but emphasizes that using Entergy’s existing analysis could result in “conservative model over-predictions [leading] to evacuation recommendations when shelter-in-place recommendations would be more appropriate, and non-conservative model

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<sup>18</sup> *Id.* at 5; *see id.* at 4-7.

<sup>19</sup> Rothstein Declaration at 11.

<sup>20</sup> *Id.* at 12.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

under-predictions [leading] to shelter-in-place recommendations when evacuation would be more appropriate.’’<sup>24</sup>

Dr. Beyea suggests that, although the MACCS2 code “does not directly account” for such factors as “wind-driven resuspension,” it “may be possible to mimic their effects in the program.’’<sup>25</sup> More specifically, he suggests that, if the MACCS2 code could be run

with extra plume segments added on to the end of a standard release sequence, with varying delay times, and a total added release equal to the assumed resuspension fraction times the initial release, then MACCS2 will produce as output the mathematical equivalent of resuspended material being carried in directions different from the main plume.<sup>26</sup>

It is not clear that the information provided by Intervenors, portions of which I summarize in the preceding discussion, would sufficiently overcome Entergy’s analyses, including its sensitivity analysis and resulting conclusions to the effect that, even considering the issues involved in Contention 3 from various conservative perspectives, the challenges Intervenors pose are not significant enough to affect the ultimate cost-benefit analysis that is at the core of a SAMA analysis. However, it is clear that Intervenors *dispute* Entergy’s conclusions, through, *inter alia*, Dr. Egan’s statement (made in the context of his expertise generally and his additional statements regarding various dispersion models) about sensitivity studies not adding “useful information” given the flawed dispersion model that is used.

Although the majority is correct that “modeling *per se* is not at issue here,’’<sup>27</sup>

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<sup>24</sup> *Id.* at 12-13.

<sup>25</sup> Beyea Declaration Supporting Document at 19-20. Although the majority would exclude consideration of the Beyea Declaration and attached report on the grounds that it presents “matters which are outside the scope of this proceeding, proffering no information regarding the facts at issue,” Majority Decision at p. 148, I would consider it at least with regard to meteorological issues, notwithstanding its earlier use to support another party’s contention on certain health issues. Dr. Beyea in his declaration states that the report from which the above quotation is taken was indeed prepared for the Massachusetts Attorney General (another petitioner in this proceeding whose one contention we did not admit, *see* LBP-06-23, 64 NRC at 280-300, 283 n.103) but that since its original release he has “come across no information or commentary by the applicant or any other person that would cause [him] to significantly change the report’s quantitative concerns.” Beyea Declaration at 1. He obviously prepared this declaration, which is dated May 24, 2007, for Intervenors to support their use of his earlier report in their Answer to Applicant’s Motion for Summary Disposition of Contention 3. Regardless of the relevance of any of the health-related issues discussed in the report, the material I cite (along with other, similar information found therein) is relevant to the meteorological issues raised by Intervenors, and should be considered in support of their Answer with regard to such issues.

<sup>26</sup> Beyea Declaration at 24-25.

<sup>27</sup> Majority Decision at p. 146.

in admitting Contention 3 as to input data regarding meteorological patterns we were clearly aware that the Intervenors' contention, insofar as it concerned meteorological issues, centrally involved challenges to the "straight-line Gaussian plume model,"<sup>28</sup> and we did not exclude this. The plume model, while not "input" *per se* in the technical sense, is implicitly part of what is "put in" to the MACCS2 code to produce results about meteorological patterns. Also challenged was the fact that the sole source of input for Entergy's SAMA analysis for the Pilgrim plant was the Plymouth Airport, 5 miles inland from the reactor site; Intervenors claimed that multiple sites were necessary to better characterize meteorological conditions, including those for wind speed, direction, and dispersion.<sup>29</sup> Experts Egan, Rothstein, and Beyea in their more recent declarations address these subjects in much greater than mere cursory fashion. I note that Egan's and Rothstein's suggestions to the effect that the NRC update its own regulatory approach with regard to meteorological monitoring are not relevant in this proceeding. The above summary, however, illustrates that their declarations also suggest specific ways in which the SAMA analysis for the Pilgrim plant might be improved through alternative approaches that could lead to more meaningful input information for, and results of, a SAMA analysis. And, contrary to the majority's viewpoint,<sup>30</sup> this does not necessarily involve an attack or generic challenge to use of the MAACS2 code or to the use of probabilistic modeling.

At this point it may be appropriate to point out that we did *not* actually exclude from consideration, as the majority states, "the adequacy of the computer code (MACCS2) used to perform the SAMA computations."<sup>31</sup> We did state that

to the extent that any part of the contention or basis may be construed as challenging *on a generic basis* the use of probabilistic techniques that evaluate risk, we find any such portion(s) to be inadmissible. The use of probabilistic risk assessment and modeling is obviously accepted and standard practice in SAMA analyses.<sup>32</sup>

By stating that we found "inadmissible" any part of the contention that could be construed as "challenging on a generic basis the use of probabilistic techniques that evaluate risk," we did *not* exclude *specific* challenges that might bring into question specific aspects of the SAMA analysis regarding the three types of input we admitted. Regarding meteorological patterns, what Intervenors challenge are several aspects of what is "put in" to the SAMA analysis on meteorological

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<sup>28</sup> See Request for Hearing and Petition To Intervene by Pilgrim Watch at 35 *et seq.* (May 25, 2006) ADAMS Accession No. ML061630125 [hereinafter Petition].

<sup>29</sup> Petition at 36-37.

<sup>30</sup> See Majority Decision at p. 146.

<sup>31</sup> See *id.* at p. 138.

<sup>32</sup> LBP-06-23, 64 NRC at 340 (emphasis added).

issues, and through Dr. Beyea they provide a specific proposal as to how their suggestions might be taken into account using the MACCS2 code.

The majority, however, maintain that “the effects of variations in wind speed and direction, meteorological patterns, and plume shape are fully encompassed by the stochastic/statistical methods used in [Entergy’s] SAMA analysis.”<sup>33</sup> Taking this statement at face value, there is essentially nothing of relevance that Intervenors *could* have provided regarding meteorological patterns. The upshot of this is that, although we admitted the issue of whether the input data regarding meteorological patterns were correct, by now excluding consideration of anything relating to the adequacy of the MACCS2 code *as specifically applied with regard to the Pilgrim plant’s SAMA analysis*, the majority in effect excludes any meaningful challenge to what is put into the code relating to meteorological patterns, because such input is effectively predetermined by the current state of the MACCS2 code.<sup>34</sup> Our admission of Contention 3 is thus rendered meaningless with regard to meteorological issues.

To the contrary of my colleagues, I would take more seriously into account the information provided by Intervenors through their eminently well-qualified experts, including their specific dispute with regard to the sensitivity analysis to the effect that, according to Dr. Egan, it does not provide “useful information” because the underlying plume/dispersion model used in the MACCS2 code is flawed.<sup>35</sup> Given the qualifications of Intervenors’ experts and the specificity of the information they provide, while I would not permit litigation of any challenges “on a generic basis [to] the use of probabilistic techniques that evaluate risk,”<sup>36</sup> I would deny Entergy’s motion and permit a hearing — at least with regard to meteorological patterns, and how the meteorological analysis might affect analysis

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<sup>33</sup> Majority Decision at p. 146; *see also supra* discussion at p. 157.

<sup>34</sup> Although Intervenors could theoretically challenge the accuracy of one or more days’ results from Pilgrim’s one meteorological monitoring tower, this would seem to be the limit of what could be disputed in the majority’s view.

<sup>35</sup> Egan Declaration at 5; *see id.* at 4-7. Dr. Egan’s complete statement in response to various statements of Entergy’s expert, Kevin O’Kula, concerning the general conservatism of the Gaussian plume model, conservative application of the MACCS2 code, and certain sensitivity cases that were run as part of the sensitivity analysis, is the following:

The fact that a model may seem to be conservative in particular applications or in limited data comparisons does not mean that the model is better or should be recommended for an application. Models can be conservative but have incorrect simulations of the underlying physics. Similarly, sensitivity studies do not add useful information if the primary model is flawed.

Egan Declaration at 5.

<sup>36</sup> *See* LBP-06-23, 64 NRC at 340; *cf.* Majority Decision at pp. 143, 146, 150.

of the evacuation and cost data.<sup>37</sup> Again, although the conclusions reached by the majority based on their “thorough examination” of the parties’ submissions with regard to Entergy’s motion may well ultimately be correct, when the opponents of the motion have provided a response that is as well supported and specific as that provided by Intervenor, and which in fact does dispute the sensitivity analysis that is central to the majority’s ruling, I find it inappropriate under relevant case law to grant the motion for summary disposition.

Under this case law, a licensing board ruling on a motion for summary disposition “must view the record in the light most favorable to the party opposing such a motion.”<sup>38</sup> It is true that, if the proponent of a motion meets its burden, an opponent must “set[ ] forth specific facts showing that there is a genuine issue,” and may not rely on “mere allegations or denials.”<sup>39</sup> The opposing party does *not*, however, have to show that it would prevail on the issues, but rather must “demonstrate that there is a genuine factual issue to be tried.”<sup>40</sup> Although this case is a close one, I find that Intervenor has met this standard through the information summarized above.

Summary disposition is not “a tool for trying to convince a Licensing Board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing.”<sup>41</sup> Although “[b]are assertions and general denials are insufficient to defend against a properly supported motion for summary disposition,”<sup>42</sup> it is inappropriate at the summary disposition stage for a Board to attempt

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<sup>37</sup> If, for example, wind patterns caused releases of radiation to cover a significantly larger area than postulated through use of the “straight-line Gaussian plume model,” it might be possible that significantly greater numbers of the population would need and/or attempt to evacuate, and there could possibly be more costs as well. *See, e.g.*, Pilgrim Watch 6/29/07 Answer at 10-23, 25, 30, 33, 41-43, 54-55, 57, 59, 65, 72, 87-89; Egan Declaration at 3, 5-7 (June 20, 2007). *See also infra* note 51.

<sup>38</sup> *Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102 (1993).

<sup>39</sup> *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 122 (2006) (citing 10 C.F.R. § 2.710(b); *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102).

<sup>40</sup> *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 102; *see also American Manufacturers Mutual Insurance Co. v. American Broadcasting — Paramount Theaters, Inc.*, 388 F.2d 272, 280 (2d Cir. 1967). In addition, if a movant satisfies its initial burden and supports its motion by affidavit, “the opposing party must either proffer rebutting evidence or submit an affidavit explaining why it is impractical to do so,” and “[i]f the presiding officer determines from affidavits filed by the opposing party that the opposing party cannot present by affidavit the facts essential to justify its opposition, the presiding officer may order a continuance to permit such affidavits to be obtained, or may take other appropriate action.” *Advanced Med. Sys.*, CLI-93-22, 38 NRC at 103. These provisions are incorporated in the NRC rules as 10 C.F.R. § 2.710(c). *See also infra* note 48.

<sup>41</sup> *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001); *see also Vermont Yankee*, LBP-06-5, 63 NRC at 121-22.

<sup>42</sup> *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 81 (2005) (citations omitted).

“to untangle the expert affidavits and decide ‘which experts are more correct.’”<sup>43</sup> This is consistent with Federal Court rulings that, while “‘wholly conclusory statements for which no supporting evidence is offered’ need not be taken as true for summary judgment purposes,” a court “‘may not make credibility determinations or weigh the evidence’” at the summary judgment stage.<sup>44</sup> As noted in the *Oyster Creek* license renewal proceeding, “summary judgment is not appropriate if it would require a judge to assess the correctness of facts and conclusions that are embodied in the competing, well-founded opinions of the parties’ experts.”<sup>45</sup>

In this proceeding, Intervenors have provided much more than “‘mere allegations,’” “‘bare assertions and general denials.’” They provide the reasoned statements of several well-qualified experts. They do not, it is true, provide any results of calculations proving the negative of Entergy’s sensitivity analysis. But such a requirement — or anything approaching its essential equivalent — is unreasonable, given the extremely complex, expensive, and time-consuming nature of the computer calculations that would be necessary to do this, which even the Applicant, with its relatively greater resources, has called “‘impractical.’”<sup>46</sup> With regard to Dr. Egan’s expert opinion that, given the underlying flawed dispersion model the sensitivity analysis does not add “‘useful information,’” it is not unusual for an expert, particularly in a very technical field, to refrain from providing conclusions that are dependent on complex computations when the expert has not actually performed the computations in question. Considering all the circumstances and the infeasibility of performing such calculations,<sup>47</sup> and

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<sup>43</sup> *Id.* at 80 (citing *Private Fuel Storage*, LBP-01-39, 54 NRC at 510); *Vermont Yankee*, LBP-06-5, 63 NRC at 122.

<sup>44</sup> *Banks v. District of Columbia*, 377 F. Supp. 2d 85, 89 (D.D.C. 2005) (citations omitted); *see also More v. Snow*, 480 F. Supp. 2d 257, 274 (D.D.C. 2007); *Mobley v. Continental Casualty*, 405 F. Supp. 2d 42, 47 (D.D.C. 2005); *San Carlos Apache Tribe v. United States*, 272 F. Supp. 2d 860, 880 (D. Ariz. 2003).

<sup>45</sup> *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), Memorandum and Order (Denying AmerGen’s Motion for Summary Disposition) at 4 (June 19, 2007) (unpublished), ADAMS Accession No. ML071700768 (citing *United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 722-23 (2d Cir. 1993); *Norfolk Southern Corp. v. Oberly*, 632 F. Supp. 1225, 1243 (D. Del. 1986), *aff’d*, 822 F.2d 388 (3d Cir. 1987); *Private Fuel Storage*, LBP-01-39, 54 NRC at 509-10).

<sup>46</sup> *See* Entergy’s Motion for Summary Disposition of Pilgrim Watch Contention 3 at 13 (May 17, 2007).

<sup>47</sup> Indeed, these calculations might well be part of the “‘further analysis’” that Intervenors are seeking in Contention 3. What is at issue in this contention is whether the input data on any of the three stated subjects are incorrect such that the Applicant’s conclusions about the costs versus benefits of possible mitigation alternatives are incorrect and “‘further analysis is called for.’” LBP-06-23, 64 NRC at 341. Although the majority in effect says that all the “‘further analysis’” that is necessary has been performed by the Applicant in its recent sensitivity analysis, in my view my colleagues apply a standard that overlooks or ignores genuine issues of material fact that Intervenors present through reputable experts, as well as considerations of practical reality and fundamental fairness.

taking into account Dr. Egan’s undisputed expertise on meteorological issues, I find his statement regarding Entergy’s sensitivity analysis to be more than a “mere allegation” or “bare assertion,” and to *dispute* Entergy’s claims regarding the results of its sensitivity analysis. While Entergy might well ultimately prevail on the issue, under relevant case law on summary disposition and summary judgment, Intervenor’s are entitled to have the record viewed in a light most favorable to them, and in such light I find they have disputed the facts Entergy puts forward to support its motion, through the declarations of reputable experts, sufficiently that summary disposition should be denied.<sup>48</sup>

I recognize that the Fifth Circuit Court of Appeals has held that, in a case heard by a judge without a jury, a judge may draw factual inferences “without resort to the expense of trial” and “may grant summary judgment if trial would not enhance its ability to draw inferences and conclusions,” if there are “no issues of witness credibility” and “a trial on the merits would reveal no additional data.”<sup>49</sup> Putting aside the likelihood that a hearing on Contention 3 would actually reveal additional relevant information, and the implicit expert credibility issues that arise out of the majority decision, what is most relevant with regard to this case law is that it is not controlling in the First Circuit, where the Pilgrim plant is located. In the First Circuit, the relevant standard would permit a district court judge in a nonjury case to weigh the evidence and draw inferences *only* where parties cross-move for summary disposition on stipulated facts and have in effect submitted their case “as a case stated”<sup>50</sup> — which is *not* the situation herein.

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<sup>48</sup> Also relevant with regard to the issue of resources is the fact that, at the beginning of the time period permitted for responding to the Applicant’s motion for summary disposition, Intervenor’s lost their counsel through no apparent fault of their own. And they have in their Answer cited a provision of Rule 56 of the Federal Rules of Civil Procedure, also found in NRC rules in 10 C.F.R. § 2.710(c), *see also* 10 C.F.R. § 2.1205(c), to the effect that:

If it appears from the affidavits of a party opposing the motion for summary disposition that the party cannot for reasons stated present by affidavit facts essential to justify the party’s opposition, the Board may refuse the application for summary disposition or may order a continuance as m[a]y be necessary or just.

On this basis, even assuming *arguendo* that Intervenor’s have not sufficiently opposed Entergy’s motion, I would — taking into account the loss of Intervenor’s counsel and the relatively short extension of less than 1 month we granted Intervenor’s to respond to Applicant’s motion, *see* Order (Granting Request for Extension) (May 30, 2007) — deny the motion at this time and set further proceedings as appropriate.

<sup>49</sup> *Nunez v. Superior Oil Co.*, 572 F.2d 1119, 1123-24 (5th Cir. 1978); *see also Houston North Hospital Properties v. Telco Leasing, Inc.*, 680 F.2d 19, 22 (5th Cir. 1982); *cf.* Majority Decision at p. 154 & note 25.

<sup>50</sup> *Reich v. John Alden Life Insurance Co.*, 126 F.3d 1, 6 (1st Cir. 1997) (citations omitted); *see also United Paperworkers International Union, Local 14, AFL-CIO-CLC v. International Paper Co.*, 64 F.3d 28, 31 (1st Cir. 1995).

Notwithstanding applicable controlling precedent, my colleagues have in all practical effect weighed the evidence in an attempt to “untangle the expert affidavits and decide ‘which experts are more correct,’” and in so doing have also inappropriately found some of the information provided by Intervenors to be improper based on incorrect characterizations of what we did and did not admit and exclude in admitting Contention 3 (the full extent of which I need not and do not address herein). In sum, the majority’s grant of Entergy’s motion for summary disposition is unwarranted, and improper under relevant law. On the other hand, considering the whole record in light of this law, and, as it requires, in the light most favorable to Intervenors, I find there to be genuine issues of material fact (which would likely be elucidated by the provision of additional information in a hearing<sup>51</sup>), and would therefore deny Entergy’s motion.

With respect to Intervenors’ newly submitted health and other non-tourism-related economic cost factors, it is true that Intervenors provided no notice that these types of costs were challenged in particular, focusing more on economic matters related to lost business value, economic infrastructure, and tourism.<sup>52</sup> However, they did state in their Petition that, “[w]ithout knowing what parameters

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<sup>51</sup>To provide just a few examples of information that might be elicited, I would want to ask all the parties’ experts: (1) whether it would be possible to use data arising out of the improved meteorological models — which may in themselves normally support “deterministic” rather than probabilistic evaluations — in a probabilistic manner to obtain a probability-weighted dose model that takes into account local geography and wind conditions; and (2) how any possible results of such a calculation would relate to Sensitivity Cases 2, 3, and 6 of Applicant’s SAMA analysis, involving analyses using postulated beginning-plume-release conditions, reduced-plume-height (to 0 meters), and no-evacuation models, respectively.

In addition, with regard to the issue of the overall conservatism of the MACCS2 code, I note, with regard to the evacuation input data *when taken alone* in the context of the overall SAMA analysis, that in the absence of any significant changes in the meteorological data the Applicant’s sensitivity analysis results in a conclusion that, even with no evacuation, there would be no additional cost-beneficial SAMAs. Without going into the origins and ramifications of this finding, I would agree that Intervenors have not provided sufficient information that would bring this into question from a technical perspective. However, I would further note, with regard to asserted conservatism in the meteorological analysis, that, in addition to referring to the sensitivity analysis models using the beginning of the plume release and a release at ground level (neither of which on its own would result in any new cost-beneficial SAMA), Applicant and its expert merely refer to the Gaussian plume model being “generally more conservative than[] those obtained by more sophisticated models” and to two studies supporting some level of conservatism. I would therefore (3) ask for further explanation by Entergy’s experts and further response from Intervenors’ experts regarding the conservatisms in the MACCS2 code and its application. It may be that the Gaussian model used in the MACCS2 code and in Entergy’s sensitivity analysis is so conservative that the information provided by Intervenors’ experts is effectively irrelevant, but, as discussed in the text of my opinion, this requires a weighing of the evidence in a hearing, and a consideration of the relative correctness of the parties’ experts that I find goes beyond what the pertinent standards on summary disposition permit.

<sup>52</sup>See Petition at 43-45.

were chosen by the Applicant, it is not possible to fully evaluate the correctness of the [SAMA analysis] . . . [but they] have been able to piece together some possible reasons that Entergy's described consequences of a severe accident at Pilgrim look so small."<sup>53</sup> Moreover, they do have Mr. Chanin as an expert on costs.<sup>54</sup> Finally, the term, "economic consequences," is a broad one, which may fairly be said to encompass at least some of the various types of costs Intervenor now wish to litigate. Before finally deciding this issue, I would at least allow oral argument on, among other things, issues relating to the scope of contentions and the types of economic costs that are normally included in SAMA analyses, based in part on the circumstances, addressed above,<sup>55</sup> relating to Intervenor's losing their counsel and thereby being seriously disadvantaged in responding to Entergy's motion.<sup>56</sup>

In any event, whatever the outcome of any oral argument on health costs,<sup>57</sup> I would deny the motion for summary disposition of Contention 3 and proceed expeditiously to hearing on relevant matters as discussed above — i.e., at least on the meteorological matters at issue, and whatever impact these might have on the evacuation and cost matters also at issue in Contention 3, as well as on the cost-benefit analysis and the need for "further analysis."

Finally, I would suggest, with regard to considerations of efficiency, time, and expense, that going more directly to hearing in this proceeding, instead of expending the sorts of resources and time that have been spent by all parties and the licensing board on matters relating to the motions for summary disposition we rule on today, might well not only have been *not* significantly more costly, but even significantly *cost-effective and efficient*, in addition to allowing for appropriate questioning of all parties' experts. Even if in the end Entergy were, in such a hypothetical situation, to prevail on all points, the hearing process, appropriately and flexibly handled so as to assure reasonable and meaningful efficiencies, would (as it should always) ultimately allow for differences between the testimony of the parties' various experts on relevant issues to be addressed with all interested parties in one room, without the need for the filing of perhaps so much paper, and with the ability to address much more directly and concisely

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<sup>53</sup> Petition at 34; see Pilgrim Watch's Answer Opposing Entergy's Motion To Strike Portions of Pilgrim Watch's Answer Opposing Entergy's Motion for Summary Disposition of Pilgrim Watch Contention 3 at 8 (July 17, 2007), ADAMS Accession No. ML072050145 [hereinafter Pilgrim Watch 7/17/07 Answer].

<sup>54</sup> See *supra* note 14.

<sup>55</sup> See *supra* note 48.

<sup>56</sup> I would note, however, that under such circumstances, the response that Intervenor did file was not unimpressive.

<sup>57</sup> If consideration of the newly submitted cost information were permitted to any significant extent, denial of summary disposition might be even more appropriate, given the potential impact of such new information.

relevant questions to clarify matters in dispute. Consequently, even if Intervenors lost on these matters, they might well walk away with greater understanding of the issues and a greater sense that fairness and justice had been done. While the resulting increase in public confidence and trust in the NRC adjudication process may not be measurable, I would expect that this would benefit as well from allowing a hearing on the matters of public concern at issue in Contention 3.

None of the above is, of course, to say that Entergy should have no right to seek to have the matters at issue resolved through summary disposition. There are certainly instances in which summary disposition is entirely appropriate. I do not, however, find this to be such an instance.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Michael C. Farrar**, Chairman  
**Nicholas G. Trikouros**  
**Lawrence McDade**

**In the Matter of**

**Docket No. 70-3098-MLA**  
**(ASLBP No. 07-856-02-MLA-BD01)**

**SHAW AREVA MOX SERVICES**  
**(Mixed Oxide Fuel Fabrication**  
**Facility)**

**October 31, 2007**

In this proceeding regarding the application of Shaw AREVA MOX Services (MOX Services) for a license to possess and use byproduct, source, and special nuclear material at the planned Mixed Oxide Fuel Fabrication Facility (MFFF, or the MOX facility) that it is building for the U.S. Department of Energy (DOE) on the federal government's Savannah River Site (SRS), the Licensing Board — ruling on a hearing petition filed by Blue Ridge Environmental Defense League (BREDL), Nuclear Watch South (NWS), and the Nuclear Information and Resource Service (NIRS) (collectively "Petitioners") seeking to intervene to contest the MOX Services Application — concludes that the Petitioners have standing to intervene and have proffered two admissible contentions.

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

The Board declines to impose a requirement that Petitioners perform an independent technical analysis at the standing phase of a proceeding, especially

in a case where the chain of plausible causation that could lead to offsite doses is abundantly clear.

**RULES OF PRACTICE: STANDARD REVIEW PLANS**

Where the NRC's standard review plan for a facility requires applicants to include measures to prevent nuclear criticality, an applicant's assertion that petitioners have not demonstrated that the facility involves "a significant source of radioactivity with an obvious potential for offsite consequences" does not stand up.

**RULES OF PRACTICE: INTERVENTION PETITION(S) (*PRO SE* PETITIONER)**

Given the information known about the nature of the facility and the available radioactive and chemical materials at risk, and the resulting potential for offsite consequences in the event of inadvertent release, criticality accident, or chemical explosion, there is no need for *pro se* petitioners to plead these matters more specifically.

**LICENSING BOARD(S): AUTHORITY**

For purposes of determining whether there is potential for offsite consequences at specific sites, licensing boards have authority to infer obvious intermediate steps in a chain of causation that could lead to offsite doses. The standard in these matters is that offsite consequences need only be plausible, not that they be probable or likely, and thus standing can be based on plausible but unlikely scenarios.

**RULES OF PRACTICE: STANDING TO INTERVENE**

Petitioners are not required to demonstrate their asserted injury with "certainty," nor to "provide extensive technical studies" in support of their standing argument. Resolving standing questions is an entirely different matter than adjudicating the ultimate merits of a contention. At the standing stage, petitioners should not be burdened with conducting extensive technical studies.

**RULES OF PRACTICE: PRECEDENTIAL EFFECT OF BOARD DECISIONS; STANDING TO INTERVENE (SHOWING NEEDED IN SUBSEQUENT PROCEEDING REGARDING SAME FACILITY)**

A petitioner awarded standing in one proceeding need not restate all of its case to establish standing in another proceeding related to the same facility. Where the standing in the prior proceeding is, however, based on an issue that is outside the scope of the new proceeding it cannot serve as the basis for standing in the new proceeding.

**RULES OF PRACTICE: STANDING TO INTERVENE (PRESUMPTION BASED ON GEOGRAPHIC PROXIMITY)**

In evaluating the specificity of petitioners' standing arguments, a licensing board must take into account the information provided by the applicant and the NRC Staff in the EIS. If the two federal agencies themselves, with the resources at their disposal, do not see fit to calculate projected doses at several different distances from the facility and to differentiate areas that might receive radiation doses from those that will not, it is hardly reasonable, or fair, to expect petitioners to do better.

**RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY)**

Because of the nature of a two-step structure where environmental issues are dealt with in a separate proceeding, environmental contentions are beyond the scope of the current proceeding unless they meet requirements beyond the ordinary contention admissibility tests of 10 C.F.R. § 2.309(f)(1). In that circumstance, petitioners' pleadings must contain more systematic support for contention admissibility than a passing reference to new information and to 10 C.F.R. § 51.92.

**RULES OF PRACTICE: CONTENTIONS (GUIDANCE DOCUMENTS)**

The fact that a given guidance document upon which an applicant relied was withdrawn does not suffice to support a contention. The applicant's analysis itself must be challenged, and the fact that it does or does not match the requirements of a specific guidance document — or matches the guidance of a withdrawn document — is only one factor to consider in evaluating the challenge.

**RULES OF PRACTICE: CONTENTIONS  
(PREMATURITY/SPECULATIVE)**

When a Notice of Hearing, intended to provide an opportunity to challenge aspects of a facility's construction or subsequent operation, is issued before construction is commenced, it is to be fully expected that additional petitions to intervene, or statements of contentions, will need to be filed as construction unfolds and (hypothetically) reveals attendant shortcomings.

**RULES OF PRACTICE: CONTENTIONS  
(PREMATURITY/SPECULATIVE)**

Instead of establishing a sorting system containing only two bins — “pre-mature” and “nontimely” — into which a prospective intervenor's proffered contentions must be placed, a licensing board, in determining whether the proffered contentions are appropriate, must apply prematurity norms in a manner that fits the circumstances; and must consider whether to condition rejection of such contentions so as to preserve the opportunity for them to be re-presented later, if their concerns come to fruition, without having to overcome higher pleading hurdles.

**RULES OF PRACTICE: NOTICE OF HEARING**

The fundamental purpose served by a Notice of Hearing, one which is so obvious it might be overlooked, is to provide facility opponents a fair opportunity to be heard.

**RULES OF PRACTICE: CONTENTIONS  
(PREMATURITY/SPECULATIVE); NOTICE OF HEARING**

If any safety contentions filed before construction begins would be considered premature and/or speculative, NRC hearing opportunities could soon come to be viewed as chimerical — a result that would seem to be the opposite of what Commissioners past and present have said is their goal. For in an “early notice” situation it would never be possible for a petitioner to have a contention admitted if potentially legitimate safety concerns about actual construction practices, or upcoming operational procedures, were automatically rejected, without recourse, because they were filed before construction had either commenced at all or proceeded any distance. It would be paradoxical to let that situation label the challenge, rather than the notice, as premature, thus ending the process and eliminating ready later opportunities to raise construction-practice matters freely.

**RULES OF PRACTICE: NOTICE OF HEARING; OPERATING LICENSE HEARINGS**

A license to possess and to use special nuclear materials at this facility is the functional equivalent of an operating license for more standard facilities, such as nuclear power plants. Traditionally, operating license applications for such facilities were neither docketed nor noticed for hearing until substantial progress had been made under the previously awarded construction permit, as a crucial issue at the operating license stage was whether the facility had indeed been constructed in accordance with the permit.

**RULES OF PRACTICE: CONTENTIONS OF OMISSION**

A classic “contention of omission” occurs when petitioners allege that certain necessary safety-related steps or analyses have not been taken. Responding that the actions will be taken later does not defeat the contention for prematurity — the uncertain or speculative nature of the situation cuts against an applicant, not against a petitioner. Facility proponents may later bring forward, as they routinely do, a solution that allegedly cures the deficiency; they then move to dismiss the contention, triggering in turn a period during which petitioners can amend the original contention to challenge the solution’s substance.

**REGULATIONS: INTERPRETATION (10 C.F.R. § 2.309)**

**RULES OF PRACTICE: CONTENTIONS (LATE-FILING REQUIREMENTS)**

There is an apparent inconsistency between two portions of the Commission’s rules establishing a framework for considering contentions filed after the initial petition was due. Any new contentions filed by petitioners — whose original petition was timely and who have demonstrated their standing — that are attributable to the applicant’s construction activity or change of plans or design, should be governed by the basic provisions of 10 C.F.R. § 2.309(f)(2) rather than by the more restrictive elements of 10 C.F.R. § 2.309(c) applicable to “nontimely filings.” When new contentions are based on breaking developments or information, they are to be treated as “new or amended,” not as “nontimely.”

**RULES OF PRACTICE: CONTENTIONS (NEW OR AMENDED)**

After the initial filing, permission of the licensing board must be sought to file new or amended safety contentions. Such permission is to be given only if (i) the contention is based on information which “was not previously available”; (ii)

that information is “materially different than information previously available”; and (iii) the contention was submitted “*in a timely fashion*” in terms of “the availability of the subsequent information.” 10 C.F.R. § 2.309(f)(2)(i)-(iii).

**LICENSING BOARD: DISCRETION IN MANAGING  
PROCEEDINGS (DISMISSAL)**

**RULES OF PRACTICE: DISMISSAL OF PARTIES**

A party may be sanctioned, including losing the opportunity to participate in a proceeding, when it absents itself from a scheduled session without first requesting that it be excused. The Board emphasizes that parties are obligated (unless excused) to attend scheduled sessions as well as to communicate readily and cooperatively with each other when the conduct of adjudicatory business requires it.

**MEMORANDUM AND ORDER  
(Ruling on Standing and Contentions)**

This proceeding involves a challenge to the November 17, 2006, application of Shaw AREVA MOX Services (MOX Services, or Applicant) for a license that would allow it to operate the Mixed Oxide Fuel Fabrication Facility (MFFF, or the MOX facility) that it is building for the U.S. Department of Energy (DOE) on the federal government’s Savannah River Site (SRS) south of Aiken, South Carolina.<sup>1</sup> The MFFF, for which a Construction Authorization was issued on March 30, 2005, is designed to make mixed plutonium and uranium oxide (MOX) fuel for use in commercial nuclear power reactors as part of DOE’s program for the disposition, through reprocessing, of surplus nuclear weapons plutonium.

The NRC Staff acknowledged receipt of the current application on December 20, 2006.<sup>2</sup> A notice of the application and opportunity to request a hearing

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<sup>1</sup> The Applicant submitted its original application in September 2006. Mixed Oxide Fuel Fabrication Facility License Application (Sept. 27, 2006), ADAMS Accession No. ML062750195. This application was revised at the request of the NRC Staff, and that version was submitted on November 17, 2007. Mixed Oxide Fuel Fabrication Facility License Application (Nov. 17, 2006), ADAMS Accession No. ML070160311 [hereinafter Application].

<sup>2</sup> Letter from David Tiktinsky, Senior Project Manager, Division of Fuel Cycle Safety and Safeguards, U.S. NRC, to Dealis W. Gwyn, Licensing Manager, Shaw AREVA MOX Services (Dec. 20, 2007), ADAMS Accession No. ML063530612.

on the application was published in the *Federal Register* on March 15, 2007.<sup>3</sup> On May 14, 2007, three citizens' organizations, two of which had participated in the earlier construction permit proceeding, jointly filed a timely Petition To Intervene along with a request for a hearing. The intervention petition included five contentions that formed the basis for the challenge to the requested license to operate the facility.

Construction of the facility, under the permit that had been issued 28 months earlier, did not begin until August 1, 2007. It is scheduled to be completed 7 years from now. On August 22, 2007, following a site visit the previous day by the Board and representatives of the parties, a combined oral argument and prehearing conference was held in Augusta, Georgia, to consider the matters raised by the Petition To Intervene.

The Board finds herein that the Petitioners have standing to intervene in this proceeding. The Board further finds that three of their contentions are inadmissible and must be dismissed; we find that the other two, even though asserted to have been filed prematurely, have sufficient substance to avoid dismissal at this juncture. In that regard, the Board goes on to solicit the views of the parties on several alternative courses of action for dealing with those contentions that, if appropriate, might serve well in lieu of admitting and litigating them now.

We also consider herein certain collateral matters that arose after the argument.<sup>4</sup> We do not, however, address at this point the additional contention the Petitioners filed subsequent to the oral argument. Final pleadings on that contention are due within the next week, and the Board will turn its attention to that matter once those papers are in hand.

## I. PROCEDURAL BACKGROUND

### A. The Prior Proceeding

This proceeding is the second adjudicatory stage in the review process for the possible licensing of the MOX facility. As described in our predecessor Board's decision cited in note 8, below, the first stage began on February 28, 2001,

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<sup>3</sup>72 Fed. Reg. 12,204 (Mar. 15, 2007). The notice was published after a redacted version of the Application was released on January 4, 2007. See Letter from David Stinson, President and COO, Shaw AREVA MOX Services, LLC, to Document Control Desk, U.S. NRC, Submittal of Redacted License Application (Jan. 4, 2007), ADAMS Accession No. ML070160304.

<sup>4</sup>The parties earlier agreed that, to allow for scheduling conflicts, the purposes of the rule calling for a Board decision within 45 days of the final pleading would have been served by a Board decision by mid-September (see Tr. at 145). Post-argument, a matter arose (and is decided herein) for which the last pleading was filed September 10. See note 25 and accompanying text (p. 180, below). See also our Oct. 17, 2007, Memorandum (p. 213, below).

when the Applicant<sup>5</sup> filed a construction authorization request (CAR) seeking permission to build an MFFF on DOE's Savannah River Site.<sup>6</sup> According to the Environmental Report (ER) that was part of the Application, the 310-square-mile federally owned SRS is a roughly circular tract of land situated within South Carolina's Aiken, Barnwell, and Allendale Counties; toward the southwest, it is bounded for 17 miles by the Savannah River, which forms the State border with Georgia.<sup>7</sup>

Within the SRS, the MFFF was to be located on a 41-acre site that lies within Aiken County and is 5.8 miles from the nearest SRS site boundary. *See id.* at 4-1 to 4-2. The largest population centers near the site are Augusta, Georgia, and Aiken, South Carolina, with a number of smaller South Carolina towns (New Ellenton, Jackson, Barnwell, Snelling, and Williston) noted as being within 15 miles. *Id.* at 4-1.

The MFFF was designed to operate for 20 years and to convert 36.4 tons of surplus-weapons-derived plutonium oxide into MOX fuel for civilian reactors. *Id.* at 1-2. The MFFF, as proposed, would have an annual design throughput of 3.8 tons of plutonium. *Id.* After fuel fabrication, it is anticipated that the MOX fuel would be used in four Duke Energy Corporation reactors: Units 1 and 2 of the Catawba Nuclear Station near York, South Carolina, and Units 1 and 2 of the McGuire Nuclear Station near Huntersville, North Carolina. *Id.* Although DOE would own the MFFF facility, its contractor, the Applicant consortium, would be the license holder and facility operator. *Id.* at 1-1.

Prior to receiving the Applicant's CAR, the Commission published a hearing notice setting out the general procedures to be followed in any proceeding concerning the MFFF. 66 Fed. Reg. 6701 (Jan. 22, 2001). This notice specified that the hearing would be conducted in two phases: one related to "design bases for the principal structures, systems, and components, the quality assurance program, and environmental issues," and the second related to "all other issues related to the issuance of a 10 CFR part 70 license." *Id.*

On April 18, 2001, after receiving the application, the Commission published a notice of acceptance for docketing and of opportunity for a hearing in the *Federal Register*. 66 Fed. Reg. at 19,994. Subsequently, one individual and three organizations — including Georgians Against Nuclear Energy (GANE) and the Blue Ridge Environmental Defense League (BREDL) — filed petitions to

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<sup>5</sup> At that point, the Applicant was a consortium of several companies known as Duke Cogema Stone & Webster. The makeup and name of the consortium had changed by the time the current phase of the proceeding was launched.

<sup>6</sup> *See* 66 Fed. Reg. 19,994, 19,995 (Apr. 18, 2001).

<sup>7</sup> *See* DCS Mixed Oxide Fuel Fabrication Facility Environmental Report (Dec. 19, 2000) (Rev. 0) at 4-1.

intervene and hearing requests in that proceeding.<sup>8</sup> In December 2001, the Board ruled that all three of the petitioning organizations had standing to intervene in the proceeding, but that only two (GANE and BREDL) had submitted admissible contentions. LBP-01-35, 54 NRC at 410. The individual who filed independently was found not to have standing. *Id.*

GANE initially filed eight contentions that the Board found to be admissible: one dealing with the design features of the Applicant's material control and accounting system; another dealing with the physical protection system; a third dealing with alleged inadequacies in the seismic design of the facility; a fourth dealing with the alleged incorrect designation of the facility's controlled area; a fifth dealing with alleged inadequacies in the safety analysis; a sixth dealing with alleged inadequate comparisons between the MFFF and alternatives; a seventh dealing with the failure to address the waste stream from a particular process at the MFFF; and the last addressing terrorism issues. *Id.* at 424, 432, 436, 438, 441, 444. For its part, BREDL submitted two admissible contentions, which were consolidated with GANE's control area and waste contentions. *Id.* at 452, 462.

The Commission reversed the Board's decision to admit GANE's terrorism contention.<sup>9</sup> All other admitted contentions were resolved by motions to dismiss, motions to withdraw, or motions for summary disposition,<sup>10</sup> and the prior proceeding was terminated in 2005.<sup>11</sup>

## **B. The Current Proceeding**

On March 15, 2007, the Commission published a notice of acceptance for docketing of the current MOX Services license application and of opportunity to request a hearing on the application. 72 Fed. Reg. 12,204 (Mar. 15, 2007). A timely request for a hearing and petition to intervene was filed on May 14,

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<sup>8</sup> *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 410 (2001). The other organization that filed was Environmentalists, Inc. (EI). The individual filing an independent petition was Edna Forster; in addition, Donald J. Moniak filed jointly with BREDL.

<sup>9</sup> *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-24, 56 NRC 335 (2002).

<sup>10</sup> Licensing Board Order (Dismissing GANE Contention 9) (Jan. 28, 2003) (unpublished); Licensing Board Order (Granting GANE Motion To Withdraw Contention 6) (Aug. 4, 2003) (unpublished); LBP-03-21, 58 NRC 338 (2003) (granting Applicant motion for summary disposition of consolidated waste contention); Licensing Board Order (Granting GANE and BREDL Motion To Withdraw Consolidated Contention 5) (Nov. 26, 2003) (unpublished); LBP-04-9, 59 NRC 286 (2004) (granting Applicant motion for summary disposition of GANE Contentions 1 and 2); LBP-05-4, 61 NRC 71 (2005) (granting Applicant motion for summary disposition of GANE Contention 3).

<sup>11</sup> *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-15, 62 NRC 53 (2005).

2007, by a group of three organizations (collectively, Petitioners): BREDL, which had participated earlier; Nuclear Watch South (NWS), the successor to earlier participant GANE; and the Nuclear Information and Resource Service (NIRS).<sup>12</sup> On June 5, 2007, this Atomic Safety and Licensing Board was established to conduct the adjudicatory proceeding.<sup>13</sup>

The NRC Staff filed an answer opposing the petition on June 11, 2007.<sup>14</sup> The Applicant followed suit, filing an answer opposing the petition on June 13, 2007.<sup>15</sup> The Petitioners filed their reply on June 27, 2007.<sup>16</sup>

The Petitioners claim representational standing on behalf of members listed in the Petition who submitted affidavits indicating that they live at various distances within 50 miles of the proposed facility and that they authorized their respective organizations to represent their interests.<sup>17</sup> The Applicant and the NRC Staff challenge this assertion of standing on the grounds that the Commission has accepted a “proximity presumption” granting standing to residents within 50 miles of a reactor, but has not accepted any such presumption in nonreactor cases.<sup>18</sup> Because this is a nonreactor case, the Applicant and Staff argue that Petitioners either (1) must show “an obvious potential for offsite consequences” at a particular distance where a proximity presumption might apply or (2) must satisfy the judicial standing requirements of injury, causation, and redressability. Applicant Answer at 7-8; Staff Answer at 3-4. Both the Applicant and the Staff argue that the Petitioners have failed to do so. Applicant Answer at 9-11; Staff Answer at 5-8.

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<sup>12</sup> Petition for Intervention and Request for Hearing (May 14, 2007) [hereinafter Petition].

<sup>13</sup> 72 Fed. Reg. 32,139 (June 11, 2007). The Board was subsequently reconstituted, pursuant to 10 C.F.R. § 2.313(c), due to the unavailability of one of the original judges. 72 Fed. Reg. 40,344 (July 24, 2007).

<sup>14</sup> NRC Staff Response to Petition for Intervention and Request To Intervene (June 11, 2007) [hereinafter Staff Answer].

<sup>15</sup> Shaw AREVA MOX Services, LLC Answer Opposing BREDL et al., Petition for Intervention and Request for Hearing (June 13, 2007) [hereinafter Applicant Answer].

<sup>16</sup> Reply of the Petitioning Organizations to the Answers Filed June 11 and 13 by NRC Staff and the License Applicant to Our [Petition] (June 27, 2007) [hereinafter Reply].

<sup>17</sup> Petition at 3-5. All but one live between 20 and 32 miles from the facility.

<sup>18</sup> Applicant Answer at 4-5 (citing *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989); *Consumers Energy Co.* (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-19 (slip op. at 3) [65 NRC 423, 426] (2007); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116-17 (1995)); Staff Answer at 4 (citing *Virginia Electric and Power Co.* (North Anna Nuclear Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979); *Georgia Tech*, CLI-95-12, 42 NRC at 116; *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994); *Exelon Generation Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 580 (2005)).

The Petition includes five contentions, which that document synopsisized as follows:<sup>19</sup>

- 1) Whether MOX Services' License Application and/or [Environmental Impact Statement (EIS)] meet the relevant requirements in the National Environmental Policy Act and/or the Clean Air Act because of failures to address critical aspects regarding limits on emissions of hazardous air pollutants necessary for the protection of public health and safety;
- 2) Whether MOX Services License Application meets the relevant requirements of the Atomic Energy Act because of its failure to prepare and submit an emergency plan to the NRC for potential radioactive releases to the public;
- 3) Whether the Final Environmental Impact Statement on the construction and operation of a plutonium fuel factory is adequate to satisfy the requirements of NEPA and NRC implementing regulations because it fails to address new and significant information showing that neither MOX Services nor the U.S. Department of Energy ("DOE") has any concrete plans for the Waste Solidification Building ("WSB") that was proposed in the EIS and, as a result, high-alpha liquid waste from the proposed facility may have to be stored onsite posing hazards which have not been addressed by the NRC in the EIS;
- 4) Whether the License Application for the proposed plutonium processing facility is inadequate because it does not address safety and public health risks posed by indefinite storage of liquid high-alpha waste at the site or contain measures for the safe storage of that waste; and
- 5) Whether the Final Environmental Impact Statement for the proposed plutonium processing facility meets the relevant requirements of NEPA because it does not evaluate the environmental impacts of a terrorist attack on the proposed factory.

Petition at 5-6. The first two of these contentions are divided into subparts. *Id.* at 6-12, 12-16.

The Applicant and the NRC Staff assert that all of these contentions fail to meet the pleading requirements of 10 C.F.R. § 2.309(f)(1), and that the Petitioners' request for a hearing should therefore be denied. Applicant Answer at 2; Staff Answer at 8. Details of the pleadings regarding these contentions are presented in sections III.B and III.C, below.

On August 22, 2007, the Board heard several hours of oral argument regarding the standing of the Petitioners and the admissibility of their contentions. The

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<sup>19</sup> *But see* note 87, below, regarding the full text of Contentions 3 and 4.

representatives of the Petitioners and counsel for the Applicant and the Staff presented their arguments and answered questions from the Board.<sup>20</sup>

There have been several filings by the parties since the oral argument. One set of filings was submitted in response to the Board's request, during the argument, for further information on the Staff's policy and procedures for keeping the Petitioners informed about new developments at the MOX Facility. To that end, the Staff supplied a letter on August 29, 2007, detailing its standard policies and procedures for informing all interested stakeholders of developments in connection with license applications.<sup>21</sup> The Staff's letter did not offer to take any additional steps to provide more information to those who had filed intervention petitions.

The Applicant subsequently provided a supplement to the Staff letter detailing the steps it would take, specific to the Petitioners, to keep them informed of new developments. These included "specific written notice . . . of any determination by MOX Services that the [Waste Solidification Building] will not be utilized for high-alpha liquid waste from the MOX Facility."<sup>22</sup>

Another set of filings was triggered by the Applicant's post-argument motion to deny Petitioner NIRS's request for hearing on the basis that NIRS had violated NRC requirements by failing to attend the combined oral argument and prehearing conference as anticipated in the Board's July 16, 2007, Scheduling Order.<sup>23</sup> NIRS responded by explaining that its absence was due solely to "unanticipated immediate medical circumstances" that prevented its representative from attending.<sup>24</sup> NIRS also indicated it had presumed the other Petitioners would represent it, because the Board had previously ordered the parties to consolidate their written replies. *Id.*

After receiving the NIRS response, the Staff also responded to the Applicant's motion.<sup>25</sup> Taking no position on the sanction request itself, the Staff simply requested that in the future NIRS directly contact opposing parties, instead of just its co-petitioners, when it needed to provide information relevant to the

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<sup>20</sup>We had previously, on August 9, 2007, issued an Order Regarding Oral Argument Format that, among other things, set out a number of issues that we thought warranted particular emphasis there. A transcript of the oral argument was prepared (Transcript of Oral Argument Held in Augusta, GA (Aug. 22, 2007)) and can be obtained from the NRC's Agencywide Documents Access and Management System (ADAMS) via Accession No. ML072400372.

<sup>21</sup>Letter from Margaret J. Bupp, Counsel for the NRC Staff, to the Licensing Board (Aug. 29, 2007).

<sup>22</sup>Shaw AREVA MOX Services, LLC Supplement to NRC Staff Letter Dated August 29, 2007 (Aug. 31, 2007) at 2.

<sup>23</sup>See Shaw AREVA MOX Services, LLC Motion To Deny Petitioner Nuclear Information and Resource Service's Request for Hearing (Aug. 31, 2007) at 1-2.

<sup>24</sup>Response of [NIRS] to Motion by Shaw, AREVA, MOX Services To Deny [NIRS] a Hearing (Sept. 6, 2007) at 1.

<sup>25</sup>NRC Staff Response to [MOX Services NIRS Motion] (Sept. 10, 2007).

proceeding. The Staff went on to point to an exchange that had occurred at the oral argument that shed some light on the matter.

A third set of filings was initiated on September 12, 2007, when Petitioners NWS and BREDL sent the Board a letter for the stated purpose of alerting us to a new DOE plan to bring a different kind of surplus plutonium to the Savannah River Site and to reprocess a portion of it at the MOX Facility.<sup>26</sup> In their letter, NWS and BREDL indicated their intention to submit an additional contention based on this new information on or before October 5, 2007 (i.e., within 30 days of the date of the new DOE plan) and asked us to consider the existence of this new information “before issuing a decision” on the pending matters. *Id.*

Responding immediately to that letter, the Applicant strongly opposed any delay, which it argued would not be consistent with the agreed-upon schedule anticipating a Board decision by mid-September.<sup>27</sup> Furthermore, the Applicant said, if the Petitioners were found by the Board to have demonstrated their standing, they would still have an opportunity, pursuant to 10 C.F.R. § 2.309(c), to submit late-filed contentions thereafter. *Id.* at 3.

As forecast, Petitioners NWS and BREDL filed an additional contention on October 5, 2007.<sup>28</sup> That contention, numbered 6, argues that the Applicant failed to comply with the National Environmental Policy Act (NEPA) because the EIS does not address recent changes proposed by DOE. *Id.* at 2. Specifically, the contention references an Amended Record of Decision issued by DOE on September 5, 2007, in which it discussed its plan to transfer roughly “2,511 additional 3013-compliant packages containing surplus non-pit weapons-usable plutonium metals and oxides” to the SRS.<sup>29</sup> In addition, Petitioners note that, according to that *Federal Register* notice, DOE is preparing a Supplemental EIS for Surplus Plutonium Disposition at the Savannah River Site to evaluate the potential environmental impacts of alternative methods to disposition surplus, non-pit plutonium materials, one of which is using the MFFF. *Id.* at 3.

As Petitioners see it, the possible introduction of this additional plutonium would require the Applicant to modify the design of the MOX Facility. *Id.* at 1-2. In support of the contention, they include a declaration from Dr. Edwin S. Lyman, a Senior Staff Scientist at the Union of Concerned Scientists, standing behind the facts and opinions in the contention.

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<sup>26</sup> Letter from Glenn Carroll, Nuclear Watch South, and Louis A. Zeller, Blue Ridge Environmental Defense League, to Licensing Board (Sept. 12, 2007).

<sup>27</sup> Shaw AREVA MOX Services, LLC Answer to Nuclear Watch South’s Letter Dated September 12, 2007 (Sept. 14, 2007).

<sup>28</sup> See Petitioners’ Late-Filed Contention Regarding Need To Supplement EIS for Proposed MOX Plutonium Processing Facility (Oct. 5, 2007) [Petitioners’ New Contention].

<sup>29</sup> Amended Record of Decision: Storage of Surplus Plutonium Materials at the Savannah River Site, 72 Fed. Reg. 51,807 (Sept. 11, 2007).

The applicable Rules of Practice call for the other parties' answers to that contention to be filed at the end of October. Those same rules permit Petitioners to file a reply a week thereafter.

## II. LEGAL STANDARDS

### A. Petitioners' Standing

A petitioner's right to participate in a licensing proceeding is derived from section 189a of the Atomic Energy Act (AEA), which provides for a hearing "upon the request of any person whose interest may be affected by the proceeding." 42 U.S.C. § 2239(a)(1)(A). The Commission's implementing regulation, 10 C.F.R. § 2.309(d), directs a licensing board, in ruling on a request for a hearing, to determine whether the petitioner has an interest affected by the proceeding by considering (1) the nature of the petitioner's right under the AEA or the National Environmental Policy Act of 1969 (NEPA) to be made a party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest.

We have long been instructed to apply traditional judicial concepts of standing when determining whether a petitioner has set forth a sufficient interest to intervene under 10 C.F.R. § 2.309.<sup>30</sup> Those concepts require that a petitioner demonstrate "a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision" (i.e., (1) injury, (2) causation, and (3) redressability).<sup>31</sup> Further, a petitioner must also demonstrate that its injury arguably falls within the zone of interests protected by the statutes governing NRC proceedings, such as the AEA or NEPA.<sup>32</sup>

A petitioner may instead show "proximity standing," which "rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working or living offsite but within a certain distance of that facility."<sup>33</sup> In nuclear power reactor construction permit and

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<sup>30</sup> See *Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 612 (1976); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995).

<sup>31</sup> *Georgia Tech*, CLI-95-12, 42 NRC at 115; see *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992); *Dellums v. NRC*, 863 F.2d 968, 971 (D.C. Cir. 1988); *Public Service Co. of New Hampshire* (Seabrook Station, Unit 1), CLI-91-14, 34 NRC 261, 266-67 (1991); *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993).

<sup>32</sup> See *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 13 (2001).

<sup>33</sup> *Exelon Generation Co., LLC* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 580 (2005) (citations omitted).

operating license proceedings, a 50-mile proximity presumption is recognized for standing purposes; “far closer proximity” has, however, been required to confer standing “in other licensing proceedings.”<sup>34</sup>

In such cases, the proximity presumption will extend only to those offsite areas where the “proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences.”<sup>35</sup> The appropriate distance for proximity standing is decided on a case-by-case basis “taking into account the nature of the proposed action and the significance of the radioactive source.”<sup>36</sup>

An organization seeking to intervene in a proceeding must demonstrate either organizational or representational standing. For organizational standing, the petitioner must show “injury in fact” to the interests of the organization itself.<sup>37</sup> For representational standing, the petitioner must demonstrate that at least one of its members would have standing to intervene on his or her own behalf, and that such a specifically identified member has authorized the organization to represent the member’s interests.<sup>38</sup>

## **B. Contention Admissibility**

Under 10 C.F.R. § 2.309(f)(1), a hearing request or petition to intervene “must

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<sup>34</sup> *Consumers Energy Co.* (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-19, 65 NRC 423, 426-27 (2007) (with respect to a license transfer for an Independent Spent Fuel Storage Installation, rejecting the proximity presumption for petitioner living within 50 miles of the plant); *see also Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2; Watts Bar Nuclear Plant, Unit 1), LBP-02-14, 56 NRC 15, 25 (2002) (allowing for the proximity presumption for those living within 17 miles of the nuclear facilities where the applicant “proposes to add tens of millions of curies of highly combustible radioactive hydrogen gas” to the core inventory); *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-99-25, 50 NRC 25 (1999) (according the proximity presumption to an interested county whose border was 17 miles from a facility which wanted to increase its spent fuel storage capacity).

<sup>35</sup> *Georgia Tech*, CLI-95-12, 42 NRC at 116 (citations omitted). That decision involved a university research reactor. The university argued that a worst-case accident scenario would not result in offsite consequences further than 100 meters from the reactor. A licensing board found, however, that the petitioner had standing even though the member it was representing lived half a mile from the facility. Although a research reactor is much smaller than a power reactor, the board in that case found that it was not a “stretch of the imagination” to presume some offsite injury due to the release of noble gases. *Id.* at 113-17.

<sup>36</sup> *Id.* at 116-17 (citations omitted).

<sup>37</sup> *See Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998).

<sup>38</sup> *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999).

set forth with particularity the contentions sought to be raised.’<sup>39</sup> The purpose of the contention admissibility rule is to “focus litigation on concrete issues and result in a clearer and more focused record for decision.” 69 Fed. Reg. at 2202. The Commission has stated that it “should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing.” *Id.*

The application of the 10 C.F.R. § 2.309(f)(1) requirements has been set forth in detail in numerous cases and need not be repeated here.<sup>40</sup> The 10 C.F.R. § 2.309(f)(1)(iii) requirement that an “issue raised in [a] contention [be] within the scope of the proceeding” is, however, of particular relevance given the two-stage jurisdictional procedure established prior to the first MFFF proceeding. *See* p. 176, above. That procedure defined the scope of the first proceeding as encompassing “design bases for the principal structures, systems, and components, the quality assurance program, and environmental issues,” and the scope of the second as including “all other issues related to the issuance of a 10 C.F.R. Part 70 license.” 66 Fed. Reg. at 6701 (emphasis added).<sup>41</sup>

The Commission subsequently confirmed its intent to address all the environmental effects of both constructing and operating the MFFF in the first proceeding, noting that the environmental report submitted by the Applicant in the first proceeding covered both sets of activities.<sup>42</sup> The Commission emphasized that “nothing in our regulations joins together the NRC’s NEPA and AEA obligations,” and that a review of the environmental effects of operating the facility could therefore be conducted prior to the safety review that would be conducted as the second phase of the procedure. *Id.*

In practice, that means that no environmental report was submitted as part of the application in this stage of the proceeding, and that no Environmental Impact Statement (EIS) will be prepared as part of the Staff review. This limitation

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<sup>39</sup> In 2004, the Commission revised and reordered its procedural rules. *See* Changes to Adjudicatory Process; Final Rule, 69 Fed. Reg. 2182, 2217 (Jan. 14, 2004). The details of requirements a contention must meet can now be found in 10 C.F.R. § 2.309(f)(1)(i)-(vi), having been located, pre-2004, in 10 C.F.R. § 2.714(b)(2).

<sup>40</sup> *See, e.g., Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 272-74, 351-59 (2006); *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 147-51 (2006); *Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 336-42 (2006).

<sup>41</sup> That procedure was not contained in the Part 2 or Part 70 rules; instead, it was created and designed by the Commission for this specific proceeding. The innovative approach thus taken at that stage may provide insight for resolving the procedural problems inherent at this stage (*see* p. 212, below).

<sup>42</sup> *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-7, 55 NRC 205, 220-21 (2002).

on the scope of this proceeding will be important as we consider environmental contentions in section III.B, below.

### C. Terrorism Precedent

Longstanding NRC precedent holds that terrorist attacks are not to be considered part of the NEPA analysis required for licensing actions.<sup>43</sup> This Commission precedent was successfully challenged in 2006 in the *Mothers for Peace* litigation.<sup>44</sup> In that case, the United States Court of Appeals for the Ninth Circuit held that the possibility of a terrorist attack at a nuclear facility could not be dismissed as “unquantifiable” or “remote and highly speculative,” as the Commission had argued, and that NEPA therefore required the agency to consider the environmental effects of terrorist attacks in its NEPA review. 449 F.3d at 1029-35.

After analyzing the *Mothers for Peace* Court of Appeals decision, the Commission “reiterate[d its] longstanding view that NEPA demands no terrorism inquiry” in its 2007 decision regarding the Oyster Creek license renewal.<sup>45</sup> The Commission stated that it would accordingly follow the *Mothers for Peace* decision only in those cases arising in the geographical area where it is binding, but that it would continue to adhere to prior precedent in all other cases. *Id.* at 128-29. The Commission explained that it “is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question,” and noted that the Ninth Circuit decision does not prevent the government from relitigating the issue in future cases.<sup>46</sup>

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<sup>43</sup> See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002), *Savannah River*, CLI-02-24, 56 NRC 335, and *Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-03-1, 57 NRC 1 (2003), all of whose antecedents go as far back as *Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 851 (1973) (citing *Siegel v. AEC*, 400 F.2d 778 (D.C. Cir. 1968)). Among the reasons cited for not considering terrorist attacks or wartime sabotage as part of a NEPA evaluation are the tradition of relying on the military for such matters, the unavailability of classified information, and the undesirability of discussing counterterrorism measures in a public proceeding. *Id.* See also *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-05-29, 62 NRC 635, 656 n.33 (2005) (noting that the Commission addresses the problem of terrorist attacks at nuclear facilities in cooperation with other agencies, including the military, and outside the hearing process).

<sup>44</sup> *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006) (reversing CLI-03-1, 57 NRC 1), cert. denied sub nom. *Pacific Gas & Electric Co. v. San Luis Obispo Mothers for Peace*, No. 06-466 (Jan. 16, 2007).

<sup>45</sup> *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 126 (2007).

<sup>46</sup> *Id.* at 128-29 & n.14 (citing *United States v. Stauffer Chemical Co.*, 464 U.S. 165, 173 (1984); *United States v. Mendoza*, 464 U.S. 154, 160 (1984)). See also the companion decisions the

(Continued)

Furthermore, the Commission stated that, in its judgment, prior NRC precedent is “consistent with Supreme Court NEPA doctrine” (*id.* at 129), which requires “a ‘reasonably close causal relationship’ between federal agency action and environmental consequences” before NEPA is triggered, a relationship similar to that of “proximate cause” in tort law.<sup>47</sup> The Commission thus rejected the Ninth Circuit’s determination that this test is no longer applicable and noted that the risk of terrorism at a nuclear facility is determined by factors “external to the NRC licensing process.” *Id.* at 130 (emphasis in original). According to the Commission, NRC licensing decisions are not the proximate cause of any environmental effects related to terrorist attacks on licensed facilities. *Id.*

In sum, for matters arising outside the Ninth Circuit, the Commission adhered to its initial view that addressing the possibility of terrorist attack is best handled outside the context of licensing proceedings. *Id.* at 130-34. This Board is bound by Commission determinations of that nature.

### III. BOARD DECISION

#### A. Petitioners’ Standing

The position of the parties with respect to standing was summarized in section II.A, above. The Board finds that the Petitioners have demonstrated representational standing on behalf of their members.<sup>48</sup> Our reasoning is as follows.

The Petitioners submitted affidavits from members whose residences are, with one exception, within 20 to 32 miles of the SRS. Petition at 4. Petitioners do not dispute the standard to be applied in this case — they agree with the Applicant and the Staff that the appropriate radius to demonstrate proximity in nonreactor cases must be determined on a case-by-case basis, as described in section II.A, above. Reply at 2. They argue, however, that the nature of the facility, which will handle large amounts of fissile and fissionable material, presents an “obvious potential for offsite consequences” over the area in which its affiants reside.<sup>49</sup>

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Commission issued the same day: *Nuclear Management Co., LLC* (Palisades Nuclear Plant), CLI-07-9, 65 NRC 139 (2007); and *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-10, 65 NRC 144 (2007).

<sup>47</sup> *Oyster Creek*, CLI-07-8, 65 NRC at 129-30 (citing *Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 774 (1983); *Department of Transportation v. Public Citizen*, 541 U.S. 752, 767 (2004)).

<sup>48</sup> At the outset, questions were raised about whether the Petitioners’ members had properly authorized the organizations to represent them, and whether the organizations’ *pro se* representatives were duly authorized. At oral argument, it was conceded that any such possible deficiencies had been cured (Tr. at 9). We thus do not address those matters herein.

<sup>49</sup> *Id.* See also *Georgia Tech*, CLI-95-12, 42 NRC at 116 (citations omitted).

They support this assertion by noting that the NRC Staff, in preparing the EIS for the facility as part of the previous proceeding, included residents as far away as 50 miles from the facility in its calculation of potential population doses.<sup>50</sup> They also note that the NRC's standard review plan for plutonium fuel facilities requires applicants to include measures to prevent nuclear criticality.<sup>51</sup>

As a foundation for establishing standing, licensing board precedents support the application of a similar proximity radius in cases involving large amounts of spent nuclear fuel. *See Shearon Harris*, LBP-99-25, 50 NRC at 29-31. In that case, which involved a license amendment permitting a power reactor to increase onsite spent fuel storage capacity, a county located entirely within 50 miles of the facility and within 17 miles from the facility at its nearest point was found to have organizational standing. *Id.*

Precedent also supports applying a similar proximity radius for a reactor that intended to add additional material to its core inventory.<sup>52</sup> As in that situation, the Petitioners' members in this case live at a similar distance from a facility that will handle a significant quantity of fissile and fissionable material and that will have the potential for nuclear criticality and accidental release of radioactive material, as indicated in the Integrated Safety Analysis (ISA) Summary submitted as part of the Application. *See* Application at 5-6 to 5-36.

The Applicant's assertion (Answer at 11) that "Petitioners have not demonstrated that the MFFF involves a significant source of radioactivity with an obvious potential for offsite consequences," does not stand up in these circumstances. Given the nature of the facility and the available radioactive and chemical materials at risk, and the resulting potential for offsite consequences in the event of inadvertent release, criticality accident or chemical explosion, all reflected in the Applicant's and Staff's own documents, there was no need for these *pro se* Petitioners to plead these matters more specifically, and no need for further elaboration here.

In that regard, the Board does not accept the Applicant's and Staff's argument that licensing boards have no authority to infer obvious intermediate steps in a chain of causation that could lead to offsite doses. *See* Tr. at 14, 25. The Petitioners argue that nuclear criticality is a legitimate concern, Reply at 2-3, and both the Application and the Board's own technical expertise suggest that their

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<sup>50</sup> Petition at 4; Reply at 2 (both citing NUREG-1767 "Environmental Impact Statement on the Construction and Operation of a Proposed Mixed Oxide Fuel Fabrication Facility at the Savannah River Site, South Carolina" (Jan. 2005) ¶4.3.5.2 [MOX EIS]).

<sup>51</sup> Reply at 2 (citing NUREG-1718, "Standard Review Plan for Review of an Application for a Mixed Oxide (MOX) Fuel Fabrication Facility" (Aug. 2000) ¶6.1).

<sup>52</sup> *Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2; Watts Bar Nuclear Plant, Unit 1), LBP-02-14, 56 NRC 15, 25 (2002).

concern is not at all unfounded.<sup>53</sup> The standard in these matters is that offsite consequences need only be plausible, not that they be probable or likely, and thus standing can be based on plausible but unlikely scenarios. Given the nature of the facility under consideration, we find that the Petitioners' position regarding the potential for offsite consequences is plausible in these circumstances.<sup>54</sup>

Petitioners are not required to demonstrate their asserted injury with "certainty," nor to "provide extensive technical studies" in support of their standing argument. *Shearon Harris*, LBP-99-25, 50 NRC at 31. Resolving standing questions is an entirely different matter than adjudicating the ultimate merits of a contention. We decline the opportunity to burden Petitioners, at the standing stage, with conducting the type of extensive technical studies that might well have been required to meet the burden that the Applicant and the Staff would have them meet here.

In that regard, neither the Application nor the EIS appears to provide information that would allow the Petitioners to make judgments about where, within a 50-mile radius, doses resulting from an untoward incident at the facility might or might not occur. The MFFF is unique, so operating histories from other facilities are not available for comparison.<sup>55</sup> An independent technical analysis by the Petitioners would therefore seem to be the only realistic way to obtain the type of information that the Applicant and Staff claim is essential. The Board declines to impose such a requirement on petitioners at the standing phase of a proceeding, especially in a case such as this, where the chain of plausible causation is abundantly clear.

In making our determination as to whether the standing requirements are met, the Board has also been guided by two precedents applicable at this stage. First, the Commission has indicated that we are to "construe the petition in favor of the petitioner." *Georgia Tech*, CLI-95-12, 42 NRC at 115. Second, longstanding agency precedent instructs us that, as a rule, *pro se* petitioners are not held to the same standard of pleading as those represented by counsel.<sup>56</sup>

We note that board precedents also teach that a petitioner awarded standing in one proceeding need not restate all of its case to establish standing in another

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<sup>53</sup> The instant Application does, in fact, include extensive discussion of measures to be employed to prevent nuclear criticality at the MFFF. Application at 6-1 to 6-28.

<sup>54</sup> See MOX EIS ¶ 4.3.5.2 and Appendix E.

<sup>55</sup> During oral argument, the Petitioners presented information about what they said was a very similar AREVA facility in La Hague, France. Tr. at 32-33. The Applicant and the Staff argued that that facility is not comparable to the one before us (Tr. at 43, 47), and we have not considered information related to the La Hague facility in our analysis.

<sup>56</sup> See *Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487 (1973).

proceeding related to the same facility.<sup>57</sup> In that regard, the standing determination in the previous MOX proceeding was limited to the narrow ground that the petitioners would be exposed to radiation doses as MOX fuel was transported from the MFFF to the reactors where it would be used.<sup>58</sup> Analysis of transportation of MOX fuel was included in the ER submitted with the application in the CAR proceeding and was therefore within the scope of *that* proceeding. *Id.* at 418-19. Because the scope of *this* proceeding does not, however, include environmental issues except under limited circumstances,<sup>59</sup> the transportation issue is outside the scope of this proceeding and thus cannot serve as a basis for standing.

That does not, however, end the matter in terms of the earlier proceeding. Although the Board's order on standing there focused only on transportation, it also noted that one petitioner in that case — GANE, now known as NWS — proffered other grounds for standing that were not opposed by the Applicant or the Staff. *Id.* at 414-15. Among these were the potential for serious accidents at the site, the risks of driving on public roads that cross the SRS, and the risks associated with recreational activities along the Savannah River.<sup>60</sup> In that regard, the location of the GANE affiant's residence was the crucial issue for the NRC Staff,<sup>61</sup> and that the same individual is an affiant in the current proceeding for both NWS and NIRS.<sup>62</sup> Although these facts are not dispositive in themselves, they provide additional support for the Board's decision regarding the appropriate distance at which to apply the proximity presumption and the resulting standing of these two organizations.

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<sup>57</sup> See *PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 19 n.9 (2007); *U.S. Army* (Jefferson Proving Ground Site), LBP-04-1, 59 NRC 27, 29 (2004); *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-23, 42 NRC 215, 217 (1995). It would, of course, be better practice for petitioners to present a fully developed argument for standing in each proceeding in which they seek to intervene, especially given that a Board in one proceeding is not bound to follow the ruling of another Board absent explicit affirmation by the Commission. *Susquehanna*, 66 NRC at 19 n.9 (citing *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-92-4, 35 NRC 114, 125-26 (1992), *rev'd on other grounds*, CLI-93-21, 38 NRC 87 (1993)).

<sup>58</sup> *Savannah River*, LBP-01-35, 54 NRC at 414-21.

<sup>59</sup> See section II.B, above (discussing scope of this proceeding with respect to environmental issues).

<sup>60</sup> See Georgians Against Nuclear Energy's Amended Petition To Intervene (July 30, 2001), ADAMS Accession No. ML012200153; Duke Cogema Stone & Webster's Answer to Georgians Against Nuclear Energy's Amended Petition To Intervene (Aug. 10, 2001) at 1, ADAMS Accession No. ML012280113; NRC Staff's Response to Supplemental Filings on the Issue of Standing (Aug. 10, 2001) at 19-20, ADAMS Accession No. ML012260265 [Staff Filing on Standing in CAR Proceeding].

<sup>61</sup> Staff Filing on Standing in CAR Proceeding at 20.

<sup>62</sup> Petition at 4. The affiant lists the same address in both proceedings and notes that her residence is approximately 20 miles away from the facility. See Request for a Hearing submitted by Glenn Carroll on behalf of Georgians Against Nuclear Energy (May 17, 2001), Exh. 1, Affidavit of Susan Bloomfield (May 14, 2001), ADAMS Accession No. ML011410340.

We also note that the NRC Staff's analysis has not broken down population doses by distance from the facility, and that its calculations include residents up to 50 miles from the MFFF. *See* MOX EIS ¶ 4.3.5.2 and Appendix E. This issue was discussed at oral argument, at which time counsel for the NRC Staff asserted that this calculation should not be taken as an indication that radiation doses would indeed be received by individuals at that distance. Tr. at 20-23. Rather, the Staff's counsel claimed that a 50-mile radius is routinely used by DOE for all calculations for DOE facilities, regardless of whether any doses are projected at that distance. Tr. at 20-21. Thus, we were told, that practice does not warrant our drawing any specific standing presumption in any particular proceeding. *Id.*

The Staff's argument properly suggests that the EIS calculation itself cannot be used to demonstrate with certitude that a 50-mile radius is appropriate for applying the proximity presumption in this case. The Board must take into account, however, when we evaluate the Petitioners' standing argument, the paucity of information provided both by DOE's contractor-Applicant and by the NRC Staff in its EIS. If the two federal agencies themselves, with the resources at their disposal, do not see fit to calculate projected doses at several different distances from the MFFF and to differentiate areas that might receive radiation doses from those that will not, it is hardly reasonable, or fair, to expect the Petitioners to do better. In such a situation, the factors we have discussed assume more importance than they might have if more detailed dose calculations had been available.

For these reasons, we find that the Petitioners have demonstrated standing based on their members' proximity to the facility, given the level of the facility's inherent potential for offsite consequences as detailed above. Having determined that the Petitioners have standing, we turn now to the contentions they advanced, treating first those contentions that we find inadmissible and then considering how to proceed with the others.

## **B. Inadmissible Contentions**

### ***1. Outside the Scope (Contention #1, Hazardous Air Pollutants, and Contention #5, Terrorist Attacks)***

The first and the last of the Petitioners' five contentions are inadmissible because they fall outside the scope of the current proceeding. They therefore do not satisfy the terms of 10 C.F.R. § 2.309(f)(1)(iii).

a. In Contention 1, the Petitioners argue that "the License Application submitted by MOX Services fails to meet the relevant requirements in NEPA because it will not adequately address pollution impacts and require controls necessary to limit hazardous air pollution." Petition at 7. This contention is divided into five subparts.

In the first one, the Petitioners argue that the MFF does not comply with emissions standards for hazardous air pollutants under the Clean Air Act (CAA), because the Application includes projected emissions for certain radionuclides that are higher than the projected emissions in the EIS from the previous proceeding. *Id.* at 8. Second, the Petitioners argue that the high-efficiency particulate air (HEPA) filters proposed for use in the ventilation system at the MFF “are an unreliable means of controlling radionuclide emissions.” *Id.* at 9. Third, the Petitioners claim that EPA standards require the use of maximum achievable control technology (MACT), and that no such MACT has been determined for radionuclides. *Id.* at 10. For this reason, the Petitioners say, the NRC must determine the appropriate control technology before issuing an operating license for the facility. *Id.* Fourth, the Petitioners argue that the facility could ultimately end up processing more plutonium than originally envisioned, and that an EIS for the site must therefore be based on the maximum annual throughput of the plant multiplied by the number of years of operation. *Id.* at 11. Finally, the Petitioners argue that the Application does not account for “higher levels of morbidity and mortality in females and infants caused by low levels of radiation.” *Id.* at 12.

The Applicant argues that all parts of this contention are inadmissible because they are all based on NEPA and therefore are outside the scope of the proceeding because — barring new developments — all environmental issues were to be resolved in the first proceeding. Applicant Answer at 19. At the time of the first proceeding, the Applicant says, the Commission established the rule that if new environmental information arises at a later phase of the proceedings, existing rules “provide for the possibility of supplements to the EIS and for late-filed hearing contentions.”<sup>63</sup> For this reason, says the Applicant, all environmental contentions at this stage must therefore satisfy the requirements of 10 C.F.R. § 2.309(c) regarding nontimely filings.<sup>64</sup> According to the Applicant, the Petitioner has not even attempted to address these requirements, and Contention 1 must therefore be dismissed in its entirety. *Id.* at 23.

The NRC Staff agrees with the Applicant regarding the inadmissibility of Contention 1, but bases its arguments on a different section of the regulations. According to the Staff, the EIS for the MFFF has already been issued and is therefore beyond the scope of this proceeding — unless the Petitioners success-

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<sup>63</sup> Applicant Answer at 21 (quoting *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, 53 NRC 478, 481 (2001)).

<sup>64</sup> *Id.* at 20-23. The most important of these is “[g]ood cause, if any, for the failure to file on time.” 10 C.F.R. § 2.309(c)(i). See *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-15, 44 NRC 8, 24 (1996); *Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986). Petitioners seeking admission of a nontimely filing must, however, also address the remaining seven factors in 10 C.F.R. § 2.309(c)(ii)-(viii). In this regard, see note 95, below.

fully plead for supplementing the EIS in accordance with the terms of 10 C.F.R. § 51.92. Staff Answer at 9. Supplementing the EIS is to be done when “significant new circumstances or information relevant to environmental concerns” become apparent. *Id.* at 9-10. It is *not*, however, to be done any time that any new information becomes available, but only when the new information presents “a seriously different picture of the environmental impact of the proposed project from what was previously envisioned.”<sup>65</sup> Because the Petitioners did not present information that would lead to an EIS supplement, the Staff argues that Contention 1 is outside the scope of the proceeding. *Id.* at 10.

The Board agrees that, because of the nature of the two-step structure created for the MOX facility (*see* note 41, above, and accompanying text), environmental contentions are beyond the scope of the current proceeding unless they meet requirements beyond the ordinary contention admissibility tests of 10 C.F.R. § 2.309(f)(1). Two possibilities for what these additional requirements might be have been suggested by the parties — the requirements for nontimely filings under 10 C.F.R. § 2.309(c), and the rules for supplementing the EIS pursuant to 10 C.F.R. § 51.92. The Board also calls attention to 10 C.F.R. § 2.309(f)(2)(i)-(iii), which permits the filing of new contentions upon leave of the presiding officer when the moving party shows that the information underlying the contention was not previously available, that the information is materially different than information previously available, and that the new contention is submitted in a timely fashion after the new information becomes available.

The Board finds that, although the Petitioners make passing reference to new information and to 10 C.F.R. § 51.92, the pleadings contain no systematic effort to argue for contention admissibility under any of these three legal theories. The Petitioners do not address the factors governing admission of nontimely contentions under 10 C.F.R. § 2.309(c), in particular the question of good cause for failure to file in a timely manner. Similarly, the Petitioners do not address the requirement that a petition to supplement the EIS must demonstrate that new information gives “a seriously different picture of the environmental impact of the proposed project from what was previously envisioned.” Finally, the Petitioners make no effort to show which elements of the information they submit in support of their contention constitute the type of new information that could support contention admissibility under 10 C.F.R. § 2.309(f)(2)(i)-(iii).

Accordingly, the Board finds that Contention 1 is outside the scope of this proceeding and must therefore be rejected.

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<sup>65</sup> *Id.* at 10 (quoting *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14 (1999), which in turn quotes *Sierra Club v. Froehlke*, 816 F.2d 205, 210 (5th Cir. 1987)).

b. In Contention 5, the Petitioners state that:

The Final Environmental Impact Statement for the proposed plutonium processing facility is inadequate to satisfy the National Environmental Policy Act because it does not evaluate the environmental impacts of a terrorist attack on the proposed plutonium fuel factory or transport. . . . [A] license must not be given for construction and subsequently for operation of a plutonium fuel factory at the Savannah River Site which is situated on the border of Georgia on the Savannah River because it is vulnerable to malevolent acts such as terrorism and insider sabotage which could create an unacceptable beyond design basis accident. . . . [M]alevolent acts must be analyzed as a foreseeable environmental impact under NEPA. Lack of analysis of the malevolent acts scenario leads to failure to design safeguards and failure to plan for emergency response and mitigation measures.

Petition at 23-25. By this contention, the Petitioners have essentially resubmitted the contention filed by GANE in the earlier proceeding.<sup>66</sup> In addition, the Petitioners assert that, due to “new and significant information,” the NRC must prepare a supplemental EIS as required by 10 C.F.R. § 51.92(a)(2). Petition at 24.

The original GANE contention asserted that the facility is open to malevolent acts, including terrorism and insider sabotage, and that the NRC must address these scenarios in the EIS in order to comply with NEPA. *See id.* at 25. The Petitioners argue that several factors have changed the way the NRC should approach terrorism-related issues. First, they argue that the terrorist attacks of September 11, 2001 — just weeks after the original contention was filed — demonstrate that the possibility of terrorism could no longer be considered as not reasonably foreseeable.<sup>67</sup> Second, they argue that the Department of Homeland Security, in the 2004 National Response Plan, “delegated to the NRC certain responsibilities in the event of a nuclear or radiological terrorist incident.”<sup>68</sup> Third, they argue, the Ninth Circuit Court of Appeals decision in *Mothers for Peace* requires the NRC to consider terrorism under NEPA. *Id.* at 29. Finally, the Petitioners state that the Commission’s subsequent decision to “disregard” the Ninth Circuit’s ruling outside of that court’s geographical range is “unreasonable.” *Id.* at 30.

The Applicant’s response to Contention 5 is fourfold. First, the Applicant asserts that the contention is NEPA-based and thus beyond the scope of this hearing. Second, the Applicant points out that the same contention was already rejected by the Commission in the prior MFFF proceeding, at which time the

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<sup>66</sup> *See Savannah River*, LBP-01-35, 54 NRC at 444-47.

<sup>67</sup> *See* Petition at 28 (quoting *Savannah River*, LBP-01-35, 54 NRC at b).

<sup>68</sup> *Id.* (citing Tom Ridge, Secretary, Dept. of Homeland Security, *Preface to National Response Plan* (Dec. 2004)).

Commission stated that there was no obligation under NEPA for the NRC to consider terrorism or malevolent acts in the MOX licensing proceeding.<sup>69</sup> The Applicant asserts that GANE's failure to appeal the Commission's ruling is enough to support rejecting the contention on "procedural grounds to preclude Petitioners from inappropriately gaining a second opportunity to appeal an already-settled issue to the Commission or the courts." Applicant Answer at 40. Third, the Applicant disagrees with the Petitioners' position that the decision in *Mothers for Peace* supports admitting Contention 5, and argues that the Ninth Circuit's decision is not controlling in this case, by virtue of the Commission's decision in *Oyster Creek*. *Id.* at 41. Finally, the Applicant argues that the Petitioners have not identified new information or circumstances that would require a supplemental EIS under 10 C.F.R. § 51.92(a)(2). *Id.* at 39.

The NRC Staff agrees with the Applicant with respect to the third of these arguments. The Staff rejects the Petitioners' position that *Mothers for Peace* supports admitting the contention, arguing that *Oyster Creek* is controlling. Staff Answer at 24. The Staff claims that the contention thus fails to meet the pleading requirements of 10 C.F.R. § 2.309(f)(1) because it does not include a material dispute that is within the proceeding's scope. *Id.* at 25.

In their reply, the Petitioners concede that they are merely seeking to "preserve the argument in the hope that the NRC will bite the bullet and face the starkly genuine threat that the environment could be impacted by an act of terrorism at a nuclear facility." Reply at 9. The Petitioners maintain that they remain convinced that terrorist attacks against nuclear facilities — especially those containing fissionable material — are foreseeable, and that NEPA requires the NRC to analyze such risks as part of the EIS. *Id.*

Based on the Commission's ruling in *Oyster Creek* and its companion cases (*see* notes 45 and 46, above), we find that Contention 5 is beyond the scope of this proceeding and fails to meet the pleading requirements of 10 C.F.R. § 2.309(f)(1)(iii), (iv), (vi), and is therefore inadmissible. Because the MFFF is located outside the geographic range of the Ninth Circuit, the Commission's decision in *Oyster Creek* is controlling: "NEPA does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks on NRC-licensed facilities." *Oyster Creek*, CLI-07-8, 65 NRC at 129. Because "licensing boards are bound to comply with [Commission adjudicatory decisions] whether they agree with them or not,"<sup>70</sup> we reject Contention 5. *See also Shoreham*, ALAB-156, 6 AEC at 851, and *Private Fuel Storage*, LBP-05-29, 62 NRC at 656 n.33 (both cited in note 43, above)

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<sup>69</sup> Applicant Answer at 39 (quoting *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-24, 56 NRC 335, 338 (2002)).

<sup>70</sup> *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-710, 17 NRC 25, 28 (1983).

In addition to being outside the scope of this proceeding, Contention 5 fails to meet the requirements of section 2.309(f)(1)(iv) and (vi), which require that a contention raise an issue that is “material to the findings the NRC must make to support the action that is involved in the proceeding,” and that has “sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact.” As the Commission stated in *Oyster Creek*, regardless of the *Mothers for Peace* decision, “there simply is no “proximate cause” link between an NRC licensing action . . . , and any altered risk of terrorist attack. Instead, the level of risk depends upon political, social, and economic factors *external* to the NRC licensing process.” *Oyster Creek*, CLI-07-8, 65 NRC at 130.

Furthermore, the Commission has already rejected the same contention in the earlier phase of this proceeding. In that case, the Board admitted the contention only to have the Commission reverse the decision. The Commission held that “the NRC has no obligation under NEPA to consider intentional malevolent acts, such as those directed against the United States on September 11, 2001, in conjunction with licensing of the MOX fuel fabrication facility.”<sup>71</sup>

Petitioners had ample opportunity to seek judicial review of this decision but failed to do so. In addition, the Petitioners have not offered any new information or circumstances that would require a supplemental EIS under 10 C.F.R. § 51.92. Therefore, the Petitioners do not have the necessary grounds to challenge the Commission’s decision rejecting the terrorism contention in the prior proceeding.

## **2. *Lack of Materiality (Contention #2, Accidental Release of Radionuclides)***

Contention 2 alleges that “the license application fails to adequately assess consequences of an accidental release of radionuclides from the plutonium fuel factory.” Petition at 13. It has two subparts. First, the Petitioners claim that “MOX Services relied on outdated regulatory guidance to calculate radiological impacts of a hypothetical criticality event.” *Id.* According to the Petitioners, the Applicant relied on NRC Regulatory Guide No. 3.35, dated 1979, which was withdrawn in 1998. *Id.* Second, the Petitioners claim that the Emergency Plan Assessment<sup>72</sup> submitted by the Applicant has several flaws that invalidate the conclusion that an emergency plan for the MFFF is not required. *Id.* at 15. The

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<sup>71</sup> *Savannah River*, CLI-02-24, 56 NRC at 338 (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002); accord, *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-02-27, 56 NRC 367 (2002)).

<sup>72</sup> Mixed Oxide Fuel Fabrication Facility Evaluation Pursuant to 10 C.F.R. § 70.22(i)(1)(I) — Emergency Plan Assessment (Nov. 2006), ADAMS Accession No. ML063250129 [hereinafter Emergency Plan Assessment].

Petitioners argue that air modeling software used by the Applicant, ARCON96, is not appropriate for calculating doses to the general public because of limitations in the model's source-receptor distance. *Id.* Furthermore, the Petitioners say that the Applicant's projected doses to members of the public if a criticality event occurs, which amount to 86% of the 1-rem dose threshold that would trigger the requirement for a complete emergency plan, are in fact significantly above that threshold when the inhalation dose from radioactive iodine release is correctly converted to a thyroid dose using the FRMAC dose conversion factors. *Id.* at 16.

The Applicant addresses the first subpart of Contention 2 by noting that "NRC Regulatory Guides do not constitute binding requirements" and that the Petitioners have therefore failed to identify any area in which the Application does not meet regulatory requirements. Applicant Answer at 31. In addition, the Applicant says, the Petitioners "have failed to identify any health and safety issue" related to the first subpart of the contention. *Id.* at 32. Finally, the Applicant argues that NRC Staff evaluated the substance of the analysis that the Applicant prepared and determined that, although it was based on outdated guidance, it "was consistent with current guidance and therefore acceptable." *Id.*

The Applicant addresses the second subpart of the contention by arguing that the Petitioners' presentation of "flaws" in the Environmental Plan Assessment is simply erroneous. *Id.* at 33-35. The ARCON96 code was not used to model doses to the general public (the nearest of whom would be over 8 kilometers from the facility), the Applicant says, but was instead used to model doses to a hypothetical individual located "only 160 meters from the MFFF stack." *Id.* at 33-34. Similarly, the projected dose of 86% of the 1-rem threshold was calculated at 160 meters and not at the SRS boundary, over 8 kilometers away. *Id.* at 34. Finally, the Applicant argues, the effective dose impact to the thyroid from radioiodines was included in the overall dose estimation and calculated according to methods prescribed in Federal Guidance Report 11, published by the Environmental Protection Agency (EPA).<sup>73</sup>

The NRC Staff agrees with the Applicant regarding the first subpart of Contention 2. Staff Answer at 17. Although the Staff agrees with the Applicant that the second subpart is also inadmissible, the Staff presents a somewhat different justification for that position. In particular, the Staff argues that calculating the dose from radioiodines in the manner proposed by the Petitioners would violate NRC regulations, and that the second subpart of Contention 2 therefore amounts to an attack on those regulations. *Id.* at 19. Under 10 C.F.R. § 2.335(a), Commission regulations are not subject to attack in adjudicatory proceedings. *Id.* at 19 n.14.

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<sup>73</sup> Applicant Answer at 35 (citing U.S. EPA, Federal Guidance Report 11, Limiting Values of Radionuclide Intake and Air Concentration and Dose Conversion Factors for Inhalation, Submersion, and Ingestion (1988), Table 2.1).

According to the Staff, the other bases proposed for the second subpart of this contention do not satisfy the pleading requirements of 10 C.F.R. § 2.309(f)(1), and the second subpart of the contention is therefore inadmissible.

The Board agrees with the Applicant's and Staff's position regarding the first subpart of Contention 2. Compliance (or noncompliance) with regulatory guidance documents does not necessarily enable a conclusion to be drawn as to the regulations themselves: compliance with a Staff guidance document does not, by itself, prove compliance with all regulatory requirements applicable in a licensing proceeding, and failure to comply with a guidance document does not demonstrate failure to comply with the relevant regulations.<sup>74</sup> Similarly, the fact that a given guidance document upon which an applicant relied was withdrawn does not suffice to support a contention. The Applicant's analysis itself must be challenged, and the fact that it does or does not match the requirements of a specific guidance document — or matches the guidance of a withdrawn document — is only one factor to consider in evaluating the challenge. The first subpart of Contention 2 must therefore be rejected as a stand-alone matter; we turn to the remainder of the contention to determine whether it supplies the necessary additional ingredients of a valid challenge.

On that score, the Board finds that the second subpart of Contention 2 must also be rejected. The fundamental reason for this decision is that, in formulating their contention, the Petitioners appear to have misunderstood the nature of the Applicant's analysis. That analysis, as presented in the Emergency Plan Assessment, appears to be extremely conservative.<sup>75</sup> As noted by the Applicant, the analysis assumes a hypothetical "Individual Outside the Controlled Area," or IOC, who is located only 160 meters from the MFFF stack, rather than the allowable 8.82 kilometers away at the nearest boundary of the SRS (Applicant Answer at 33-34). That hypothetical person would, then, experience doses considerably higher than any member of the public outside the boundaries of the Savannah River Site. If an analysis employing such a conservative assumption indicates that no emergency plan is necessary, then there is a considerable margin between any doses the public — located at least 50 times further away — might receive and the 1-rem threshold that would trigger the emergency plan requirement.

Confusion over the location of the IOC, as opposed to the boundary of the SRS, also appears to underlie the Petitioners' arguments regarding the use of the ARCON96 model. The Petitioners and the Applicant agree that the ARCON96 model is limited to receptors less than 10,000 meters from a source of radioactive

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<sup>74</sup> See *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 98, 100 (1995); *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), ALAB-852, 24 NRC 532, 544-45 (1986).

<sup>75</sup> See Applicant Answer at 33 (citing Emergency Plan Assessment).

material. Petition at 15; Applicant Answer at 33. If the Applicant were using this code to project doses outside the boundaries of the SRS site, the Petitioners' argument could have merit. The Applicant appears, however, to be using the code to estimate doses at much closer range, well within the limitations of the model.

The Petitioners' argument regarding radioiodines and thyroid dose does not depend on this difference in distance, but — as noted by the Staff — is not accompanied by factual support that would satisfy the requirements of 10 C.F.R. § 2.309(f)(1). Staff Answer at 19. The Board need not address whether the logic in the Petitioners' presentation is meant to constitute an attack on Commission regulations, as suggested by the Staff. *See id.* Rather, the Petitioners appear to be back-calculating specific organ doses from the effective dose equivalent that was calculated on the basis of dose to all the organs.<sup>76</sup> On its face, this reverse procedure does not support the allegation that radioiodine exposure could lead to projected doses above the threshold that indicates the need for an emergency plan.

The Board therefore rejects Contention 2 for failure to demonstrate the existence of a factual dispute on a material issue of law or fact and to provide the required support for the Petitioners' position. The contention therefore fails to meet the pleading requirements of 10 C.F.R. § 2.309(f)(1)(v)-(vi), and cannot be admitted.

### **C. Remaining Contentions (#3 and #4, Radioactive Waste Storage)**

#### **1. General Considerations**

Petitioners' third and fourth contentions challenge the Applicant's plans for the handling of radioactive waste that will be generated by the MOX facility. Although the former contention is said to be environmentally based and the latter safety-oriented, the proffered basis for the latter also incorporates the bases underlying the former, and thus to that extent they are interrelated; in any event, the two contentions present a common, overriding issue.<sup>77</sup>

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<sup>76</sup> Even if the Petitioners are correct and the projected thyroid dose should actually be 5.43 rem, the weighting factors of 10 C.F.R. § 20.1004 would still need to be applied to calculate the effective dose equivalent and in turn the total effective dose equivalent that is relevant to the 1-rem threshold. The weighting factor for the thyroid is 0.03, so a thyroid dose of 5.43 rem contributes only 0.16 rem to the effective dose equivalent.

<sup>77</sup> As we read the common basis presented for both contentions, it pleads the existence of sufficient new information to avoid the general ban on consideration of environmental issues at this stage (*see* pp. 184, 192, above). We thus consider the two contentions together. Even if the "environmental" one (#3) is barred, however, the bases it presents survive by virtue of their incorporation in the "safety" contention (#4). In that circumstance, there is little reason to attempt to separate the contentions for present purposes.

That common issue is whether — given the totality of the situation before us — the contentions are speculative and/or premature and, if so, in what fashion a rejection of those contentions, and the possible concomitant dismissal of the pending petition, should be framed and/or conditioned. That matter becomes crucial because if the pending contentions are deemed premature and/or speculative, it would not be because of any defects specific to them but rather because of an overriding circumstance: the timing of the Notice of Hearing, issued before construction had commenced, virtually assures that any contention presented at this juncture that attempts to challenge alleged deficiencies in project construction, or the resultant impact on facility operation, would suffer from similar deficiencies.

Put another way, a Notice of Hearing of the type issued here is generally intended to provide an opportunity to challenge aspects of a facility's construction or subsequent operation. But when such a Notice is issued before construction is commenced, it is to be fully expected that additional petitions to intervene, or statements of contentions, would need to be filed as construction unfolds and (hypothetically) reveals attendant shortcomings. Nonetheless, facility proponents have frequently argued that such later filings should be considered “nontimely.” See further discussion at note 95 (pp. 210-11), below.

We are understandably reluctant to issue a decision that would in effect establish a sorting system, for this case and others, containing only two bins — labeled “premature” and “nontimely” — into which a prospective intervenor's proffered contentions must be placed, thus putting them at a disadvantage on one count or the other. Instead, we must determine whether the proffered contentions are appropriate in this instance, where prematurity norms must be applied in a manner that fits the circumstances; and if not, whether to condition rejection of such contentions so as to preserve the opportunity for them to be re-presented later, if their concerns come to fruition, without having to overcome higher pleading hurdles.

In resolving these questions, we must honor the fundamental purpose served by a Notice of Hearing, one which is so obvious it might be overlooked, i.e., to provide facility opponents a fair opportunity to be heard. Failure to honor that purpose might later provide fertile ground for judicial challenges. We explain our reasoning on these matters below.

## **2. *Parties' Positions***

### **a. *Petitioners' Asserted Basis***

The Petitioners believe that the environmental and safety analyses of the project are deficient in dealing with liquid waste streams. First, as set out in Contention 3, they assert those analyses do not address a matter that has become

apparent since the earlier proceeding, namely, that the Applicant and DOE lack “any concrete plans for construction or operation of the Waste Solidification Building (WSB).”<sup>78</sup> For that reason, and others stated in Contention 4 (Petition at 23) related to operational safety, waste may have to be stored onsite for an extended period of time, thereby raising environmental issues not examined in the EIS and correlative significant safety issues not examined in the SER. Relying upon these points, the Petitioners conclude that it may be fairly assumed that the facility’s waste will end up being stored onsite, with attendant safety and environmental concerns that were not anticipated, much less analyzed, in the documents supporting the Application.<sup>79</sup>

*b. Applicant’s Response*

The Applicant’s position is that Contention 3 is an environmental one that does not provide any new and significant information about the MFFF or the WSB but is merely “speculation regarding the likelihood and timing of DOE’s development of the WSB.” Applicant Answer at 35. The Applicant asserts that “DOE is in fact on schedule to design and construct the WSB.” *Id.* at 37. The Applicant points to the President’s 2008 budget request to Congress as evidence both of the adherence to schedule and the existence of funding.

In terms of the Petitioners’ belief that the application does not address the WSB, the Applicant asserts that the EIS (in § 2.2.4) evaluated the environmental impacts of the WSB and that there is no further NRC requirement in that regard because the “WSB is, after all, a DOE facility separate from the MFFF, and not subject to NRC licensing.” *Id.* According to the Applicant, because only the MOX facility itself comes within the NRC’s jurisdiction, any inquiry at all concerning other aspects of the overall DOE project would be outside the scope of our authority.

Furthermore, the Applicant states, “there is no requirement for the EIS to address the impacts of long-term storage of high-alpha waste at the MFFF based upon speculation that the WSB will not be built.” *Id.* at 37-38. At oral argument,

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<sup>78</sup> Petition at 17. Specifically, the Petitioners assert that “new and significant information now shows that there is no concrete prospect that the WSB will be built before plutonium fuel processing begins or even that it will be built at all.” *Id.* at 18. They support this view with three points: (1) in 4 years DOE has not produced a design for the WSB; (2) there is no agreement between the DOE, NRC, and MOX Services to deal with the waste; and (3) there is no information in the application dealing with the WSB. *Id.*

<sup>79</sup> The Petitioners point in this regard to what they categorize as DOE’s well-known failures to deal promptly and thoroughly with waste management issues (at the Savannah River Site and elsewhere) as lending support to their thesis. Accordingly, they urge that we postpone the adjudicatory process until there is “adequate public assurance that plutonium fuel factory waste will not add further insult to the terribly burdensome waste problem already plaguing SRS.” *Id.* at 23.

the Applicant mentioned that if the WSB is not built, DOE's environment regulations will come into play, triggering an evaluation based on that agency's NEPA procedures, including the public process DOE goes through in dealing with NEPA issues. Tr. at 104-05.

The Applicant raises parallel objections to Contention 4. Specifically, it argues that Contention 4 too is "highly speculative" with "no basis supporting the assertion that high-alpha waste will be stored 'indefinitely' onsite." Applicant's Answer at 38.

*c. NRC Staff Response*

The Staff asserts that issues related to the EIS were to be taken up during the earlier proceeding and are thus outside the scope of this one, unless the Petitioners have shown that the EIS must be supplemented pursuant to the criteria set out in 10 C.F.R. § 51.92(a). The Staff argues that the Petitioners have not made that demonstration.

In that regard, the Staff asserts, the Petitioners want the Staff to amend the EIS simply because DOE has not yet moved forward with the construction of the WSB; according to the Staff, more tangible indicia that DOE is indeed changing its WSB plans are needed, in which case DOE "would be required to publish an amended Record of Decision (ROD) to that effect in the *Federal Register*." Staff Answer at 21. Since DOE has not done so, the need for an amended EIS has not been triggered, leaving "no need to supplement the EIS to account for purely speculative future changes." *Id.*

The Staff too makes the point that this proceeding is limited to the operation of the MOX facility, and since the disposal of waste will happen "at areas of SRS unconnected to the MOX [f]acility and outside the scope of the NRC's regulatory authority, issues related to the *safety* of waste disposition are outside the scope of the Staff's review of the Application." *Id.* at 22. Furthermore, the Staff does not believe that Petitioners have provided the "requisite facts or expert opinion" to support the contention in any event.

**3. Board Ruling**

An understanding of the nature of the issues before us can be readily discerned from the history of this proceeding. Having previously (in 2005) received a construction permit in which a number of issues were understood to be reserved for a later stage, the Applicant now seeks an operating license before any tangible

steps have been taken in the construction of the facility.<sup>80</sup> With that application in hand, the NRC issued the Notice of Hearing, purportedly providing the citizenry, including the Petitioners before us, the opportunity to challenge, among other things, improprieties in the construction process.

But virtually any contention that Petitioners might have in mind at this juncture relating to safety aspects of the construction process as conducted, or of facility operation, would have to contain some element of speculation, given that construction had not yet begun and the design had not yet been completed. In this situation, and in any others where the Notice of Hearing might be viewed as premature (*see, e.g.*, note 89, below), the natural result is that facility proponents will argue that *any* safety contentions will likewise be premature and/or speculative.

If those arguments were to carry the day, however, NRC hearing opportunities could soon come to be viewed as chimerical — a result that would seem to be the opposite of what Commissioners past and present have said is their goal.<sup>81</sup> For in an “early notice” situation like this one, it would never be possible for a petitioner to have a contention admitted if potentially legitimate safety concerns about actual construction practices, or upcoming operational procedures, were automatically rejected, without recourse, because they were filed before construction had either commenced at all or proceeded any distance. It would be paradoxical to let that situation label the challenge, rather than the notice, as premature, thus ending the process and eliminating ready later opportunities to raise construction-practice matters freely.

We begin, then, by turning to an analogy. As was conceded at oral argument (Tr. at 110-11), the license sought in this proceeding (i.e., to possess and to use special nuclear materials at this unusual facility) is the functional equivalent of an operating license for more standard facilities, such as nuclear power plants. Traditionally, operating license applications for such facilities were neither docketed nor noticed for hearing until substantial progress had been made under the previously awarded construction permit, as a crucial issue at the operating

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<sup>80</sup> Construction officially started in the beginning of August 2007, with Petitioners having been required to file their contentions 2 1/2 months earlier, by May 14, 2007.

<sup>81</sup> *See, e.g.*, “A Vision of Tomorrow, A Plan for Today,” a speech by former Commissioner Jeffrey S. Merrifield at the NRC 2001 Regulatory Information Conference (Mar. 14, 2001, NRC News # S-01-005) (“The Commission has a significant responsibility to provide fair and meaningful opportunities for public involvement in our licensing proceedings”); “Perspectives on Nuclear Regulation and the Global Interest in Nuclear Energy,” remarks of Commissioner Peter B. Lyons at the Trombay Colloquium (Mar. 27, 2006, NRC News # S-06-011) (in speaking about the “opportunity for public hearings,” stressing how very seriously the agency takes its “responsibility for public participation” because “when the public has an opportunity to . . . participate in our decision-making process, nuclear safety is enhanced and public confidence in the NRC as a fair, stable and strong nuclear regulator is strengthened”).

license stage was whether the facility had indeed been constructed in accordance with the permit.<sup>82</sup>

In this proceeding, however, the notice of hearing at this operating-license-equivalent stage was issued before construction had even commenced, much less progressed substantially. In that circumstance, the arguments of the Applicant and the NRC Staff that the Petitioners' safety arguments are "speculative" may — by those parties' lights — be true. But those arguments turn out to be either hollow or excessive, for, it bears repeating, *any* safety contention about construction outcomes — a key issue in the regulatory scheme for permits such as this, *see* 10 C.F.R. § 70.23(a)(8)<sup>83</sup> — could scarcely avoid containing elements of speculation or prematurity if it has to be filed before that construction had even commenced.<sup>84</sup>

In that regard, the construction which commenced on August 1 is not scheduled to be completed (assuming full congressional funding along the way<sup>85</sup>) until 2014, 7 years from now. For its part, the Staff Safety Evaluation Report — a key document in the licensing process — is itself not scheduled for release until December 2009, i.e., over 2 years from now.

We thus need to consider not only how this matter should be resolved now under 10 C.F.R. § 2.309(f)(1), *see* pp. 183-84, above, but also how it will progress later. Our decision is informed by documents that bear on the specifics of the two contentions before us. As noted above, the contentions, particularly when read together, raise concerns about waste stream handling and the resultant impact on the safe operation of the facility.

To be sure, as the Applicant and Staff point out, the Waste Solidification Building is not subject to NRC licensing. But that is not the end of the matter. For failure to build the WSB, or to operate it properly, would jeopardize the commitment to operate the MOX facility itself — which *is* subject to NRC licensing — in a safe and environmentally sound fashion, and would thus require alteration of the licensed facility's design or operations to remedy the situation.

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<sup>82</sup> *See, e.g., Consolidated Edison Co. of New York* (Indian Point Station, Unit 2), ALAB-188, 7 AEC 323 (1974) (Staff issued full-power operating license three days after Licensing Board operating license adjudication completed; facility had already begun low-power testing); *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 2), ALAB-384, 5 NRC 612, 614, 619 (1977) (construction 90% completed within 2 years of time for intervention in operating license stage).

<sup>83</sup> Subsection (a)(8), applicable only to a limited type of facility, provides that one issue to be considered here at this stage is whether "construction of the principal structures, systems and components . . . has been completed in accordance with the application."

<sup>84</sup> The Board presiding over another licensing proceeding (the *Pa'ina* irradiator case) recently faced a similar quandary. *See* p. 208 & note 93, below.

<sup>85</sup> The Applicant makes much of the inclusion of project funding in the President's budget. But this is only the beginning of the budget process, with a host of congressional overseers and appropriators involved in the final say as to funding levels.

And matters entirely independent of whether the WSB comes into existence are of even more concern here.

That conclusion should not be a surprising one. Concerns about any interruption in the transfer of liquid waste out of the MOX facility — for *any* reason — have long been recognized as having a resultant, indeed a significant, influence on the safe operation and environmental impact of the MOX facility. For example, when this issue came up in the earlier, construction request phase of the proceeding, the Staff addressed it in the following fashion:

The staff notes that an explicit inventory limit on waste is not specified in the revised CAR. Currently, the facility is designed to accommodate up to 90 days equivalent of most waste solutions (e.g., of the values in Table 11.2-1, because the storage of the [Low Level Waste] destined for the waste solidification building will likely be less than 90 days equivalent), although the applicant anticipated that there will be transfers of liquid wastes every 2 weeks. The applicant indicated that the facility will shut down before exceeding the liquid waste storage capacity. The staff interprets this to mean active waste generating operations would be curtailed at some setpoint before the tankage is completely full, until the potential backlog of waste at the facility is cleared. *Actual setpoints would be defined by [Duke Cogema Stone & Webster] as part of any license application it may later submit.* The staff finds this approach acceptable for construction authorization.

NUREG-1821 (MFFF CAR FSER), § 11.2.1.3.11, at p. 11-48 (emphasis added).

We have not been pointed to anything, and have found nothing, in the Application that explicitly addresses the issues thus raised by the Staff in the first licensing stage. It is thus clear that the key safety issue the Petitioners are seeking to bring forward in Contention 4 involves a matter of some substance that focuses on a real, not a fanciful, safety concern.

On that score, the Staff is currently scheduled to complete its review and to prepare the safety evaluation for this application in December 2009. Presumably, at that time, the Staff will address this matter, as its earlier documents indicated it would. At this point, however, the materials before us indicate that, whether or not the WSB is built, there is some uncertainty about the system for liquid waste handling, enough to call into question the safety of MOX facility operations.

In that regard, 10 C.F.R. § 70.72(a) requires that a licensee “establish a configuration management system to evaluate, implement, and track each change to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel.” The system established under 10 C.F.R. § 70.72(a) must address, among other things, the “[i]mpact of the change on safety and health or control of licensed material,” 10 C.F.R. § 70.72(a)(2), and “[t]he impacts or modifications to the integrated safety analysis, integrated safety analysis summary, or other safety program information . . . .” 10 C.F.R. § 70.72(a)(6). This would require that any increase in the maximum inventory

of either radionuclides or chemicals used to perform the evaluations in the ISA Summary be subject to the requirements of section 70.72(a).

The importance of this issue is also reflected in the concern expressed by the Advisory Committee on Reactor Safeguards (ACRS). Its views on waste handling appear in the comment on the CAR review, to which the Petitioners directed our attention; we quote at some length here from those views because of their relationship to the twin contentions before us:

MF<sup>3</sup> [the MOX facility] will return waste to the Department of Energy. The facility to receive this waste at the Savannah River site has not been designed, nor have the waste acceptance criteria been established. This raises the possibility that additional unit operations will have to be added to MF<sup>3</sup>. Perhaps of more importance, the possibility of unplanned interruptions in waste receipt by the Department of Energy needs to be considered in the integrated safety analysis of the MF<sup>3</sup> design. It will be necessary to conduct operations at MF<sup>3</sup> in a way that assures there is always sufficient waste storage capacity to bring the facility to a safe configuration in the event that waste receipt is interrupted. A protracted hiatus in waste receipt would raise issues of waste aging within MF<sup>3</sup>. Experience has shown chemical evolutions brought on by evaporation, radiolysis, and other chemical processes can lead to the formation of hazardous chemicals or conditions in wastes awaiting transport to the Department of Energy. Measures to mitigate any hazards posed by aging wastes need to be addressed in the safety analyses for the final stage of the authorization process for MF<sup>3</sup> for timeframes of short, intermediate, and long duration.<sup>86</sup>

The Staff statement quoted at p. 204, above, relates directly to this ACRS comment, which in turn raises the broader question of waste storage, independent of the WSB, relating to an interruption in waste transfer to the DOE for *any* reason. The ISA does not consider this because of the assumption of routine and continual waste transfer to the DOE. But together, the third and fourth contentions can be fairly read as raising these broader questions.<sup>87</sup>

The *current existence* of the uncertainty about the safety analysis of the system for liquid waste handling, referred to above, provides a sufficient basis to support the proffered contentions, given the other support the Petitioners have mustered.

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<sup>86</sup>Letter from Graham B. Wallis, Chairman, NRC Advisory Committee on Reactor Safeguards, to Nils J. Diaz, NRC Chairman (Feb. 24, 2005) at 5, ADAMS Accession No. ML050660219.

<sup>87</sup>We quoted at the outset of this decision only a synopsis of the contentions, as set out in the Petition (*see* p. 175, above). The contentions themselves were considerably longer, and we commend the full version of #3 & #4 to the reader's attention. In light of the other record materials before us, we find that, taken together or considering only the safety contention, they deal with a matter of real substance. On that score, our primary concern is with the safety-related contention. Proceeding by analogy to a court's pendent jurisdiction, however, we carry the environmentally related contention along (for now) because of the potential environmental consequences of safety failures. Even if that were impermissible, the safety contention remains.

If that uncertainty is cured, the contentions may later be mooted — but the speculation about the endeavor at this stage must cut against the Applicant, not the Petitioners.

Put another way, although not characterized this way by the Applicant and Staff, the Petitioners have, by alleging that certain necessary safety-related steps or analyses have not been taken, in effect presented a classic “contention of omission.” Responding that the actions will be taken later does not defeat the contention for prematurity. Instead, it merely sets the stage for facility proponents later to bring forward, as they routinely do, a solution that allegedly cures the deficiency; they then move to dismiss the contention, triggering in turn a period during which the Petitioners can amend the original contention to challenge the solution’s substance.<sup>88</sup>

Accordingly, it is appropriate to admit the contentions. We could then proceed to litigate whether the Applicant has given adequate consideration to its waste storage and disposal situation. There may, however, be a number of other ways in which to proceed, short of litigating the merits of the contentions now. Because some of these options were not covered by the previous briefs and at the oral argument, and because after issuing today’s decision we must still address the admissibility of a newly presented contention (*see* p. 175, above), there is time available to present them here as alternatives for the parties to consider and to invite their comments thereon. After receiving those comments, we will couple our final ruling on that matter with our ruling on the remaining contention, making the entire controversy then ripe for Commission review, by way of an appeal by one or more of the parties, or by other means.

With all this background analysis in mind, we express our willingness to reconsider our decision to this extent: we pose the following alternatives — which would insure that if future developments warrant the Petitioners have a fair opportunity to press contentions in the nature of those now admitted — to the admission and adjudication of those contentions at this time:

*i. Reject Those Contentions on Condition That One or More Additional Notices of Hearing Would Be Issued at Appropriate Times*

It seems clear that the drafters of the Rules of Practice did not anticipate the difficulties engendered by Notices of Hearing at this early stage of the construction process, and the Rules are silent as to how we should proceed when faced with

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<sup>88</sup> *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382-83 (2002), as to this common process.

that circumstance.<sup>89</sup> In making the determination as to how best to fill in that regulatory gap, we could take guidance from the new rules applicable to the so-called “combined operating licenses” (COLs).<sup>90</sup>

Those rules establish a one-step process in which the initial Notice of Hearing, covering both the construction and operating phases, is issued at the outset of a proceeding. Superficially, then, it might appear that petitioners in such proceedings would be faced with the same difficulties as the Petitioners before us, namely, a situation in which they must file at the outset contentions challenging construction that has not yet taken place.

Upon analysis, however, the guidance provided by the COL rule could prove apt here. For the COL rule specifically provides that an additional Notice of Hearing will be issued as completion of construction nears, so as to allow facility opponents to seek — in the ordinary course and without undue burden (*compare, e.g.,* reopening closed proceedings, touched on at Tr. 90, 112-13) — a hearing based on problems revealed by prescribed inquiries.<sup>91</sup> Perhaps something of a

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<sup>89</sup> It is not just this case in which this type of issue might arise. A similar situation could develop with respect to proceedings involving applications by holders of licenses to operate nuclear power plants to renew or to extend the standard 40-year term of those licenses for an additional 20 years. By rule and decision, the Commission has mandated that any safety-related opposition to such renewal can be based only on matters stemming from the “aging” of the facility. *See* 10 C.F.R. §§ 54.21 and 54.29; *see also* Final Rule: “Nuclear Power Plant License Renewal; Revisions,” 60 Fed. Reg. 22,461, 22,463 (May 8, 1995); *see, e.g., Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 7-8 (2001).

Naturally, such renewal applications have to be filed some time in advance of the expiration of the initial 40-year license term, both to allow for the expected length of the proceeding and to provide the licensee the opportunity to formulate alternative plans for serving electric demand were the requested renewal to be denied. Typically, such applications have been filed some 5-10 years before license expiration. The Commission’s Rules, however, allow for filing for the extension as much as 20 years before license expiration. 10 C.F.R. § 54.17(c). (Recently, the Commission waived that rule to allow a licensee to apply for extension some 21 1/2 years before license expiration. *See* Vogtle Electric Generating Plant Units 1 and 2 License Renewal Application (June 2007) at 1.1-13.)

That situation would appear to have the potential to raise the same type of question that we face: where a facility has not yet aged to the point where aging impacts were expected to be felt, petitioners could have difficulty in raising certain types of contentions that would focus on the impacts of aging on the specific facility before the proceeding’s curtain is closed for want of a valid contention.

<sup>90</sup> Licenses, Certifications, and Approvals for Nuclear Power Plants; Final Rule, 72 Fed. Reg. 49,352, 49,536-37 (Aug. 28, 2007).

<sup>91</sup> In particular, 10 C.F.R. § 52.103(a) states that

Not less than 180 days before the date scheduled for initial loading of fuel into a plant by a licensee that has been issued a combined license under this part, the Commission shall publish notice of intended operation in the *Federal Register*. The notice must provide that any person whose interest may be affected by operation of the plant may, within 60 days, request that the

(Continued)

similar nature could be employed here; we leave it to the Applicant and Staff to suggest at what later stage(s) such additional notice(s) might be employed here (e.g., following SER issuance), and to announce their support for such a measure, if they choose to do so.<sup>92</sup>

*ii. Defer Ruling on the Contentions Until a More Appropriate Time*

In suggesting this alternative, we take a cue from the action recently taken by our colleagues on the *Pa'ina* Board (*see* note 84, above). There, those opposing the licensing of an irradiator that was the subject of an adjudicatory hearing sought a stay of the Staff's issuance of the license pending the outcome of the adjudicatory process. Under the rules applicable to that type of proceeding, a stay must be sought within 5 days of the "issuance of the notice of the NRC staff's action." 10 C.F.R. § 2.1213(a).

The stay request pointed to certain irreparable injury, but the applicant then replied that such injury was not imminent, in that it could not occur until that applicant was able to secure a lease for the property upon which it sought to place the irradiator. At that time, there was thus no irreparable harm threatened upon which to base a stay. But once the harm were to become actualized, it would be too late under the rules to request a stay.

Faced with this paradox, the Board took the eminently sensible — and just — step of simply holding the motion in abeyance until the conditions leading to the potential irreparable injury were actualized. Furthermore, the Board required the Applicant to keep the Board updated on the status of the lease negotiations.<sup>93</sup>

By the same token here, if on reconsideration we were to determine that the Petitioners' contentions were not ripe now but might later be actualized, we could simply defer taking action on their admissibility. This option benefits the parties by now freeing them from litigation that may prove unnecessary. At some further

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Commission hold a hearing on whether the facility as constructed complies, or on completion will comply, with the acceptance criteria in the combined license . . . .

72 Fed. Reg. at 49,536-37.

<sup>92</sup>To be sure, the regulations governing enrichment facilities provide for a single construction/operation hearing. 10 C.F.R. § 70.23a. But the issue of concern here apparently did not arise at either the *LES* and *USEC* hearings, i.e., there was no suggestion that those enrichment facility hearings (or the issuance of their construction/operation licenses) had to await either the start or the substantial completion of facility construction. For that reason, we do not believe that the decisions therein provide us definitive guidance on how to proceed here.

<sup>93</sup>*See Pa'ina Hawaii*, Licensing Board Order (Temporarily Holding in Abeyance Stay Application) (Oct. 5, 2007) (unpublished).

stage, after events had removed the prematurity, we could take up the question of their admissibility, or that of amended contentions.<sup>94</sup>

*iii. Reject the Contentions but Determine Not To Dismiss the Proceeding at This Juncture*

Under this approach, we would reject the contentions but not dismiss the proceeding, instead simply holding the adjudication open. This step would recognize that the Petitioners have demonstrated their standing and have put forward contentions that might be better considered when their merits become more ripe, as they have the potential to do. Upon motion by the parties presented to us at an appropriate juncture, we could reconsider the admissibility of the contentions (or new or amended ones, *see* note 95, below) and, if admitted, consider whether their merits should be disposed of summarily.

*iv. Reject the Contentions in Return for Acceptance of a License Condition*

Were the Applicant to agree to accept a license condition requiring the availability of the WSB and the needed implementation of alarms, setpoints, and procedures before it could begin to receive material for processing, it would have to seek amendment of that license condition were its plans to change. Agreement of the parties that an amendment would automatically trigger a new Notice of Hearing would provide the Petitioners essentially the same opportunity they seek now to preserve, and the contentions could be rejected, without prejudice, to abide events.

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In proffering these alternatives, we are (1) giving recognition to the Petitioners having been found to have standing and (2) noting that, as events unfold over the next 7 years, appropriate avenues could therefore be made available by the

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<sup>94</sup> In proffering this alternative, we recognize that the Commission has “long declined to assume that licensees will refuse to meet their obligations under their licenses or our regulations.” *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 29 (2003) (citing *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000)); *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-8, 41 NRC 386, 400 (1995); *Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-207, 7 AEC 957, 958 (1974)). But given the timing of the Notice of Hearing here, contentions challenging construction outcomes will necessarily contain an element of the theoretical. As we have seen, that is not the Petitioners’ fault — the Applicant’s plans themselves have elements of incompleteness and are thus open to challenge via contentions of omission. *The overriding consideration is a simple one: the Petitioners are raising a serious safety matter that troubles both the ACRS and this Board.* To reject their contention(s) and dismiss the proceeding at this juncture would be to abdicate our responsibilities and to raise questions about the legitimacy of our processes.

Commission or by the Staff to provide due and fair opportunity for the submission of additional contentions without placing unnecessary hurdles and inconsistent directives (*see* note 95, below) in the Petitioners' path. We suspect that such additional contentions may well be filed from time to time as construction developments unfold and reveal possible shortcomings upon which contentions might plausibly be based; it would serve the public interest were a way developed to consider them fairly.<sup>95</sup>

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<sup>95</sup> In this regard, there is an apparent inconsistency between two portions of the Commission's rules establishing a framework for considering contentions filed after the initial petition was due. That being so, we take this opportunity to observe that any new contentions filed by these Petitioners — whose original petition was timely and who have demonstrated their standing — that are attributable to the Applicant's construction activity or change of plans or design, should be governed by the basic provisions of 10 C.F.R. § 2.309(f)(2) rather than by the more restrictive elements of 10 C.F.R. § 2.309(c) applicable to "nontimely filings."

In explaining that inconsistency, we start with the basic rule governing contentions (10 C.F.R. § 2.309(f)), which indicates (in subsection (2) thereunder) that contentions "must be based on documents or other information available at the time the petition is to be filed . . ." Along those lines, new or amended contentions can be freely filed, at least with respect to environmental contentions, if new data or conclusions appear in new documents. *Id.*

Otherwise, after the initial filing, permission of the Board must be sought to file new or amended contentions. Such permission is to be given only if (i) the contention is based on information which "was not previously available"; (ii) that information is "materially different than information previously available"; and (iii) the contention was submitted "*in a timely fashion*" in terms of "the availability of the subsequent information." 10 C.F.R. § 2.309(f)(2)(i)-(iii).

As sensible and fair as that provision would appear, "nontimely . . . contentions" (which presumably are different from the "new or amended contentions" defined as "timely" above) may be accepted only upon a showing of good cause for failure to file on time and a weighing of, among other things, "the availability of other means" for protecting the interest asserted, the extent to which that interest will be represented by existing parties, and "the extent to which the [petitioner's] participation will broaden the issues or delay the proceeding." 10 C.F.R. § 2.309(c)(1)(i)-(viii).

The apparent inconsistency in these regulations has drawn comment from prior Boards, each of which has concluded that when new contentions are based on breaking developments or information, they are to be treated as "new or amended," not as "nontimely." *See, e.g., AmerGen Energy Co.* (Oyster Creek Nuclear Generating Station), LBP-06-11, 63 NRC 391, 395-96 & n.3 (2006); and *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-05-32, 62 NRC 813, 821 & n.21 (2005). We adopt that same interpretation, as it generally reconciles the apparently inconsistent regulations. To do otherwise would seem to leave grave doubts both (1) as to how the regulations should be applied in circumstances like those before us, and (2) as to the legitimacy of the dramatically different impact they can have, if not applied cautiously, on parties who are essentially similarly situated except for having one contention, versus none, admitted initially. And even if the contentions were somehow deemed nontimely, in the circumstances before us there would be *per se* "good cause" for that shortcoming if they were filed within a reasonable period (say 30 days as other Boards have directed) of the new developments which triggered them. Moreover, it could fairly be said in that circumstance that it was not the Petitioners' participation, but the Applicant's and Staff's action, which "broaden[ed] the issues" or "delay[ed] the proceeding." Put another way,

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Because another, related matter was presented to us recently and remains to be decided, we are issuing today's decision in preliminary or interlocutory form. It will not be finalized until we rule on the additional contention recently filed by the Petitioners.

For that reason, and because the lengthy construction schedule allows us to take some additional time to resolve this matter properly and completely without harming any party's legitimate interests,<sup>96</sup> we use this interim period to solicit the views of the parties as to the four alternatives we have suggested, including at what stages the Applicant and the Staff would be prepared to have new Notices of Hearing issued if we were to close this proceeding as they had previously urged. At the time we decide those matters, we will also rule upon the admissibility of the additional pending contention. That order, whether it confirms the judgments announced today or reconsiders and revises them, will constitute our final ruling on the Petition herein, thus triggering the running of the applicable period for appeal to the Commission.

We concede that this approach may be viewed as unorthodox. But so are the questions that have been presented to us. Had we accepted the Applicant's and the Staff's view and dismissed outright the waste-related contentions and the attempted intervention — in circumstances where the notice of hearing was issued so far in advance of concrete developments on the construction front — our decision would, we think, have called the integrity of the proceeding into question.

An outright dismissal would raise profound questions about the fairness (in terms of procedural due process) of an interpretation of the regulations that would result in a Notice of Hearing being largely fanciful in terms of creating a genuine opportunity for a hearing. Instead, what the Applicant's and Staff's interpretation would accomplish is to have the Notice of Hearing create — whether inadvertently or deliberately — the opportunity, not for a hearing, but for an especially early termination of unfettered hearing rights.

In that respect, our decision avoids having the Notice of Hearing become

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if the developments which led to the new contention are the result of physical activity or written publications of an applicant or of the Staff, why would a "broadening of the issues" be attributed to the reaction of a petitioner in bringing a challenge to those new developments, rather than to the action of the parties that generated the new developments in the first place? As to another factor, there being no other "existing parties," these Petitioners' interests could of course not be otherwise represented. 10 C.F.R. § 2.309(c)(1)(vi).

<sup>96</sup>In this regard, this may be the appropriate place to observe that a party's objections to brief extensions of time sought by its adversaries, in circumstances where those extensions cannot possibly have any real-world adverse impact, would seem to lack the comity litigants usually extend to each other.

illusory or misleading,<sup>97</sup> a result the Commission surely did not intend in promulgating its regulations.<sup>98</sup> In that vein, we are unwilling to accept the Applicant's and Staff's position when doing so would require us to issue a decision that mocks, rather than furthers, the values inherent in a fair process.<sup>99</sup>

At the end of the day, it might turn out that the course we are following will lead to a result fully consistent with what occurred at the earliest stage of the proceeding, when the Commission created — outside of the regulations — a split-scope adjudicatory process (*see* note 41, above) designed for this proceeding. By parity of reasoning to what the Commission did at the outset, it would serve the public interest were the parties to aid us in finding a way to fill in the regulatory interstices by creating an effective, efficient, and fair means for dealing with the quandary before us. Whether or not our case management authority (*see* 10 C.F.R. § 2.319) would allow us to do the same on our own, it seems clear that the parties could agree to follow such a course (subject to our finding it to be in the public interest).

#### **D. Post-Argument Matters**

As noted at the outset, several matters have been raised with us since the oral argument. We dispose of two of them here. The other must await our receipt of responsive pleadings, which we expect shortly.

##### **1. Proposed Dismissal of NIRS**

The Applicant's motion to deny NIRS's request for a hearing as a sanction for

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<sup>97</sup> As former Commissioner Merrifield once stressed, “enhancing public confidence and *communicating honestly and effectively with the public*” are not burdens, but responsibilities. “Safety: The Foundation upon Which Economic Value Is Built,” remarks at 2001 ANS Annual Meeting (June 18, 2001) (NRC News # S-01-05) (emphasis added). Although there stressing the industry's responsibilities, surely the values he mentioned are those of this agency as well.

<sup>98</sup> We are unwilling to ascribe such an intent to the Commission's realignment of the Rules of Practice over the past 10-15 years. To be sure, the rule changes were explicitly intended to promote efficiency and effectiveness. Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,169-76 (Aug. 11, 1989); Policy on the Conduct of Adjudicatory Proceedings, Policy Statement, 63 Fed. Reg. 41,872, 41,873 (Aug. 5, 1998); Changes to the Adjudicatory Process; Final Rule, 69 Fed. Reg. 2182, 2190-91 (Jan. 14, 2004). But each time the Commission repeated that instruction, it coupled it with the admonition that the changes were not intended to create unfairness. 54 Fed. Reg. at 33,170-71; 63 Fed. Reg. at 41,873; 69 Fed. Reg. at 2191. We trust that the resolution we ultimately reach in this proceeding will resolve the host of fairness issues raised by the “premature notice.”

<sup>99</sup> As we see it, it is not so much the contention at issue (or any other safety contention that might have been filed) that should be called premature. Rather, it is the Notice of Hearing that more accurately deserves that label.

the nonappearance of any NIRS representative at oral argument appeared to have much to commend it when filed. The Applicant is generally correct that a party should not be permitted to participate in a proceeding when it absents itself from a scheduled session without first requesting that it be excused from participating.

In light, however, of the explanation thereupon given by the NIRS Director regarding not only the circumstances surrounding her absence but also her belief that her attendance was not required because of the joint nature of the Petitioners' presentation, we deny the Applicant's motion. In doing so, we nonetheless emphasize that all parties are obligated (unless excused) to attend scheduled sessions as well as to communicate readily and cooperatively with each other when the conduct of adjudicatory business requires it. With all parties now fully attuned to these obligations, the Board expects that no party's conduct in this regard will require the filing of any further motions for sanctions.

## **2. *Filing Delay***

The Petitioners' suggestion that we delay our opinion to await the filing of an additional contention, a suggestion strongly opposed by the Applicant, has been overtaken by events. The delay in issuing this opinion (*see* note 4, above) was unrelated to the Petitioners' suggestion (*see* our unpublished Oct. 17, 2007, Memorandum providing "Notice of Expected Date for Decision"). The filing of the additional contention mooted both the suggestion and its opposition.

## **3. *Additional Contention***

The Applicant's and Staff's responses to the additional contention now before us are due around month's end. The Board will begin its deliberations on that matter at the expiration, in the first week of November, of the Petitioners' time to file a reply. It is our present expectation to decide that matter at the same time we rule on the parties' "reconsideration" submittals called for elsewhere in this opinion, at which time our ruling on the intervention petition will be final and subject to Commission review.

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In accordance with the foregoing opinion, the parties shall proceed as follows:

1. The Applicant and the NRC Staff shall file by Friday, November 9, briefs addressing the "reconsideration" alternatives set out in section III.C.3, above, and any related matters — or other alternatives — they wish to bring to the Board's attention.
2. The Petitioners shall file by Monday, November 19, a response to the Applicant's and Staff's briefs.

The Board will combine its decision on those matters with its ruling on the additional contention filed on October 5, about which the last pleadings are due, pursuant to our regulations, in the first week in November.

For the reasons assigned in the foregoing opinion, the Board has reached the following conclusions:

1. The Applicant's request for sanctions against NIRS is DENIED.
2. Each of the Petitioners has demonstrated its representational STANDING to participate in this proceeding.
3. Petitioners' contentions # 1, #2, and #5 are inadmissible and are DISMISSED.
4. Petitioners' contentions #3 and #4 are ADMITTED, and Petitioners' request for a hearing is thus GRANTED, with both rulings subject to the reconsideration that will occur regarding contentions #3 and #4, and with the grant of a hearing also dependent upon the Board's eventual ruling on contention #6.
5. The Board's decision is, by virtue of its interlocutory nature, NOT FINAL, and thus no appeal to the Commission is in order at this point; the time for any such appeal has therefore not yet begun to run against any party.

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD

Michael C. Farrar, Chairman  
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros  
ADMINISTRATIVE JUDGE

Lawrence G. McDade  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
October 31, 2007

Copies of this Memorandum and Order were sent this date by e-mail to (1) counsel for Applicant Shaw AREVA MOX Services, (2) counsel for the NRC Staff, and (3) the representatives of Petitioners Blue Ridge Environmental Defense League (BREDL), Nuclear Watch South (NWS), and the Nuclear Information and Resource Service (NIRS).

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Dale E. Klein**, Chairman  
**Gregory B. Jaczko**  
**Peter B. Lyons**

**In the Matter of**

**Docket No. 52-008-ESP**

**DOMINION NUCLEAR NORTH  
ANNA, LLC  
(Early Site Permit for North Anna  
ESP Site)**

**November 20, 2007**

The Commission approves the Early Site Permit for the North Anna facility.

**EARLY SITE PERMITS: MANDATORY HEARINGS**

In a mandatory ESP hearing, the NRC must address six issues:

*Safety Issue 1:* whether the issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public.

*Safety Issue 2:* whether, taking into consideration the site criteria contained in 10 C.F.R. Part 100, a reactor, or reactors, having the characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public.

*Overriding NEPA Issue:* whether the review conducted by the Commission pursuant to the National Environmental Policy Act (NEPA) has been adequate.

*NEPA Baseline Issue 1:* whether the requirements of section 102(2)(A), (C), and (E) of NEPA and the regulations in [10 C.F.R. Part 51, Subpart A] have been complied with in this proceeding.

*NEPA Baseline Issue 2:* independently consider the final balance among the

conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken.

*NEPA Baseline Issue 3:* determine, after considering reasonable alternatives, whether the construction permit . . . should be issued, denied, or appropriately conditioned to protect environmental values.

#### **EARLY SITE PERMITS: MANDATORY HEARINGS**

NEPA Baseline Issue 1 requires that the NRC determine, among other things, whether it has complied with NEPA § 102(2)(C)(iii), which in turn requires the NRC to provide a “detailed statement” on “alternatives to the proposed action.”

#### **COUNCIL ON ENVIRONMENTAL QUALITY: GUIDANCE**

Although the CEQ’s guidance does not bind us, we give such guidance substantial deference.

#### **NEPA: ENVIRONMENTAL IMPACT STATEMENTS**

Our own examination of the entire administrative record leads us to conclude that the Staff’s underlying review *was* sufficiently detailed to qualify as “reasonable” and a “hard look” under NEPA. Our discussion of this issue today adds necessary additional details and constitutes a supplement to the FEIS’s alternative site review.

#### **NEPA: ENVIRONMENTAL IMPACT STATEMENTS**

According to the courts, agencies may defer certain issues in an EIS for a multistage project when detailed useful information on a given topic is not “meaningfully possible” to obtain, and the unavailable information is not essential to determination at the earlier stage. The CEQ has likewise recognized that information may be unavoidably incomplete or unavailable, and that under those circumstances, an FEIS can overcome this deficiency if it states that fact, explains how the missing information is relevant, sets forth the existing information, and evaluates the environmental impacts to the best of the agency’s ability.

#### **EARLY SITE PERMITS: UNRESOLVED ISSUES**

#### **COMBINED OPERATING LICENSES: UNRESOLVED ISSUES**

Where, as here, one or more particular environmental impacts cannot be

meaningfully assessed at the ESP stage, those matters may be designated as “unresolved,” provided they do not interfere with the Staff’s ability to determine whether there is any obviously superior alternative to the proposed site.

#### **POLICY STATEMENTS**

Policy Statements are neither rules nor orders, and therefore do not establish requirements that bind either the agency or the public.

#### **NEPA: ENVIRONMENTAL JUSTICE**

Executive Order 12,898 itself does not establish new substantive or procedural requirements applicable to NRC regulatory or licensing activities.

#### **NEPA: FINAL ENVIRONMENTAL IMPACT STATEMENT**

An FEIS is necessarily more concise than the underlying pre-FEIS analysis, as the explanation is intended to summarize the analysis in a manner both concise and understandable to the public. In *LES*, we explained that an FEIS’s discussion need not be “elaborate or lengthy,” but found a “conclusory statement on ‘some negative impact’ on property values, without explanation or analysis,” to be plainly deficient.

#### **NEPA: ENVIRONMENTAL IMPACT STATEMENTS**

NRC’s NEPA process for preparation of an environmental impact statement mandates openness and clarity.

#### **NEPA: ENVIRONMENTAL JUSTICE**

Given the fact-specific nature of environmental justice issues and inquiries, we believe that the methods and form of Staff review — including any decision whether to hold discussions with knowledgeable community and governmental representatives — is best left to the informed discretion of the Staff.

#### **NEPA: ENVIRONMENTAL JUSTICE**

The Staff’s explanation of how it reached its conclusions regarding environmental justice is rather cursory for a licensing action of this magnitude. However, in this instance, the Commission does not direct the Staff to supplement its environmental justice review, as the Commission otherwise might, because it believes

that the review was sufficient and that such a supplement would constitute a purely academic exercise with little or no practical benefit.

The Staff's review did not clearly comport with the letter of the Commission's environmental justice Policy Statement, or with its internal Staff guidance. However, it appears to the Commission that the Staff's review satisfied the statutory and regulatory requirements of NEPA, in that it did take a "hard look" at the environmental impacts of the construction and operation of new units on the North Anna ESP site. On a practical level, its review was sufficient to identify significant environmental impacts that would fall heavily on a particular minority or low-income community.

## **RADIOLOGICAL DOSE**

For light-water-cooled reactors (LWRs), section 20.1301(e) would be the limiting standard, because a licensee within the uranium fuel cycle could not release the 100-mrem limit permitted by section 20.1301(a) without necessarily violating the 25-mrem limit of section 20.1301(e) that applies to the entire site.

Specific numerical guidelines for maintaining effluent releases ALARA for non-LWRs have not been developed. Unless and until such guidelines are implemented, whether a particular non-LWR design complies with ALARA requirements will be determined on a case-by-case basis in the context of a future COL or CP application referencing the ESP.

In making its determination on the postulated source terms, the Staff did not, and need not, authorize the proposed reactors to release radioactivity in the amounts used in connection with the dose estimates. Rather, the Staff used conservative estimates to conclude that two new units bounded by the postulated source terms *could* comply with applicable radiation standards found in 10 C.F.R. Part 20. However, *actual compliance* with applicable radiation standards is deferred at the ESP stage, and can only be determined in a COL or CP proceeding, when the applicant must proffer necessary design information and proposed operational programs.

If a COL or CP applicant chooses to pursue a new reactor design before the Commission has set specific standards applicable to that type of reactor, then the applicant will be subject to the existing requirement of 10 C.F.R. § 20.1301(a)(1), and will further be required to demonstrate that its emissions will be ALARA pursuant to 10 C.F.R. §§ 50.34a, 50.36a, and 20.1101. While the design objectives found in Appendix I could potentially serve as guidance to the Staff in performing its review in this area, they would not bind such a CP or COL applicant.

## **EARLY SITE PERMITS**

Approval of an ESP does not — and is not intended to — approve the construction or operation of reactor(s) of any specific design at the proposed ESP site.

## **COMBINED OPERATING LICENSE: ACTION ITEMS; REPRESENTATIONS AND ASSUMPTIONS**

Like permit conditions, site characteristics, and plant parameter values, the COL action items identify significant information requirements that do not affect the Staff's ability to make the requisite safety findings for issuance of an ESP, but nevertheless merit tracking and resolution during the safety review performed for a subsequent CP or COL application referencing the ESP. By contrast, the "representations, assumptions, and unresolved issues" discussed in the FEIS serve a different purpose. "representations and assumptions," as well as any other key assumptions that are captured within the text of the FEIS, help to form the basis for the Staff's "finality" determinations in the environmental arena during any subsequent CP or COL proceeding. However, they neither place limitations on the ESP or the ESP holder, nor bind a CP or COL applicant in the preparation of future applications referencing the ESP.

## **NEPA: ENVIRONMENTAL IMPACT STATEMENT**

In the environmental context, the contents of the FEIS bound the reach of both issue preclusion and Staff inquiry into new and significant information in a future CP or COL proceeding referencing an ESP granted for the North Anna ESP site.

## **MEMORANDUM AND ORDER**

Today, we approve issuance of an early site permit (ESP) for the North Anna ESP site in Louisa County, Virginia.

\* \* \* \*

On June 29, 2007, a split Atomic Safety and Licensing Board issued its Initial Decision<sup>1</sup> in the "mandatory hearing" portion of this adjudication addressing Dominion Nuclear North Anna, LLC's (Dominion) 2003 application seeking an ESP for a parcel of land located within the boundaries of the North Anna Power Station. The majority of the Board approved issuance of the North Anna ESP,

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<sup>1</sup> LBP-07-9, 65 NRC 539 (2007).

while the dissenting judge would have denied the ESP due to insufficiencies in the NRC Staff's and Dominion's examinations of alternative sites and alternative design features related to water conservation.

In today's Memorandum and Order, we examine the differing views of the majority and dissent on those two issues. Although we find flaws in the Staff's explanation of its alternative site review, we nonetheless conclude that the majority has the better of the argument. We also address three issues that the Board recommended that we consider:

- (i) Did the Staff's environmental justice analysis in the FEIS [Final Environmental Impact Statement<sup>2</sup>] follow the "greater detail" guidance set forth in the Commission's Environmental Justice Policy Statement?<sup>3</sup>
- (ii) How do the NRC's multiple radiation protection standards (and the ALARA concept) apply to new reactors that are proposed to be added at a site with preexisting nuclear reactors and radiological effluents?
- (iii) How should the Commission apply its statement prohibiting partial ESPs and ESPs where adequate information is not available to a situation where significant elements of the plant parameter envelope for the ESP are missing and numerous siting issues are unresolved due to lack of information?<sup>4</sup>

In addition to these issues, we also briefly address issues regarding hydrology and tritium.<sup>5</sup>

Under our regulations and jurisprudence, we "must review and approve the Licensing Board's Initial Decision authorizing [the] issuance" of an ESP before it can become effective.<sup>6</sup> Based on our analysis of the questions set forth above and also of the issue on which the majority and dissent differed, we approve the Board's Initial Decision. We base all of today's determinations on our review of the Initial Decision, the Staff's and Dominion's briefs addressing these same matters, and the underlying administrative record.

## I. BACKGROUND

Dominion filed its application for an ESP for the North Anna site in 2003. The

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<sup>2</sup> NUREG-1811, "Environmental Impact Statement for an Early Site Permit (ESP) at the North Anna ESP Site — Final Report" (Dec. 2006) (FEIS).

<sup>3</sup> Final "Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions," 69 Fed. Reg. 52,040, 52,048 (Aug. 24, 2004) (Policy Statement).

<sup>4</sup> CLI-07-23, 66 NRC 35, 35-36 (2007).

<sup>5</sup> See LBP-07-9, 65 NRC at 569-79 (hydrology), 579-83 (tritium).

<sup>6</sup> *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-7, 65 NRC 122 (2007); 10 C.F.R. § 2.340(f).

requested site is adjacent to, and generally west of, the two existing North Anna reactors (Units 1 and 2). A group of intervenors challenged the ESP application. Their issues were resolved and the contested portion of this proceeding concluded in October 2006.<sup>7</sup> At that point, this proceeding became uncontested, but was still subject to the mandatory hearing requirement of the Atomic Energy Act of 1954, as amended (AEA).<sup>8</sup> In this mandatory ESP hearing, the NRC must address six issues:

**Safety Issue 1:** whether the issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public.<sup>9</sup>

**Safety Issue 2:** whether, taking into consideration the site criteria contained in 10 C.F.R. Part 100, a reactor, or reactors, having the characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public.<sup>10</sup>

**Overriding NEPA Issue:** whether the review conducted by the Commission pursuant to National Environmental Policy Act (NEPA)<sup>11</sup> has been adequate.<sup>12</sup>

**NEPA Baseline Issue 1:** whether the requirements of section 102(2)(A), (C), and (E) of NEPA<sup>13</sup> and the regulations in [10 C.F.R. Part 51, Subpart A] have been complied with in this proceeding.<sup>14</sup>

**NEPA Baseline Issue 2:** independently consider the final balance among the conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken.<sup>15</sup>

**NEPA Baseline Issue 3:** determine, after considering reasonable alternatives, whether the construction permit . . . should be issued, denied, or appropriately conditioned to protect environmental values.<sup>16</sup>

The Board conducted an evidentiary hearing on these six required safety and

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<sup>7</sup> See LBP-06-24, 64 NRC 360 (2006).

<sup>8</sup> AEA § 189a, 42 U.S.C. § 2239(a).

<sup>9</sup> Dominion Nuclear North Anna, LLC; Notice of Hearing and Opportunity To Petition for Leave to Intervene; Early Site Permit for the North Anna ESP Site, 68 Fed. Reg. 67,489 (Dec. 2, 2003) (Notice of Hearing). See also 10 C.F.R. § 2.104(b)(1)(iv); *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 33 n.32 (2005) (*Clinton I*).

<sup>10</sup> Notice of Hearing, 68 Fed. Reg. at 67,489. See also 10 C.F.R. § 2.104(b)(1)(i)(d)(2); *Clinton I*, CLI-05-17, 62 NRC at 33 n.32.

<sup>11</sup> 42 U.S.C. §§ 4321-4347.

<sup>12</sup> 10 C.F.R. § 51.105(a)(4). See Notice of Hearing, 68 Fed. Reg. at 67,489.

<sup>13</sup> 42 U.S.C. § 4332(2) (A), (C), (E).

<sup>14</sup> 10 C.F.R. § 51.105(a)(1). See Notice of Hearing, 68 Fed. Reg. at 67,489.

<sup>15</sup> 10 C.F.R. § 51.105(a)(2). See Notice of Hearing, 68 Fed. Reg. at 67,489.

<sup>16</sup> 10 C.F.R. § 51.105(a)(3). See Notice of Hearing, 68 Fed. Reg. at 67,489.

environmental issues and issued its Initial Decision on the uncontested portion of this proceeding. We invited briefs on the Board's three questions, the issues of alternative site review and alternative design features, and the Board's remarks suggesting deficiencies in Dominion's and the Staff's evidence and arguments. The Staff and Dominion filed the requested briefs.<sup>17</sup> We turn now to those issues.

## II. DISCUSSION AND ANALYSIS

### A. Alternative Sites

#### 1. *Legal Standards and Commission Guidance*

NEPA Baseline Issue 1 requires that the NRC determine, among other things, whether it has complied with NEPA § 102(2)(C)(iii), which in turn requires the NRC to provide a "detailed statement" on "alternatives to the proposed action."<sup>18</sup> Our regulations require an ESP applicant to submit as part of its application an Environmental Report (ER) that addresses, among other things, "[a]lternatives to the proposed" site "sufficiently complete to aid the Commission in developing and exploring, pursuant to [NEPA] section 102(2)(E), . . . appropriate alternatives to recommended courses of action."<sup>19</sup> The ER must identify "[a]ll reasonable alternatives"<sup>20</sup> and "must . . . evaluat[e] . . . alternative sites to determine whether there is any obviously superior alternative to the site proposed."<sup>21</sup>

The Staff, after analyzing the ER and performing its own independent review, must publish for public comment a Draft Environmental Impact Statement

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<sup>17</sup> Dominion's Brief in Response to CLI-07-23 (Aug. 23, 2007) (Dominion's Response Brief); NRC Staff's Response to Commission's August 2, 2007, Order (Aug. 23, 2007) (Staff's Response Brief). Both parties declined to file reply briefs.

<sup>18</sup> 42 U.S.C. § 4332(2)(C)(iii).

<sup>19</sup> 10 C.F.R. § 51.45(b)(3) (internal quotation marks omitted). See Dominion Nuclear North Anna's Environmental Report at pp. 3-9-1 to 3-9-8 (Rev. 9, Sept. 2006) (ER), ADAMS Accession No. ML062580114.

<sup>20</sup> 10 C.F.R. Part 51, Subpart A, App. A, § 5. See also *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 104 (1998) (*LES*).

<sup>21</sup> 10 C.F.R. § 52.17(a)(2). The Council on Environmental Quality [CEQ] advises that these "reasonable alternatives . . . must be rigorously explored and objectively evaluated." 40 C.F.R. § 1502.14(a); CEQ, "Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations," 46 Fed. Reg. 18,026 (Mar. 23, 1981) (Forty Most Asked Questions). Although the CEQ's guidance does not bind us, we give such guidance substantial deference. Cf. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 n.22 (2002) (*PFS*), citing and quoting *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 72 n.[3] (1991). See generally *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 334, 355-56 (1989) (CEQ regulations are entitled to "substantial deference").

(DEIS)<sup>22</sup> analyzing the comparative environmental effects of locating the new reactor on the proposed and alternative sites.<sup>23</sup> After reviewing public comments on the DEIS, the Staff must issue an FEIS “stat[ing] how the alternatives considered . . . will or will not achieve the requirements of sections 101 and 102(1) of NEPA.”<sup>24</sup>

Section 9.3 of the Environmental Standard Review Plan (ESRP) provides guidance for application of these regulatory requirements. Section 9.3 provides, in relevant part, that the Staff’s review should “be directed to identification of sites suitable for the size and type of nuclear power plant proposed by the applicant”<sup>25</sup> within the “region of interest” (the geographic area considered in searching for possible sites<sup>26</sup>). The Staff should analyze the candidate sites (the top four or more sites within the region of interest<sup>27</sup>) “in the detail needed to make an eventual evaluation that no site within the appropriate study area can be judged . . . to be obviously superior to the applicant’s proposed site.”<sup>28</sup>

ESRP Section 9.3 recognizes that some applicants (such as Dominion here) will propose sites based “on the location of an existing nuclear power plant previously found acceptable on the basis of a NEPA review.”<sup>29</sup> For such proposed sites, Section 9.3 provides that “all nuclear power plant sites within the identified region of interest having an operating nuclear power plant or construction permit issued by the NRC should be compared with the applicant’s proposed site.”<sup>30</sup>

But regardless of whether the applicant is proposing a new or preexisting plant site, the Staff’s “evaluation . . . of the applicant’s site-selection process should include consideration of both the process (i.e., methodology) used by the applicant and the reasonableness of the product (e.g., potential sites) identified by

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<sup>22</sup> Here, the DEIS is “Draft Environmental Impact Statement for an Early Site Permit (ESP) at the North Anna ESP Site,” Draft Report for Comment (Nov. 2004).

<sup>23</sup> 10 C.F.R. § 51.71(d).

<sup>24</sup> 10 C.F.R. § 51.91(c). The two cited sections of NEPA set out the statute’s general policy goals and instruct federal agencies to interpret and administer their policies, regulations, and governing statutes in accordance with those policy goals.

<sup>25</sup> NUREG-1555, “Environmental Standard Review Plan: Standard Review Plans for Environmental Reviews for Nuclear Power Plants (Main Report),” Vol. 1, at p. 9.3-2 (March 2000), ADAMS Accession No. ML003701937 (in today’s order, all subsequent citations to NUREG-1555 are to Vol. 1 unless otherwise indicated). *See also* Draft Revised NUREG-1555, “Environmental Standard Review Plan, Section 9.3 Site Selection Process” at p. 9.3-2 (July 2007) (Draft Revised Section 9.3), ADAMS Accession No. ML071800223. This revision post-dates the Staff’s North Anna ESP review.

<sup>26</sup> NUREG-1555 at p. 9.3-1. *See also* Draft Revised Section 9.3 at pp. 9.3-1, 9.3-7. Applicants generally select regions of interest based on either geographic boundaries or the proposed plant’s expected service area. Draft Revised Section 9.3 at p. 9.3-7.

<sup>27</sup> NUREG-1555 at p. 9.3-1. *See also* Draft Revised Section 9.3 at p. 9.3-2.

<sup>28</sup> NUREG-1555 at p. 9.3-6. *See also* Draft Revised Section 9.3 at pp. 9.3-5 to 9.3-6.

<sup>29</sup> NUREG-1555 at p. 9.3-7. *See also* Draft Revised Section 9.3 at pp. 9.3-11 to 9.3-12.

<sup>30</sup> NUREG-1555 at p. 9.3-7. The Staff omitted this instruction from Draft Revised Section 9.3.

that process.”<sup>31</sup> The purposes are to determine whether the “candidate areas<sup>[32]</sup> identified by the applicant represent a reasonably complete list of such areas within the identified [region of interest]” and, more particularly, to determine if the applicant has employed “an adequate, well documented process for screening candidate sites”<sup>33</sup> such that “there is reasonable assurance that no potential alternative sites . . . have been omitted.”<sup>34</sup> The criteria for selecting candidate areas and candidate sites are essentially the same.<sup>35</sup> The ESRP then states that, as a general matter, “the identification of . . . three to five alternative sites in addition to the proposed site could be viewed as adequate.”<sup>36</sup>

## **2. The Parties’ Environmental Documents**

### *a. Dominion’s Environmental Report*

Dominion defined its region of interest as “the Eastern quadrants of the United States,”<sup>37</sup> which includes an irregular area from New York to South Carolina, then west to Texas, and finally north to Minnesota.<sup>38</sup> Next, Dominion identified the candidate sites within that region of interest. Dominion did not provide a list of all such sites, instead describing them generally — as federal facilities, existing nuclear plant sites, and a “generic greenfield site.”<sup>39</sup> Dominion then addressed more specifically the generic greenfield site<sup>40</sup> and two specific federal sites — the Department of Energy’s (DOE) site at Portsmouth, Ohio, and DOE’s Savannah River site in South Carolina (SRS). Dominion ruled out the greenfield

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<sup>31</sup> NUREG-1555 at p. 9.3-8. *See also* Draft Revised Section 9.3 at p. 9.3-6.

<sup>32</sup> A “candidate area” is a reasonably homogeneous area of several square miles, large enough to contain several sites, and located within the region of interest. Regulatory Guide 4.2 (Rev. 2), “Preparation of Environmental Reports for Nuclear Power Stations” at p. 9-1 & n.2 (July 1976) (Reg. Guide 4.2).

<sup>33</sup> NUREG-1555 at p. 9.3-9. *See also id.* at p. 9.3-11 (referring to the need for the Staff to determine whether “the applicant . . . employed a practicable site-selection process”); Draft Revised Section 9.3 at p. 9.3-8 (“the staff needs to determine whether the applicant used a logical process that would reasonably be expected to produce a list of the best possible sites in the candidate area(s)”).

<sup>34</sup> NUREG-1555 at p. 9.3-10.

<sup>35</sup> Reg. Guide 4.2 at p. 9-3.

<sup>36</sup> NUREG-1555 at p. 9.3-10. *See also* Draft Revised Section 9.3 at p. 9.3-10 (same).

<sup>37</sup> ER at p. 3-9-2.

<sup>38</sup> ER at p. 3-9-12, Figure 9.3-1. According to the Staff, the irregularity of the region of interest was a function of transmission system areas. Transcript of Evidentiary Hearing at 561-EH (Andrew J. Kugler, Staff witness) (April 25, 2007) (Tr.), ADAMS Accession No. ML071370547.

<sup>39</sup> ER at pp. 3-9-2 to 3-9-3.

<sup>40</sup> A “greenfield” site is assumed to be an undisturbed, pristine site.” NUREG-1437 (Supp. 3), “Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding the Arkansas Nuclear One, Unit 1” at p. 8-3 (April 2001), ADAMS Accession No. ML011170034.

site because the anticipated environmental impacts of constructing a plant there would exceed the impacts of constructing a plant at an existing nuclear site.<sup>41</sup> By contrast, Dominion found numerous advantages to locating a new nuclear unit at DOE's sites<sup>42</sup> or on an existing nuclear plant site.<sup>43</sup>

Dominion then narrowed the group of existing nuclear plant sites by giving preference to existing sites that were “designed for more generation than actually constructed” and/or to which Dominion could “more readily obtain access and control.”<sup>44</sup> Dominion's exercise of this preference eliminated all but three nuclear plant sites — North Anna Power Station, Surry Power Station in Virginia, and Millstone Power Station in Connecticut.<sup>45</sup>

Next, Dominion excluded Millstone from consideration, explaining that the site had not been licensed for construction of additional units, had potential fogging and/or icing problems, was near a special recreation facility, and was the subject of an ongoing feasibility study evaluating once-through cooling system impacts.<sup>46</sup>

This left only two federal and two nuclear plant sites as candidates — North Anna, Surry, SRS, and Portsmouth.<sup>47</sup> Dominion next applied forty-five economic, engineering, environmental, and sociological criteria to each potential site and concluded that the North Anna site outscored the other three by a small margin.<sup>48</sup> From this, Dominion reached the final conclusion that there were no obviously superior sites to North Anna.<sup>49</sup>

*b. The Staff's FEIS*

The Staff in its FEIS stated that it was following the review process specified in ESRP Section 9.3 for selecting alternative sites.<sup>50</sup> The FEIS discussed Dominion's region of interest and alternative site selection process, the Staff's own evaluation of alternative sites, and the subject of greenfield and brownfield alternative sites.<sup>51</sup> For each of these topics, the Staff described Dominion's analysis in some detail and concluded that the analysis was acceptable.

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<sup>41</sup> ER at pp. 9-3-4 & 3-9-9, Table 9.3-1.

<sup>42</sup> *Id.* at pp. 3-9-3 to 3-9-4.

<sup>43</sup> *Id.* at pp. 3-9-4 to 3-9-5.

<sup>44</sup> *Id.* at p. 3-9-5.

<sup>45</sup> *Id.* at pp. 3-9-5 to 3-9-6.

<sup>46</sup> *Id.* at p. 3-9-6.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.* at pp. 3-9-7 to 3-9-8 & p. 3-9-11, Table 9.3-3.

<sup>49</sup> *Id.* at p. 3-9-7.

<sup>50</sup> FEIS at p. 8-1.

<sup>51</sup> *Id.* at pp. 8-7 to 8-10.

The Staff then compared the proposed North Anna site to Surry, SRS, and Portsmouth (Dominion's three proposed alternative sites) and concluded, as had Dominion, that none of the three alternative sites was "obviously superior" to the proposed North Anna site.<sup>52</sup> In so concluding, the Staff examined generic issues such as the impacts on air quality and biota, the impacts on radiological and nonradiological health, the effects of electromagnetic fields, the impacts of both radiation doses and health impacts on the public, and occupational doses to workers.<sup>53</sup> The Staff also evaluated each of the three alternative sites individually, examining impacts on land use, water use, water quality, terrestrial and aquatic resources (including endangered species), socioeconomics, and historical and cultural resources.<sup>54</sup>

### 3. *Initial Decision LBP-07-9*

Applying the legal standards and Commission guidance set forth in subsection II.A.1 above to the facts described in subsection II.A.2, the majority of the Board concluded that the Staff's analysis of alternative sites had been adequate. In a lengthy dissent, Judge Karlin disagreed, concluding that the Staff's analysis had been inconsistent with both the letter and spirit of NEPA's requirement that the agency consider reasonable alternatives to the site proposed by the applicant.

#### a. *Majority Decision*

The majority approved the Staff's review of a small number of alternative sites and, in support, relied largely on federal case law holding that the kind of alternatives requiring consideration depends upon the project's underlying goal *as determined by the applicant*. The majority did acknowledge court rulings that an applicant should not be allowed to purposely narrow the goal so as to predetermine the outcome of the agency's environmental review.<sup>55</sup> But the majority concluded that Dominion had justified its narrow scope of alternatives and that the Staff had adequately reviewed Dominion's alternative site selection process.

The majority relied in particular on a recent Seventh Circuit decision affirming an NRC decision regarding the Clinton ESP, where we had approved a narrower project goal, and consequently a narrower collection of alternatives, "because the

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<sup>52</sup> *Id.* at pp. 8-11 to 8-81, 9-6 to 9-9.

<sup>53</sup> *Id.* at pp. 8-10 to 8-17.

<sup>54</sup> *Id.* at pp. 8-17 to 8-79.

<sup>55</sup> LBP-07-9, 65 NRC at 607-08 & n.96, citing *City of New York v. Department of Transportation*, 715 F.2d 732, 743 (2d Cir. 1983), and *City of Carmel-by-the-Sea v. Department of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997).

applicant was ‘in no position to implement’ the additional alternatives.’<sup>56</sup> The majority also leaned heavily upon federal and Commission jurisprudence favoring deference to the applicant’s list of alternative sites, and repeatedly observed that the Staff is not required to conduct an independent feasibility study of alternative sites.<sup>57</sup>

*b. Dissenting Opinion*

Judge Karlin, on the other hand, concluded that flaws in the majority’s analysis of NEPA Baseline Issue 1 (whether NEPA’s and the Commission’s environmental requirements have been satisfied) prevented the Board from conducting the required independent balancing (required for NEPA Baseline Issue 2) of the conflicting environmental factors contained in the record.<sup>58</sup> He likewise questioned how, given these flaws, the majority could properly conclude (as required under NEPA Baseline Issue 3) that the ESP should be issued, and further conclude (as required under the Overriding NEPA Issue) that the Staff’s review had been adequate.<sup>59</sup> In short, he concluded that Dominion had unduly narrowed the site options in order to predetermine the outcome of the alternative site review.<sup>60</sup>

Although Judge Karlin found fault with Dominion’s alternative site review, he directed most of his criticism to the quality and depth of the *Staff’s* own alternative site review, because the Overriding NEPA Issue is couched in terms of the adequacy of the *agency’s* review.<sup>61</sup> He initially observed that the Staff had never questioned whether Dominion’s small selection of alternative sites was, to use the words of NUREG-1555, “the best that can reasonably be found for the siting of a nuclear power plant,” or even whether Dominion had omitted any potential sites.<sup>62</sup> He highlighted the Staff’s own acknowledgment that it had “‘simply ‘used the slate of sites that the applicant had identified’ and [had] ‘determined whether *the process* that [Dominion] used to identify those sites was reasonable.’”<sup>63</sup>

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<sup>56</sup> LBP-07-9, 65 NRC at 608, quoting *Environmental Law and Policy Center v. NRC*, 470 F.3d 676, 683 (7th Cir. 2006).

<sup>57</sup> *Id.* at 608-09, 611.

<sup>58</sup> See the majority’s discussion of this issue, *id.* at 602-14.

<sup>59</sup> See the majority’s discussion of this issue, *id.* at 615-16.

<sup>60</sup> *Id.* at 631. See also *id.* at 637 (opining that the acceptance of Dominion’s position would render the NEPA alternative analysis a “foreordained formality”), quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir.), *cert. denied*, 502 U.S. 994 (1991).

<sup>61</sup> *Id.*, 65 NRC at 632-38.

<sup>62</sup> *Id.*, 65 NRC at 632, quoting NUREG-1555 at p. 9.3-1.

<sup>63</sup> *Id.*, 65 NRC at 633, quoting Tr. at 572 (emphasis added).

He also argued that the Staff had “failed to comply with its own guidance requiring that the proposed site be compared against *all* nuclear power plant sites within the identifiable region of interest.”<sup>64</sup> He observed that the Staff’s analysis had included none of the dozens of plants that lie within the ESP’s specified region of interest and that were not owned by Dominion’s parent corporation, Dominion Resources, Inc.<sup>65</sup> Judge Karlin then questioned the Staff witness’s justification for the Staff’s decision not to follow the guidance in the ESRP — i.e., that the Commission’s 1977 decision in *Seabrook*<sup>66</sup> absolved the Staff of the duty to consider other companies’ sites. Judge Karlin also opined that the Staff’s *per se* rejection had ignored the use of joint ventures, common in the nuclear industry.<sup>67</sup> He also criticized the Staff for having considered no federal sites other than Portsmouth and SRS.<sup>68</sup>

Judge Karlin ultimately concluded that, even were the Staff’s *per se* approach valid, the Staff would *still* have failed to meet the standard set forth in the ESRP — i.e., to “determine if the selection *process* used [by the applicant] to identify candidate sites was adequate” — because the Staff’s witness had offered no details as to how the Staff conducted its review.<sup>69</sup> Judge Karlin concluded from the testimony, the FEIS, and the parties’ supplemental filings that the Staff had simply accepted Dominion’s alternative site selection process at face value, “without raising a single question.”<sup>70</sup>

#### 4. *Our Analysis*

The issue here, when distilled to its essence, is whether the level of detail in the Staff’s alternative site analysis was so narrow as to render the results

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<sup>64</sup> *Id.* (emphasis omitted), quoting NUREG-1555 at p. 9.3-7 (emphasis added).

<sup>65</sup> *Id.*

<sup>66</sup> *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 536 (1977).

<sup>67</sup> He offered as an example the fact that the North Anna site itself currently falls within this category, with the two existing units held as a joint venture between VEPCO and Old Dominion Electric Cooperative. LBP-07-9, 65 NRC at 634.

<sup>68</sup> *Id.*

<sup>69</sup> *Id.*, 65 NRC at 635 (emphasis in dissenting opinion but not in the ESRP).

<sup>70</sup> *Id.*

“foreordained” or, instead, whether the level of detail was reasonable under NEPA’s “rule of reason”<sup>71</sup> and “hard look”<sup>72</sup> tests.

We agree with the dissent that the FEIS does not show that the Staff’s alternative site review *at the candidate site level* was sufficiently detailed. Indeed, the Staff witness conceded as much at the Evidentiary Hearing, stating, “I’ve got to admit, the way we state it in the EIS, we don’t clearly state that we have done an evaluation of the candidate sites,”<sup>73</sup> and “we did not clearly state it in terms of us looking at [Dominion’s region of interest] for candidate sites.”<sup>74</sup> As close as the Staff came to explaining this omission is to assert that, *if* the Staff had performed a candidate site study, it *would* have been “probably similar”<sup>75</sup> to the 2002 study by Dominion and Bechtel which, Staff asserted, contained a discussion of candidate sites.<sup>76</sup>

This omission creates the unfortunate — and, we believe, inaccurate — appearance that the Staff avoided its obligation to take a “hard look” at the alternative sites issue and instead merely accepted Dominion’s analysis at face value. And this appearance is exacerbated by the fact that the Staff actually reviewed in depth *only* Dominion’s four proposed sites<sup>77</sup> — facts reminiscent of

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<sup>71</sup> See, e.g., *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 834 (D.C. Cir. 1982) (referring to the “rule of reason”), and *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 551 (1978) (referring to the “notion of feasibility”) — both of which decisions address agencies’ duty under NEPA to consider alternatives to an applicant’s proposed action. More generally, the CEQ has described the “rule of reason” as “a judicial device to ensure that common sense and reason are not lost in the rubric of regulation.” CEQ, Final Rule: “National Environmental Policy Act Regulations; Incomplete or Unavailable Information,” 51 Fed. Reg. 15,618, 15,621 (Apr. 25, 1986).

<sup>72</sup> *Robertson*, 490 U.S. at 333 (“the EIS requirement and NEPA’s other ‘action-forcing’ procedures implement that statute’s sweeping policy goals by ensuring that agencies will take a ‘hard look’ at environmental consequences”).

<sup>73</sup> Tr. at 573-EH (Kugler).

<sup>74</sup> *Id.* at 574-EH (Kugler). See also *id.* at 564-EH:

Judge Karlin: But isn’t that required by NUREG-1555, that you go from region of interest to a group of candidate sites within that region, down to the alternative sites?

Mr. Kugler: Yes, Your Honor. And we did that. I’m not sure if the words in the document [FEIS] are fully reflective of it.

<sup>75</sup> *Id.* at 603-EH (Kugler).

<sup>76</sup> *Id.* at 600-EH to 601-EH (Kugler), referring to “Study of Potential Sites for the Deployment of New Nuclear Plants in the United States, U.S. Department of Energy Cooperative Agreement No. DE-FC07-02ID14313, Prepared by Dominion Energy, Inc. and Bechtel Power Corporation” (Sept. 27, 2002), [http://np2010.ne.doe.gov/ESP\\_Study/ESP\\_Study\\_Dominion.pdf](http://np2010.ne.doe.gov/ESP_Study/ESP_Study_Dominion.pdf).

<sup>77</sup> *Id.* at 578-EH (Mr. Kugler agreed that the Staff compared the North Anna site to only the three alternative sites presented by Dominion), 580-EH to 581-EH (Mr. Kugler agreed that the Staff did not “look at other powerplant sites owned by Dominion or its other associated companies” or “other

(Continued)

those in another adjudication 30 years ago, where the adequacy of the Staff's alternative site review was similarly called into question.<sup>78</sup>

But *our own* examination of the entire administrative record leads us to conclude that the Staff's underlying review *was* sufficiently detailed to qualify as "reasonable" and a "hard look" under NEPA — even if the Staff's description of that review in the FEIS was not. Our explanation below provides an additional detailed discussion as part of the record on the alternative site review.<sup>79</sup> We direct the Staff to include a similar level of detail in future FEIS analyses of alternative sites.

a. "Greenfield" Sites

We consider reasonable Dominion's decision not to consider "greenfield" sites (i.e., sites containing no nuclear plants, nonnuclear power plants or nonpower nuclear facilities such as enrichment plants<sup>80</sup>). The siting of a nuclear plant on such a site would be expected to have significant detrimental impacts on land use, ecology, and aesthetics — particularly when compared with the equivalent impacts

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powerplant sites owned by other companies"), 582-EH (Mr. Kugler acknowledged that the Staff did not look at federally owned sites other than Portsmouth and SRS). The Staff also concluded that Millstone was not a good candidate due to its location and size. *Id.* at 579-EH (Kugler). This conclusion follows Dominion's earlier decision to reject Millstone as an alternative site. Declaration of Marvin L. Smith at 2 (May 7, 2007) (Smith Declaration), attached to Dominion's Supplement to the Record on Alternative Sites (May 7, 2007).

<sup>78</sup>The Licensing Board in the *Phipps Bend* case chastised the Staff for "what appears to have been a totally uncritical . . . reliance on only those [alternative] site possibilities suggested to it through the medium of the Applicant's Environmental Report." *Tennessee Valley Authority* (Phipps Bend Nuclear Plant, Units 1 and 2), LBP-77-60, 6 NRC 647, 658 (1977), *aff'd*, ALAB-506, 8 NRC 533 (1978). Although the Licensing Board in *Phipps Bend* ultimately approved the Staff's alternative site review, the Board described the review as only "minimally acceptable in the circumstances of this case." *Id.*, LBP-77-60, 6 NRC at 659.

<sup>79</sup>*See* 10 C.F.R. § 51.109(f) ("If the Commission . . . reaches conclusions different from those of the presiding officer with respect to . . . matters [involving the adequacy of the FEIS], the final [FEIS] will be deemed modified to that extent. . . ."); *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 29 n.43 (1978) (FEIS may be "modified by subsequent decisions of our adjudicatory tribunals"); *Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705 (1985) ("Amendment of the FE[I]S by the adjudicatory hearing record and subsequent Licensing Board decision is entirely proper under NRC regulations and court precedent"), *review denied*, CLI-86-5, 23 NRC 125 (1986), *aff'd in part and denied in part on other grounds*, *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719 (3rd Cir. 1989). *Cf. New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 94 (1st Cir. 1978) (same, regarding a Licensing Board decision amending an FEIS).

<sup>80</sup>The word "greenfield" is often used to refer more generally to "undeveloped" or "stand-alone" sites. *See* note 40, *supra*.

at sites with existing nuclear power plants.<sup>81</sup> For example, Dominion would have to clear undisturbed land and construct transmission systems, transportation systems, cooling water systems, and other infrastructure.<sup>82</sup>

*b. Brownfield Sites (Nuclear and Otherwise) Owned by Other Power Producers*

We accept as reasonable Dominion's explanation that building its reactor(s) on a site owned by a nonaffiliated competitor would permit some of the benefits of the new units (e.g., lease payments, reduced costs for shared services) to flow to that competitor — a result that would contravene Dominion's business goal of "maximiz[ing] the competitiveness of its generating costs and rates."<sup>83</sup> As Dominion points out, "[p]roviding a benefit to a competitor is inconsistent with Dominion's purposes and goals."<sup>84</sup> And even were Dominion willing to build on a competitor's site, it seems highly doubtful that the competitor would permit it. The competitor would hardly wish Dominion to be in a position to encroach on the competitor's customer base. These difficulties are examples of the "institutional . . . obstacles with construction at an alternative site" that we held in *Seabrook* were valid considerations under the rule of reason.<sup>85</sup> Both Dominion's own statements<sup>86</sup> and common sense support these conclusions.

Dominion's decision to exclude brownfield sites with *non*nuclear (i.e., gas- and coal-fired) power facilities, was reasonable for additional reasons. Power producers typically locate gas-fired plants on small sites that would generally lack the land required for a nuclear plant's exclusion area.<sup>87</sup> And though power producers may locate coal-fired plants on larger sites, much of the land is used for either coal storage or ash disposal. Consequently, to locate a nuclear power plant on a coal-fired plant's site, Dominion would likely need to obtain rights

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<sup>81</sup> Affidavit of Andrew J. Kugler in Response to "Dominion's Supplement to the Record on Alternative Sites" and to Supplement the Record in This Proceeding with Respect to Alternative Sites at 3 (May 11, 2007), attached to NRC Staff Response to "Dominion's Supplement to the Record on Alternative Sites" and Staff Supplement to the Record (May 11, 2007).

<sup>82</sup> Tr. at 598-EH (Kugler).

<sup>83</sup> Dominion Exh. 3 at 68-69, appended to Dominion's Response to the Licensing Board's February 7, 2007 Order (Issuing Environment-Related Questions) (March 1, 2007), ADAMS Accession No. ML070670202; Dominion's Response to the Licensing Board's February 7, 2007 Order (Issuing Environment-Related Questions) at 20 (March 1, 2007).

<sup>84</sup> Dominion Exh. 3 at 69.

<sup>85</sup> CLI-77-8, 5 NRC at 540 (also offering as two examples "the lack of franchise privileges and current eminent domain powers").

<sup>86</sup> See, e.g., Dominion Exh. 3 at 68 ("there is no reasonable prospect that . . . utilities would allow a substantial competitor like Dominion to build a large generating unit at their sites").

<sup>87</sup> See Smith Declaration at 1.

to an adjacent greenfield property. As explained above, the siting of a nuclear power plant on a greenfield property (adjacent or otherwise) would be expected to trigger significant environmental and other impacts and may not be a viable alternative for locating a plant on the site of an existing nuclear power plant.<sup>88</sup>

Moreover, according to Dominion, nonnuclear power plants generally lack excess transmission capacity beyond the amount required to operate the existing units. By contrast, the North Anna site's transmission capacity was originally designed for additional nuclear units.<sup>89</sup> Further, nonnuclear units are not subject to the same stringent siting requirements as nuclear power plants,<sup>90</sup> and consequently can be located closer to urban areas than can nuclear power reactors.<sup>91</sup> Also, as Dominion points out, nuclear sites have two other advantages over nonnuclear sites: a greater knowledge of environmental conditions at the site and an existing nuclear infrastructure at the site.<sup>92</sup>

Finally, Dominion has examined the characteristics of its affiliates' nonnuclear plant sites and that the only one large enough to offer a sufficient exclusion area would have insufficient water resources to support even one nuclear power unit (much less the two that it may seek to construct at North Anna).<sup>93</sup>

*c. Brownfield Nuclear Facility Sites Not Housing Competitors' Power Plants*

Two of Dominion's alternative sites — Portsmouth and SRS — fall into this category.<sup>94</sup> They share many of the advantages of existing nuclear power plant sites in that they already possess nuclear infrastructure, have already been subject to safety and environmental reviews, and are sufficiently large to house a nuclear plant and its large perimeter area.<sup>95</sup> They have two additional advantages in that they are not Dominion's current or potential competitors and they are "interested in obtaining new missions."<sup>96</sup> In our view, Dominion's decision to include them as alternative sites was reasonable.

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<sup>88</sup> See *id.* at 2.

<sup>89</sup> See *id.* at 1, 3.

<sup>90</sup> See, e.g., 10 C.F.R. § 100.21(h) ("Reactor sites should be located away from very densely populated centers. Areas of low population density are, generally, preferred."); Regulatory Guide 4.7 (Rev. 2), "General Site Suitability Criteria for Nuclear Power Stations" at p. 4.7-5 (April 1998).

<sup>91</sup> See Smith Declaration at 3.

<sup>92</sup> See *id.* at 1.

<sup>93</sup> See *id.* at 3.

<sup>94</sup> Dominion also gave preliminary consideration to a third such site — DOE's facility at Idaho Falls — but rejected it. See FEIS at p. 8-11. The Idaho Falls facility was far outside Dominion's region of interest.

<sup>95</sup> See Smith Declaration at 2; Tr. 569-EH (Kugler).

<sup>96</sup> Tr. at 581-EH (Kugler).

*d. Dominion's Own Nuclear Plant Sites*

We find no fault with either Dominion's or the Staff's inclusion of the Surry site on the list of alternative sites. Conversely, we agree that Millstone was appropriately excluded from that list, due to its location and size.<sup>97</sup>

*e. Conclusion*

The Staff in its FEIS failed to include a sufficiently detailed description of the Staff's alternative site review at the candidate site level. But our own examination of the entire administrative record leads us to conclude that the Staff's underlying review *was* sufficiently detailed to qualify as "reasonable" and a "hard look" under NEPA. Our discussion of this issue today adds necessary additional details and constitutes a supplement to the FEIS's alternative site review. As noted above, we also direct the Staff to include a similar level of detail when addressing candidate sites (or in its review of candidate sites) in future FEIS analyses of alternative sites.

**B. Alternative Design Criteria**

The majority of the Board briefly addressed the Staff's consideration of "system design alternatives."<sup>98</sup> The majority agreed with the Staff that it need not have considered a system design alternative that would impose water conservation measures on the preexisting Units 1 and 2. The majority reasoned that those units "already use once-through cooling, which results in approximately the same amount of water being returned to the lake as is withdrawn, albeit at a higher temperature."<sup>99</sup>

By contrast, Judge Karlin questioned why the Staff had not imposed a permit condition that the system design of North Anna's two existing reactor units be modified to provide for water saving measures, "as a form of offset to the impacts of the proposed new reactors" (the cooling of proposed reactor Unit 3 would result in evaporation of 8707 gallons per minute).<sup>100</sup>

We agree with the majority. Modifications to the system design of the two existing units fall outside the scope of this proceeding as defined by our Notice of Hearing. The Notice provides that the scope is Dominion's request for approval of the North Anna site as the location for two or more *new* reactor units (if

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<sup>97</sup> The Staff considered Millstone at the candidate site stage. *See* note 77, *supra*; Tr. at 579-EH (Kugler).

<sup>98</sup> LBP-07-9, 65 NRC at 592-93, 612-13.

<sup>99</sup> *Id.* at 612-13.

<sup>100</sup> *Id.* at 631, 638-39.

authorized for construction and operation in a separate licensing proceeding).<sup>101</sup> While we recognize that the Notice authorizes the Board to “determine, after considering reasonable alternatives, whether the ESP should be issued, denied, or *appropriately conditioned to protect environmental values*,”<sup>102</sup> we do not construe the final clause as permission to attach conditions to operating licenses for separate, existing reactor units.<sup>103</sup>

## C. The Amount of Information Needed for Issuance of an ESP

### 1. The Board’s Discussion

We stated in 1989 that we would not issue either “[ESPs without] operational parameters” or “partial ESPs.”<sup>104</sup> We indicated that, under such circumstances, the applicant should instead pursue an “Early Partial Decision on Site Suitability.”<sup>105</sup> These statements led the Board to suggest that we address the question of how to apply our statement prohibiting the issuance of either full or partial ESPs where significant elements of the plant parameter envelope (PPE) for the ESP are missing and “where . . . numerous siting issues are unresolved due to lack of information.”<sup>106</sup> The Board directed our attention to numerous gaps and unresolved issues in the ESP application.<sup>107</sup> For example, the application lacked information in the following areas:

- design for water treatment systems,<sup>108</sup>

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<sup>101</sup> Notice of Hearing, 68 Fed. Reg. at 67,489.

<sup>102</sup> *Id.* (emphasis added).

<sup>103</sup> Furthermore, such a result would run afoul of our Backfit Rule, which permits the Staff to impose new conditions on existing licenses only under very limited circumstances, none of which the dissent suggests apply here. 10 C.F.R. § 50.109(a)(3).

<sup>104</sup> LBP-07-9, 65 NRC at 626, citing Final Rule: “Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors,” 54 Fed. Reg. 15,372, 15,377-78 (Apr. 18, 1989).

<sup>105</sup> LBP-07-9, 65 NRC at 626, citing 10 C.F.R. Part 2, Subpart F and Part 50, Appendix Q.

<sup>106</sup> *Id.*, 65 NRC at 617.

<sup>107</sup> *Id.*, 65 NRC at 562 n.37 (referring both to the application’s failure to include “a number of . . . PPE . . . values” and to the Staff’s enumeration of thirty-five unresolved environmental questions), 605 (observing that “the FEIS did not address . . . groundwater contamination (and resulting lake impacts) . . . from proposed Units 3 and 4”), 616 (describing as not “resolved” numerous “findings, permit conditions, COL action items, or items listed as requiring further action or follow-up”), 626 n.116 (citing Board Safety Questions 111 & 116, and Board Environmental Questions 1A, 1B, 1C, 1D, 3, 5A, 5B, 26, 36, 51, 107, 108, & 125), 628 (referring to more than thirty-five instances where the FEIS described matters as “unresolved”).

<sup>108</sup> *Id.*, 65 NRC at 627, citing FEIS at p. 3-7.

- information to estimate liquid and gaseous radioactive effluents for gas-cooled reactor designs,<sup>109</sup>
- information on severe accidents for certain reactor designs,<sup>110</sup>
- uranium fuel cycle impacts for gas-cooled reactor designs,<sup>111</sup> and
- transportation-related “risk[s] to the public from radiation exposure for gas-cooled reactor designs.”<sup>112</sup>

Although the Board recognized that there is no regulatory bar to granting an ESP despite unresolved issues, the Board was still concerned that such a result might contravene Commission policy. The Board ended its discussion of this issue by posing two questions for the Commission’s consideration: “How many holes or ‘unresolved issues’ can there be in a PPE before it runs afoul of the Commission’s policy?” and “When should the Staff decline to issue an ESP and advise the applicant to instead consider an Early Partial Decision on Site Suitability?”<sup>113</sup>

## 2. *Our Analysis*

The question of the appropriate treatment of “unresolved issues” turns largely on the facts in and surrounding the particular ESP application at issue. We therefore consider that question here in the context of this ESP proceeding. We conclude that the unresolved environmental issues here were not sufficient to prevent the Staff from completing its review of the ESP application.

We observe initially that incomplete information is not necessarily a fatal flaw, or even a flaw at all, in an ESP proceeding. As one court observed, “[c]ourts have permitted agencies to defer certain issues in an EIS for a multistage project when detailed useful information on a given topic is not ‘meaningfully possible’ to obtain, and the unavailable information is not essential to determination at the earlier stage.”<sup>114</sup> The CEQ has likewise recognized that information may be unavoidably incomplete or unavailable, and that under those circumstances, an FEIS can overcome this deficiency if it states that fact, explains how the missing

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<sup>109</sup> *Id.*, citing FEIS at p. 3-13.

<sup>110</sup> *Id.*, citing FEIS at p. 5-89.

<sup>111</sup> *Id.*, 65 NRC at 628, citing FEIS at p. 6-1.

<sup>112</sup> *Id.*, citing FEIS at p. 6-26 (emphasis in original).

<sup>113</sup> *Id.*

<sup>114</sup> *Environmental Law & Policy Center*, 470 F.3d at 684, quoting *County of Suffolk v. Secretary of the Interior*, 562 F.2d 1368, 1372 (2d Cir. 1977).

information is relevant, sets forth the existing information, and evaluates the environmental impacts to the best of the agency's ability.<sup>115</sup>

We took much the same tack in the recent *Grand Gulf* ESP proceeding as we do here. In *Grand Gulf*, we concluded that, because certain environmental effects simply could not “be meaningfully assessed at the ESP stage,” the Staff’s decision to defer consideration of those effects until “a time when they can be accurately assessed [was] consistent with NEPA’s requirements.”<sup>116</sup>

With respect to the environmental review for an ESP, 10 C.F.R. § 52.17(a)(2) requires that an ESP applicant submit a complete ER focusing on construction and operation of one or more new reactors. Section 52.17(a)(2) further requires that the ER include “an evaluation of alternative sites to determine whether there is any obviously superior site to the site proposed.” Where, as here, one or more particular environmental impacts cannot be meaningfully assessed at the ESP stage, those matters may be designated as “unresolved,”<sup>117</sup> provided they do not interfere with the Staff’s ability to determine whether there is any obviously superior alternative to the proposed site.<sup>118</sup>

Most of the unresolved issues enumerated by the Board concerned the design or environmental impacts of gas-cooled reactors — issues similar to, or the same as, ones we left unresolved in the *Clinton* ESP proceeding.<sup>119</sup> Those issues are impossible to address now from a technical standpoint, simply because the gas-cooled reactor designs have not yet been finalized. Moreover, an ESP applicant need not submit detailed design information.<sup>120</sup> Similarly, the unresolved water

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<sup>115</sup> 40 C.F.R. § 1502.22(b). As noted above, although CEQ regulations do not bind the Commission, we do look to them for guidance. *PFS*, CLI-02-25, 56 NRC at 348 n.22; *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44 n.17 (1989), *vacated in part on other grounds*, CLI-90-4, 31 NRC 333 (1990).

<sup>116</sup> *System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-14, 65 NRC 216, 218-19 (2007). This general principle of deferral likewise applies to the Staff’s treatment of safety issues. *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-07-12, 65 NRC 203, 209 (2007) (*Clinton II*).

<sup>117</sup> *E.g.*, FEIS Table J-3.

<sup>118</sup> *See* 10 C.F.R. § 52.18.

<sup>119</sup> *See* Dominion’s Response Brief at 15 & n.9.

<sup>120</sup> *See* Review Standard (RS)-002, “Processing Applications for Early Site Permits” (May 3, 2004) (RS-002), Attach 3 at 2, available at ADAMS Accession No. ML040700772 (“detailed design information pertaining to structures, systems and components called for in the [ESRP] need not be submitted by an applicant in an ESP application employing the PPE approach”).

quality issue<sup>121</sup> defies current resolution because a design for a water treatment system has not yet been selected.<sup>122</sup>

These issues relate to design rather than siting and are therefore appropriately left for consideration at the COL or CP stage. This conclusion is consistent with our view that the scope of environmental review at the ESP stage is sufficient when it addresses all issues needed for us to perform an evaluation of the alternative sites.<sup>123</sup> Finally, the remaining issues — need for power,<sup>124</sup> alternative energy sources,<sup>125</sup> and severe accident mitigation alternatives<sup>126</sup> — similarly do not affect the alternative site analysis in this ESP proceeding. These issues may be appropriately deferred until the COL or CP stage, and therefore their lack of resolution would not prevent issuance of an ESP in this case.

## **D. The Adequacy of the Staff’s “Environmental Justice” Review**

### ***I. Background***

In Executive Order 12,898,<sup>127</sup> President Clinton directed federal agencies to include “environmental justice” in their mission “by identifying and addressing,

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<sup>121</sup> LBP-07-9, 65 NRC at 628.

<sup>122</sup> Nor can we currently address issues regarding the possible impacts of electromagnetic fields; current scientific knowledge on that subject is inconclusive. *See* FEIS, Vol. 2, at p. 3-200; Dominion’s Response Brief at 18-19.

<sup>123</sup> *See* Final Rule: “Licenses, Certifications, and Approvals for Nuclear Power Plants,” 72 Fed. Reg. 49,352, 49,430 (“The purpose of this change is to clearly delineate that the scope of the environmental review at the early site permit stage is, at a minimum, to address all issues needed for the NRC to perform its evaluation of the alternative sites”), 49,433 (same) (Aug. 28, 2007). Although the “new” Part 52 rules (cited immediately above) do not apply in this proceeding, the quoted statement provides evidence of our view on this matter. *See also Department of Transportation v. Public Citizen*, 541 U.S. 752, 767 (2004) (“Where the preparation of an EIS would serve ‘no purpose’ in light of NEPA’s regulatory scheme as a whole, no rule of reason worthy of that title would require an agency to prepare an EIS”).

<sup>124</sup> 10 C.F.R. § 52.17(a)(2) (“the environmental report need not include an assessment of the benefits (for example, need for power) of the proposed action”).

<sup>125</sup> *Clinton I*, 62 NRC at 48 (“boards must merely weigh and compare alternative sites, not other types of alternatives (such as alternative energy sources)”).

<sup>126</sup> Letter to Dr. Ronald L. Simard, Nuclear Energy Institute, from James E. Lyons, Director, New Reactor Licensing Project Office, Office of Nuclear Reactor Regulation (Feb. 12, 2003), ADAMS Accession No. ML030280518 (“If detailed design information is not available in the ESP application, then the staff review and findings on severe accident mitigation alternatives will be deferred to the COL stage”); Letter to Dr. Ronald L. Simard, Nuclear Energy Institute, from James E. Lyons, Director, New Reactor Licensing Project Office, Office of Nuclear Reactor Regulation (June 25, 2003), ADAMS Accession No. ML031430282 (same).

<sup>127</sup> “Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations,” Executive Order 12,898, 3 C.F.R. 859 (1995), 59 Fed. Reg. 7629 (Feb. 16, 1994).

as appropriate, disproportionately high and adverse health or environmental effects of [their] programs, policies, and activities on minority populations and low-income populations.”<sup>128</sup> Although the NRC, as an independent agency, was not bound by the Executive Order, then-Chairman Selin nonetheless committed to undertake environmental justice reviews.<sup>129</sup>

As part of that commitment, the Commission issued a Policy Statement in 2004, setting out its position on the treatment of environmental justice issues in the agency’s licensing and regulatory activities. The Policy Statement restated and expanded upon the “environmental justice” doctrines then emerging from a handful of the NRC’s adjudicatory decisions<sup>130</sup> and also from two Staff guidance documents.<sup>131</sup> Although the Policy Statement charged the Staff with diligently investigating potential adverse environmental impacts on minorities and low-income populations, it directed the Staff to conduct an even more detailed examination in situations where the Staff finds that “the percentage in the impacted area exceeds that of the State or the County percentage for either the minority or low-income population.”<sup>132</sup> Under those circumstances, the Commission charged the Staff to consider environmental justice “in greater detail.”<sup>133</sup> As explained below, the Board has suggested that we clarify the meaning of the quoted phrase and determine whether the Staff’s FEIS satisfied our “greater detail” standard in this proceeding.

## 2. *The Board’s Discussion*

The Board expressed considerable skepticism as to “whether the Staff’s environmental justice analysis in the FEIS met the ‘greater detail’ standard in

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<sup>128</sup> *Id.* at 7629.

<sup>129</sup> Policy Statement, 69 Fed. Reg. at 52,041 (“Background”); *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-97-8, 45 NRC 367, 375 (1997), *rev’d on other grounds*, CLI-98-3, 47 NRC at 100-110; Letter from NRC Chairman Ivan Selin to the President, dated March 31, 1994, available at ADAMS Accession No. ML033210526.

<sup>130</sup> See, particularly, *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147 (2002); *Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 64-71 (2001); *LES*, CLI-98-3, 47 NRC at 100-110.

<sup>131</sup> LIC-203, “Procedural Guidance for Preparing Environmental Assessments and Considering Environmental Issues” (Rev. 1, May 24, 2004), ADAMS Accession No. ML033550003; NUREG-1748, Final Report, “Environmental Review Guidance for Licensing Actions Associated with NMSS Programs” (Aug. 2003), ADAMS Accession No. ML03254081. The Policy Statement clarifies but does not rescind these NRR and NMSS guidance documents. 69 Fed. Reg. at 52,042 (“Summary of Public Comments and Responses to Comments”) (emphasis added).

<sup>132</sup> Policy Statement, 69 Fed. Reg. at 52,048.

<sup>133</sup> *Id.* In the context of the NRC’s environmental justice reviews, the phrase “in greater detail” originated in NMSS’s Guidance, NUREG-1748, App. C, at C-5.

the NRC Environmental Justice Policy” Statement.<sup>134</sup> The Board found that the Staff’s purported documentation of a “greater detail” consideration was comprised of portions of only three partial pages, none of which contained meaningful analysis.<sup>135</sup> The Board further found that the closest the Staff came to a meaningful discussion was its citation of a “Site Audit Trip Report” — a document which the Board described as containing “very few references” to either environmental justice or low-income or minority populations.<sup>136</sup>

The Board was particularly troubled by the revelation that the site audit trip did not involve “any attempt to contact and discuss [environmental justice] issues with any officials or representatives from the two jurisdictions with the largest areas of low-income and minority populations . . . within the 50-mile impact area,” but rather focused on the three closest counties and two nearby communities.<sup>137</sup> From this, the Board concluded that the Report “does not provide meaningful support for the Staff’s subsequent statements that it ‘found no unusual resource dependencies or practices’ . . . and ‘did not identify any health-related or location-dependent disproportionately high and adverse impacts affecting these minority and low-income populations.’ ”<sup>138</sup> The Board further observed that

[t]he paucity of [environmental justice] analysis, investigation, and information in the FEIS raises doubts as to whether the Staff has complied with the NRC [environmental justice] policy that requires [the Staff] to provide an [environmental justice] analysis in greater detail when the low-income or minority population thresholds are met. The analysis that the Staff carried out may have been excellent, but the Board cannot assess it when information supporting the conclusion is neither included in the FEIS nor provided by reference. . . . Therefore, although the Staff’s conclusions are plausible given the nature of the application being considered, the Board has doubts as to whether the Staff’s [environmental justice] analysis satisfies the NRC [environmental justice] Policy requirement for an analysis “in greater detail.”<sup>139</sup>

Based on the reasoning and observations described above, the Board recommended “that the Commission consider addressing the somewhat novel question as to what it expects the Staff to do when, under the NRC [Environmental

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<sup>134</sup> LBP-07-9, 65 NRC at 617-21.

<sup>135</sup> *Id.*, 65 NRC at 619.

<sup>136</sup> *Id.*, 65 NRC at 620-21, referring to John A. Jaksch and Michael J. Scott, “North Anna ESP Site Audit Trip Report — Socioeconomics” (Aug. 11, 2005) (Trip Report), available at ADAMS Accession No. ML062130542.

<sup>137</sup> LBP-07-9, 65 NRC at 620-21.

<sup>138</sup> *Id.*, 65 NRC at 621, quoting FEIS at p. 4-36.

<sup>139</sup> LBP-07-9, 65 NRC at 621.

Justice] Policy, an . . . analysis ‘in greater detail’ is required,”<sup>140</sup> “[a]nd more specifically, . . . whether an [environmental justice] analysis, where the Staff does not discuss [environmental justice] issues with representatives or officials from the jurisdictions with the main and largest minority and low-income populations in the area of interest, satisfies the ‘in greater detail’ requirements of the NRC [Environmental Justice] Policy.”<sup>141</sup>

### 3. *Our Analysis*

At the outset, it bears noting that the Commission issued the Policy Statement to advise the public of the manner in which the Commission intended to prospectively exercise its *voluntary commitment* to consider environmental justice. In issuing the Policy Statement, we stated:

The purpose of this policy statement is to present a comprehensive statement of the Commission’s policy on the treatment of environmental justice matters in NRC regulatory and licensing actions.<sup>142</sup>

However, the Policy Statement is neither a rule nor an order, and therefore does not establish requirements that bind either the agency or the public. As stated in *Pacific Gas & Electric Co. v. Federal Power Commission*:

A general statement of policy . . . does not establish a “binding norm.” It is not finally determinative of the issues or rights to which it is addressed. The agency cannot apply or rely upon a general statement of policy as law because a general statement of policy only announces what the agency seeks to establish as policy.<sup>143</sup>

For the Board to suggest that the strictures of the Policy Statement may be enforced as law, or that it in some way creates a substantive mandate, accords too much weight to the Policy Statement.<sup>144</sup> In this context, we turn to the Board’s concerns.

In LBP-07-9, the Board essentially posed the following questions:

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<sup>140</sup> *Id.*

<sup>141</sup> *Id.*, 65 NRC at 621-22 (footnote omitted).

<sup>142</sup> Policy Statement, 69 Fed. Reg. at 52,041 (“Background”).

<sup>143</sup> 506 F.2d 33 (D.C. Cir. 1974). *See also Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 733-36 (3d Cir. 1989) (in which the court declined to accord an NRC final policy statement, that had been subject to notice and comment, the stature of a rule).

<sup>144</sup> Indeed, as we have frequently stated, “It is the Commission’s position that [E.O. 12,898] itself does not establish new substantive or procedural requirements applicable to NRC regulatory or licensing activities.” Policy Statement, 69 Fed. Reg. at 52,043 (“Summary of Public Comments and Responses to Comments”).

- (1) What did we mean when we directed the Staff, under certain circumstances, to “consider” environmental justice impacts “in greater detail?”<sup>145</sup>
- (2) How much of that “consider[ation]” must make its way as *explanation* into the FEIS itself?
- (3) Did the FEIS’s “environmental justice” discussion *in this proceeding* contain sufficient explanation (i.e., analysis, investigation, and information)?

Turning to the first two questions, we initially approve the distinction that the Board has drawn between the Staff’s analysis of environmental justice issues and the Staff’s explanation of that analysis in the FEIS. An FEIS is necessarily more concise than the underlying pre-FEIS analysis, as the explanation is intended to summarize the analysis in a manner both concise and understandable to the public.<sup>146</sup> In *LES*, we explained that an FEIS’s discussion need not be “elaborate or lengthy,”<sup>147</sup> but found a “conclusory statement on ‘some negative’ impact on property values, without explanation or analysis,” to be plainly deficient.<sup>148</sup> Guidance from the Office of Nuclear Reactor Regulation (NRR)<sup>149</sup> offers the following explanation of the specificity expected in an FEIS:

The staff should clearly state the conclusion regarding whether or not the proposed action will have disproportionately high and adverse environmental impacts on minority or low-income populations. This statement should be supported by sufficient information to allow the public to understand the rationale for the conclusion. The underlying information should be presented as concisely as possible, using language that is understandable to the public and that minimizes the use of acronyms or jargon.<sup>150</sup>

NRR’s explanation is consistent with our own more general statement that “[t]he

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<sup>145</sup> *Id.*, 69 Fed. Reg. at 52,048 (emphasis added).

<sup>146</sup> See generally Forty Most Asked Questions, 46 Fed. Reg. at 18,033 (“The body of the EIS should be a succinct statement of all the information on the environmental impacts and alternatives that the decisionmaker and the public need, in order to make the decision and to ascertain that every significant factor has been examined . . . [while] [l]engthy technical discussions . . . are best reserved for the appendix” to the FEIS).

<sup>147</sup> *LES*, CLI-98-3, 47 NRC at 109 n.27.

<sup>148</sup> *Id.*, 47 NRC at 109.

<sup>149</sup> At the time the Staff commenced its review of the North Anna ESP, we had not yet established the Office of New Reactors, which currently has responsibility for reviewing ESP applications.

<sup>150</sup> LIC-203, Appendix D, “Environmental Guidance and Flow Chart” at D-11. See also CEQ Guidance at 10 (the “analyses of environmental justice concerns [should be] clear, concise and comprehensible”). Accord CEQ Guidance at 14-15; 40 C.F.R. § 1501.2(a) (an FEIS should be “analytic rather than encyclopedic”).

NRC's NEPA process for preparation of an environmental impact statement mandates *openness and clarity*.<sup>151</sup>

The similar guidance from our Office of Nuclear Material Safety and Safeguards (NMSS) regarding environmental reviews (NUREG-1748, *supra*), while not directly germane to this reactor-related proceeding, is nonetheless instructive. The NMSS Guidance repeatedly instructs the Staff to *document* its conclusions regarding environmental justice,<sup>152</sup> and states “the facts should be presented so that the ultimate decision maker can weigh all aspects in making the agency decision.”<sup>153</sup>

However, each environmental justice review is necessarily case-specific.<sup>154</sup> As we stated in *Hydro Resources*:

One can always flyspeck an FEIS[’s discussion] to come up with more specifics and more areas of discussion that conceivably could have been included. There is no “standard formula for how environmental justice issues should be identified or addressed.”<sup>155</sup>

We leave our discussion of the first two questions with the following observation on the Staff’s discretion in the conduct of its environmental justice reviews. Given the fact-specific nature of environmental justice issues and inquiries, we believe that the methods and form of Staff review — including any decision whether to hold discussions with knowledgeable community and governmental

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<sup>151</sup> Policy Statement, 69 Fed. Reg. at 52,043 (“Summary of Public Comments and Responses to Comments”).

<sup>152</sup> NUREG-1748 at pp. C-5 (“If no minorities or low-income populations are identified in the potentially affected area or environmental impact area, then document the conclusion”), C-6 (twice stating that “[t]he reviewer should document the conclusion in the environmental justice section”), C-7 (“The results of an environmental justice evaluation should be documented in the EIS” and “an EIS . . . should document the conclusion of the findings on environmental justice”).

<sup>153</sup> NUREG-1748 at p. C-7.

<sup>154</sup> See Policy Statement, 69 Fed. Reg. at 52,047 (“due to the site-specific nature of an [environmental justice] analysis, [environmental justice] issues are usually not considered during the preparation of a generic or programmatic EIS”); CEQ, “Environmental Justice: Guidance Under the National Environmental Policy Act” at 8 (“the question of whether agency action raises environmental justice issues is highly sensitive to the history or circumstances of a particular community or population, the particular type of environmental or human health impact, and the nature of the proposed action itself”), 10 (“appropriate consideration of environmental justice issues is highly dependent upon the particular facts and circumstances of the proposed action, the affected environment, and the affected populations”) (Dec. 10, 1997) (CEQ Guidance), available at [http://www.epa.gov/Compliance/resources/policies/ej/ej\\_guidance\\_nepa\\_ceq1297.pdf](http://www.epa.gov/Compliance/resources/policies/ej/ej_guidance_nepa_ceq1297.pdf).

<sup>155</sup> CLI-01-4, 53 NRC at 71, quoting CEQ Guidance at 8 (“There is not a standard formula for how environmental justice issues should be identified or addressed”). See also CEQ Guidance at 10 (“Neither the Executive Order [12,898] nor this guidance prescribes any specific format for examining environmental justice”).

representatives — is best left to the informed discretion of the Staff. We note that the NRR Guidance provides that “[t]he staff should develop effective public participation strategies[. . .] strive for meaningful community representation in the [FEIS] process[. . .] endeavor to have complete representation of the community as a whole.”<sup>156</sup>

With these general principles in mind, we turn to the adequacy of the Staff’s environmental justice review here. If the Staff finds that “the percentage in the impacted area . . . exceeds [by more than 20%] that of the State or the County percentage for either the minority or low-income population,” or if the Staff finds that “the minority or low-income population percentage in the impacted area exceeds 50 percent,” then our Policy Statement states the Staff is to consider environmental justice “in greater detail” than it otherwise would.<sup>157</sup> The Staff found that the first of these conditions was present within a 50-mile radius of the proposed site,<sup>158</sup> and states that it therefore considered environmental justice in greater detail in its analysis.<sup>159</sup>

The Staff states that it conducted its review using the NRR Guidance.<sup>160</sup> As noted above, the Staff identified minority and low-income populations, and documented all of the environmental impacts of construction and operation in the FEIS.<sup>161</sup> The Staff concluded that all environmental impacts would be small or moderate. The Staff further stated that it had identified the pathways through which the environmental impacts could occur and examined the potentially disproportionate impacts on minority and low-income populations. More particularly, the Staff found that the offsite impacts of construction and operation to minority and low-income populations would be “small.”<sup>162</sup> The NRR Guidance provides that, following a finding (as here) of “no potentially significant environmental impacts,” the Staff should document the results and end the environmental justice

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<sup>156</sup> LIC-203 at D-2. *See also* LIC-203 at D-3 (instructing the Staff to “develop a strategy for effective public involvement in the NRC’s scoping process”). In a similar vein, a recent revision to the ESRP recommends that “[a]s part of scoping, . . . specific efforts be made to interview representatives of minority communities . . . having specific knowledge about the locations, resource dependencies, customs and practices, and pre-existing health and socioeconomic conditions of minority and low-income populations in the region.” Draft Revision 1 to Section 2.5.4 (Environmental Justice) of NUREG-1555 at pp. 2.5.4-2 to 2.5.4-3 (July 2007), available at ADAMS Accession No. ML071550104. *See generally* CEQ Guidance at 9-13; 40 C.F.R. § 1500.2(d).

<sup>157</sup> 69 Fed. Reg. at 52,048. *See also* LIC-203 at D-8 to D-9.

<sup>158</sup> FEIS at pp. 2-77 to 2-79 (including Figures 2-6 and 2-7), 4-36. NRR generally uses a 50-mile radius when conducting an environmental justice analysis. LIC-203 at D-8.

<sup>159</sup> Staff’s Response Brief at 4.

<sup>160</sup> *Id.* at 4.

<sup>161</sup> *Id.* at 5.

<sup>162</sup> FEIS at pp. 4-36, 4-50, 5-52, 5-94.

review.<sup>163</sup> But the Staff went on to determine that “no disproportionately high and adverse impacts on minority or low-income groups were identified.”<sup>164</sup> We now examine the Staff’s analysis to determine whether it supports the Staff’s conclusion that it complied with the “greater detail” standard in this instance.

As a first step, the Staff used census data to identify minority and low-income groups within the identified 50-mile radius. This action was needed, *regardless* of whether the Staff conducted a “greater detail” review. Of necessity, the Staff had to identify these groups *before* it could determine that “the percentage in the impacted area significantly exceeds that of the State of the County percentages for either the minority or low-income population”<sup>165</sup> — the finding that triggers a “greater detail” review in this proceeding.

The Staff went on to document all environmental impacts as “small” or “moderate,” which goes to the heart of a “greater detail” review: are there potentially significant environmental impacts to minority or low-income populations? The problem here lies in the paucity of the Staff’s discussion. The portions of the FEIS that purport to document the environmental justice review “in greater detail” are, as discussed below, a set of brief and conclusory passages,<sup>166</sup> ultimately finding that “cumulative impacts of environmental justice would be SMALL.”<sup>167</sup> As noted, the Staff, in its Response Brief, points to its documentation of all of the environmental impacts of construction and operation in the FEIS, referring to tables of these findings outside the environmental justice discussion, that were not mentioned by the Board.<sup>168</sup> Thus, the Staff appears to rely heavily on its descriptions and findings regarding impacts in other parts of the FEIS, outside the environmental justice discussion. While these findings reasonably inform the environmental justice review as part of an integrated NEPA review, the Staff’s discussion of environmental justice in the FEIS did not clearly explain or detail how these findings were taken into account.

For example, the Staff, in its Response Brief, states that it identified the pathways through which environmental impacts could affect the identified minority or low-income populations,<sup>169</sup> citing two maps (FEIS Figures 2-6 and 2-7) in

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<sup>163</sup> LIC-203 at D-10. We understand the Staff’s determination of “small” impacts to fall under this rubric.

<sup>164</sup> FEIS at pp. 4-36, 5-52.

<sup>165</sup> Policy Statement, 69 Fed. Reg. at 52,048.

<sup>166</sup> See FEIS at p. 4-50, Table 4-1, p. 4-36, p. 5-52, and p. 5-94, Table 5-22.

<sup>167</sup> *Id.* at p. 7-7. The remaining statements in these three sections of the FEIS address issues other than environmental impacts.

<sup>168</sup> Staff’s Response Brief at 5, citing FEIS at pp. 4-48 to 4-51 (construction) and 5-92 to 5-94 (operation).

<sup>169</sup> Staff’s Response Brief at 5, 6.

support.<sup>170</sup> While the two cited maps provide information regarding the locations of such populations, the maps, by their very nature, do not explain the identification of any pathways.<sup>171</sup> The maps do, however, show the relative locations of the relevant populations and the proposed units and demonstrate that the relevant populations are not located in the immediate vicinity of the site, as the Staff indicates in its Response Brief.<sup>172</sup> The Staff also points, in its Response Brief, to the NRR Guidance, which provides that typically, the severity of environmental impacts varies inversely with the distance from the facility, and therefore, the review should be focused on areas closer to the site.<sup>173</sup>

Further, the Staff states that it examined the potentially disproportionate impacts on the relevant minority and low-income populations.<sup>174</sup> The Staff describes in general terms the methodology and results of its examination.

The staff then evaluated whether minority and low-income populations could be disproportionately affected by these impacts. In its December 2003 onsite review, the staff interviewed local government officials and the staff of social welfare agencies concerning potentially disproportionate impacts on low income and minority populations (Jaksch and Scott 2005). The staff found no unusual resource dependencies or practices, such as subsistence agriculture, hunting, or fishing through which the population could be disproportionately impacted by construction of Units 3 and 4 at the [North Anna] site that would result in those populations being adversely affected. In addition, the staff did not identify any health-related or location-dependent disproportionately high and adverse impacts affecting these minority and low-income populations.<sup>175</sup>

While such negative findings may limit the extent of the expected analysis, these statements do not provide details of a supporting analysis.

This assessment is supported by the Staff's reference to the underlying "Trip Report" by Jaksch and Scott.<sup>176</sup> As the NRR Guidance states, "[e]ach [F]EIS shall contain a section titled, 'Environmental Justice,' which will either contain the complete environmental justice review or a *reference to another document*

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<sup>170</sup> FEIS at pp. 2-78 and 2-79.

<sup>171</sup> *Id.* at p. 4-36 ("The staff identified the pathways through which the environmental impacts associated with the construction of Units 3 and 4 at the [North Anna] site could affect human populations"), 5-52 (same regarding operational impacts).

<sup>172</sup> Staff's Response Brief at 5-6.

<sup>173</sup> *Id.* at 6.

<sup>174</sup> *Id.* at 5, citing FEIS at pp. 4-36 and 5-52.

<sup>175</sup> FEIS at pp. 4-36 and 5-52. The Staff also observes that the negative findings are consistent with the fact that the Staff discovered no such impacts during the scoping process, or from comments on the DEIS or the Supplemental DEIS (SDEIS), or from the Staff's other public outreach activities.

<sup>176</sup> *See supra* note 136.

*containing the review.*”<sup>177</sup> The Board pointed out, however, that the Trip Report “does not provide meaningful support for the Staff’s subsequent statements that it ‘found no unusual resource dependencies or practices’ . . . and ‘did not identify any health-related or location-dependent disproportionately high and adverse impacts affecting . . . minority and low-income populations.’ ”<sup>178</sup> While the report reflects some discussion of low-income and minority populations, and broader discussion of issues of potential relevance to consideration of impacts, the report is essentially a description of a series of conversations with local citizens and officials.

When the Staff review identifies minority or low-income populations in a potentially significant environmental impact area, NRR Guidance directs the Staff to determine “disproportionately high and adverse effects” by considering the following six questions:

- Are the radiological or other health effects significant or above generally accepted norms? Is the risk or rate of hazard significant and appreciably in excess of the general population? Do the radiological or other health effects occur in groups affected by cumulative or multiple adverse exposures from environmental hazards?
- Is there an impact on the natural or physical environment that significantly and adversely affects a particular group? Are there any significant adverse impacts on a group that appreciably exceed or [are] likely to appreciably exceed those on the general population? Do the environmental effects occur or would they occur in groups affected by cumulative or multiple adverse exposure from environmental hazard?<sup>179</sup>

Neither the FEIS nor the Staff’s Response Brief explains the role of these questions in the Staff’s determination. Rather, the Staff focused, in its Response Brief, as noted above, on the portion of the guidance that states: “If there are no minority or low-income populations within the impact area(s) or if there are no potentially significant environmental impacts, then these results should be documented and the environmental justice review is complete.”<sup>180</sup>

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<sup>177</sup> LIC-203 at D-11 (emphasis added). *Cf.* NUREG-1748, App. C at C-7 (“If a site has already received an environmental justice evaluation, it is acceptable to reference the previous evaluation and provide a summary of the findings and then add any new information that results from the proposed action”).

<sup>178</sup> LBP-07-9, 65 NRC at 621, quoting FEIS at p. 4-36.

<sup>179</sup> LIC-203 at D-10. *See also* NUREG-1748, App. C at C-6.

<sup>180</sup> Staff’s Response Brief at 5, citing FEIS at pp. 4-36 and 5-52. Dominion presents a similar argument. Dominion’s Response Brief at 10.

We recognize that the NRR Guidance is not binding on the Staff. However, we believe that, in this instance, the Staff has placed undue reliance upon NRR's direction to present the "underlying information . . . as concisely as possible."<sup>181</sup> As a result, the Staff's explanation of how it reached its conclusions regarding environmental justice is rather cursory for a licensing action of this magnitude. However, in this instance, we do not direct the Staff to supplement its environmental justice review, as we otherwise might, because, as discussed below, we believe that the review was sufficient and that such a supplement would constitute a purely academic exercise with little or no practical benefit.

The Board did not take issue with the Staff's identification of relevant minority and low-income populations. The record in this case shows that no petitioner raised a proposed contention with respect to environmental justice issues. As noted above, the Staff found a majority of the *general* environmental impacts set forth in this FEIS to be "small" or, in a very few cases, "moderate." Further, a review of public comments on the DEIS and SDEIS indicates that no commenter identified, or even suggested, an environmental justice issue associated with this ESP site, such as the presence of subsistence fishing in Lake Anna, or other practices of minority and/or low-income populations that could lead to a disproportionately high and adverse impact linked to the construction and operation of one or more new units at the North Anna ESP site.<sup>182</sup> Moreover, the Staff contacted officials and representatives of the three closest counties and two nearby communities, in addition to the scoping process and public outreach associated with preparation of the DEIS, SDEIS, and FEIS.

We did not identify, in the record presented, any concrete environmental justice issues associated with this proposed action. We do not believe it is necessary to require the Staff to supplement the FEIS, as there is no suggestion in the record of unaddressed environmental justice considerations.

For these reasons, although the Staff's discussion of its environmental justice analysis set forth in the FEIS is quite thin, we do not require further review. We believe that the Staff's documentation does reflect consideration of environmental justice in greater detail, though the discussion of that consideration is terse. Were we to be presented with a situation similar to that in the *LES* case, in which either the Staff or a public stakeholder identified (at any point during the Staff's

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<sup>181</sup> See LIC-203 at D-11.

<sup>182</sup> See FEIS, Vol. 2, at pp. 3-3, 3-193 to 3-196. More than one commenter, however, requested that the EIS include more extensive information related to environmental justice. The Staff's responses to these comments specifically discussed its various public outreach efforts. In addition, none of the comments gathered during the scoping process, prior to preparation of the DEIS, related to environmental justice issues. See generally DEIS, Appendix D, "Scoping Meeting Comments and Responses."

review) a concrete, site-specific environmental justice issue,<sup>183</sup> we would expect the Staff to reflect in its environmental documents a significantly more detailed environmental justice discussion than it presented in this FEIS.

In conclusion, the Staff's review did not clearly comport with the letter of the Commission's environmental justice Policy Statement, or with its internal Staff guidance. However, it appears to us that the Staff's review satisfied the statutory and regulatory requirements of NEPA, in that it did take a "hard look" at the environmental impacts of the construction and operation of new units on the North Anna ESP site. On a practical level, its review was sufficient to identify significant environmental impacts that would fall heavily on a particular minority or low-income community.<sup>184</sup>

We observe, however, that the Commission's Policy Statement and internal guidance on conducting environmental justice reviews are in place to clearly explain to the public how the agency will conduct its environmental justice reviews in licensing matters such as this. We expect conformance with the Policy Statement, and relevant associated guidance, in future licensing actions of this magnitude.

## **E. Applicability of Multiple Radiation Protection Standards**

### ***1. The Board's Discussion***

During the evidentiary hearing, the Board expressed some confusion as to how to apply the agency's various standards for radiation releases and doses

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<sup>183</sup>In *LES*, the Commission addressed two concrete issues of disparate impact on two nearby, impoverished, and overwhelmingly African-American communities. Specifically, the applicant proposed relocating a particular road, but the FEIS, in considering the impacts of relocating the road, failed to take into account the impact of that relocation on pedestrians. The Board determined that many residents used the road as a vital link between the communities, and the extra distance that would be added to the pedestrian commute would have a significant impact on elderly or infirm residents. In addition, the Board found that the FEIS gave only cursory attention to the change in property values resulting from the construction of the uranium enrichment facility in question. Because the two communities were adjacent to the proposed site, presumably the predicted negative impact on property values would fall most heavily on those communities. The Commission ultimately affirmed the Board's direction to the Staff to revise the FEIS to consider actions to mitigate the impacts of (1) relocating the road, and (2) the project on property values. *See generally LES*, CLI-98-3, 47 NRC at 106-10.

<sup>184</sup>We also recognize that the North Anna site already contains existing nuclear units, and we would therefore expect that the actual impacts on low-income and minority populations would have already been identified. This ESP is for a site that has had two operating nuclear power plants for over 20 years. The existing plants (through the NRC's regulatory oversight, participation in emergency preparedness activities, and routine community outreach activities) provide the NRC with substantial information about the effects of a nuclear power plant on surrounding communities and populations.

from normal operations. The Board heard presentations from, and posed a number of questions to, the parties' experts in this area.<sup>185</sup> In particular, the Board was interested in how the NRC's multiple radiation protection standards apply to new reactors added at a site with preexisting nuclear reactors and radiological effluents.<sup>186</sup> The Board posed questions as to how the "as low as reasonably achievable" (ALARA) concept applies when a company proposes to place multiple additional nuclear reactors on a site where such facilities are already located.<sup>187</sup> Although the Board ultimately determined, in making its findings on Safety Issue 1, that "issuance of the ESP will not result in the exceeding of any of NRC's existing numeric radiological standards for the siting of nuclear power plants,"<sup>188</sup> it requested Commission guidance in this area.<sup>189</sup>

According to the Board, much of the confusion surrounding this general issue arises from the fact that some of the Commission's dose limits and standards apply on a per-reactor basis, others apply on a per-license or per-licensee basis, still others apply on a per-site basis, and yet another applies to "uranium fuel cycle operations."<sup>190</sup> Further, the Board pointed out that in most cases, the per-site limit (25 mrem) would moot the per-licensee limit (100 mrem).<sup>191</sup>

With these considerations in mind, the Board suggested that the Commission untangle the following issues:

- (1) How do the per-reactor, per-licensee, and per-site radiological limits apply when there are multiple reactors and multiple licensees being added to a site? Are they additive, increasing the amount of dose and exposure to the public? If not, how should they be applied?
- (2) How is ALARA satisfied under these circumstances?
- (3) How can the gas-cooled reactor designs in the ESP application be deemed to meet the NRC safety regulations, when there are no specific standards for them and most of the standards apply only to light-water-cooled reactors?
- (4) How should the 25-mrem dose limit imposed by 10 C.F.R. § 20.1301(e) and 40 C.F.R. § 190.10 be allocated as between preexisting reactor effluents and new reactor licensees on the same site?<sup>192</sup>

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<sup>185</sup> LBP-07-9, 65 NRC at 585.

<sup>186</sup> *Id.*

<sup>187</sup> *Id.*, 65 NRC at 585-86.

<sup>188</sup> *Id.*, 65 NRC at 599.

<sup>189</sup> *Id.*, 65 NRC at 616-17.

<sup>190</sup> *Id.*, 65 NRC at 623 & n.111.

<sup>191</sup> *Id.*, 65 NRC at 623-24.

<sup>192</sup> *Id.*, 65 NRC at 625-26.

## 2. *Our Analysis*

At the outset, these questions need not be resolved before the ESP can be granted. Criteria in 10 C.F.R. § 52.17 and 10 C.F.R. Part 100 require only that the ESP applicant describe the maximum levels of radiological effluents each facility will produce, and demonstrate that radiological effluent release limits *can be met* (with appropriate design), given the atmospheric dispersion characteristics of the site.<sup>193</sup> The evidence presented at hearing satisfied the Board that these requirements had been met.<sup>194</sup> A determination of whether doses are ALARA would be considered during the review of any subsequent CP or COL application referencing the ESP. A CP or COL applicant referencing this ESP, however, may be required to address issues unique to a multireactor, multiple-licensee site. Therefore, we offer the following observations on the Board's questions.

### a. *Board Question 1: How Do the Per-Reactor, Per-Licensee, and Per-Site Radiological Limits Apply When There Are Multiple Reactors and Multiple Licensees Being Added to a Site?*

The Board expressed concern that it is unclear how the various standards in 10 C.F.R. Parts 20 and 50 interact at multireactor sites, given that the standards are expressed in terms of different entities. Part 20, Subpart D, for example, applies generally to “licensees”<sup>195</sup> and limits radiation dose limits to “individual members of the public.”<sup>196</sup> Part 50 standards, in contrast, apply on a per-reactor basis, requiring that all nuclear reactors be designed so that releases of radioactivity are ALARA.<sup>197</sup>

Two provisions of 10 C.F.R. Part 20 are of interest here. Section 20.1301(a) provides, in pertinent part, that *all licensees* shall conduct operations so that the total effective dose equivalent (TEDE) to individual members of the public from the licensed operation will not exceed 0.1 rem (100 mrem) in a year. It is a *per-licensee* standard. Section 20.1301(e) incorporates by reference the U.S. Environmental Protection Agency's (EPA) environmental radiation protection standard found in 40 C.F.R. § 190.10, which imposes a stricter limit of 0.025

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<sup>193</sup> See 10 C.F.R. §§ 52.17(a)(1), 100.21(c)(1).

<sup>194</sup> LBP-07-9, 65 NRC at 599.

<sup>195</sup> 10 C.F.R. § 20.1301(a) applies to “each licensee.”

<sup>196</sup> See, e.g., 10 C.F.R. § 20.1301(a)(1).

<sup>197</sup> See 10 C.F.R. § 50.34a, “Design objectives for equipment to control releases of radioactive effluents — nuclear power reactors.” Similarly, 10 C.F.R. § 50.36a(a) requires “each licensee of a nuclear power reactor” to include technical specifications that, among other things, require compliance with 10 C.F.R. § 20.1301(a), in order to keep releases of radioactive materials during normal conditions ALARA.

rem (25 mrem) to any member of the public resulting from planned releases of radioactive effluents.<sup>198</sup> It applies to all sources within the uranium fuel cycle at a given site; that is, it is a *per-site* restriction.

For light-water-cooled reactors (LWRs), section 20.1301(e) would be the limiting standard, because a licensee within the uranium fuel cycle could not release the 100-mrem limit permitted by section 20.1301(a) without necessarily violating the 25-mrem limit of section 20.1301(e) that applies to the entire site. This would be true whether the applicant seeking to construct and operate a new LWR is the licensee for the existing reactor at the site, or a different licensee (as could be the case for the North Anna site). In this circumstance, the 100-mrem limit imposed by 10 C.F.R. § 20.1301 would be of no regulatory consequence.<sup>199</sup>

It is true that the limits in 40 C.F.R. § 190.10 — and hence 10 C.F.R. § 20.1301(e) — do not apply to non-LWRs. EPA’s radiation protection standard applies to operations within the “uranium fuel cycle,” which it defines as the processes in production of uranium fuel, “generation of electricity by a light-water cooled nuclear power plant using uranium fuel,” and reprocessing spent uranium fuel.<sup>200</sup> This definition excludes gas-cooled nuclear power reactors, regardless of fuel composition. Therefore, under the current regulatory scheme, gas-cooled nuclear power reactors would not be subject to the stricter 25-mrem per-site limit of 40 C.F.R. § 190.10 and 10 C.F.R. § 20.1301(e). In addition, 10 C.F.R. Part 50, Appendix I provides “numerical guidance on design objectives for [LWRs] to meet the requirements that radioactive material in effluents released to unrestricted areas be kept [ALARA].”<sup>201</sup> No similar design objectives currently exist for non-LWRs.

Currently, every operating nuclear power reactor in this country is a light-water-cooled reactor, and therefore subject to the limits of section 20.1301(e). But Dominion included two gas-cooled reactor designs in its list of designs considered when developing the PPE for the North Anna ESP application. This potentially gives rise to the anomalous situation in which a new licensee with a gas-cooled (or other non-LWR) design could, in theory, be permitted radiological emissions resulting in up to 100-mrem TEDE to a member of the public, at a site where one or more existing LWR licensees must limit their own emissions to a total of 25 mrem or less. Neither the NRC Staff nor the Applicant thought this a practical

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<sup>198</sup> 40 C.F.R. § 190.10.

<sup>199</sup> In its Initial Decision, the Board interpreted a Staff legal pleading to say that section 20.1301(a) does not apply to nuclear reactors. LBP-07-9, 65 NRC at 624. But the Staff’s Response Brief (at 9) clarifies the Staff’s intent to convey that section 20.1301(a) also applies to “other” licensees *in addition to* nuclear power reactor licensees.

<sup>200</sup> 40 C.F.R. § 190.02(b).

<sup>201</sup> 10 C.F.R. § 50.34a(a).

concern, however, because *any* new reactor would be subject to the existing Part 50 ALARA requirements.<sup>202</sup>

We expect that the ALARA requirements will ensure that radioactive effluent releases from new LWRs on a given site are likely to remain well below applicable regulatory limits. With respect to LWRs, the numerical design objectives of Part 50, Appendix I to Part 50 are a fraction of the section 20.1301(e) (40 C.F.R. § 190.10) limits.<sup>203</sup> The existing units at North Anna, for example, control the releases of radioactive effluents so that the maximally exposed individual receives a calculated dose of only 0.32 mrem per year.<sup>204</sup> According to the Final Safety Evaluation Report (FSER), the calculated whole body dose from the new units is expected to be, at most, 6.4 mrem per year.<sup>205</sup> Given that the postulated source terms were calculated to be conservative, the Staff reasonably determined that applicable radiation standards could be met. Compliance with ALARA requirements will, of course, be considered in conjunction with a subsequent CP or COL application.

As noted above, specific numerical guidelines for maintaining effluent releases ALARA for non-LWRs have not been developed. Unless and until such guidelines are implemented, whether a particular non-LWR design complies with ALARA requirements will be determined on a case-by-case basis in the context of a future COL or CP application referencing the ESP.

*b. Board Question 2: How Is ALARA Satisfied at Multi-reactor, Multi-licensee Sites?*

Here, the Board voiced a concern that, even when each reactor is held to an ALARA standard with respect to radiological emissions, total emissions necessarily increase when additional reactors are added to a site.<sup>206</sup> While additional reactors on a site might raise the TEDE to members of the public, 10 C.F.R. Part 20 caps total exposures to the public. Where the site contains “‘uranium fuel cycle’” facilities (for example, light-water-cooled reactors), section 20.1301(e) limits the

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<sup>202</sup> See Staff’s Response Brief at 15-16; Dominion’s Response Brief at 13-14; 10 C.F.R. §§ 50.34a, 50.36a, 20.1101.

<sup>203</sup> In promulgating 40 C.F.R. Part 190 standards, EPA recognized that Appendix I design objectives would assure the Part 190 standards were met for sites with up to five reactors. Except in “‘highly unusual circumstances,’” a multireactor site could have up to five units conforming to the Appendix I design objectives without violating the limits of section 190.10. See Final Rule: “‘Part 190 — Environmental Radiation Protection Standards for Nuclear Power Operations,’” 42 Fed. Reg. 2857, 2858 (Jan. 13, 1977).

<sup>204</sup> See ER, Rev. 9, at p. 3-5-147 (Sept. 2006). See also Tr. at 470-EH.

<sup>205</sup> NUREG-1835, “‘Safety Evaluation Report for an Early Site Permit (ESP) at the North Anna ESP Site,’” Supp. 1, at p. 11-4 (Nov. 2006) (FSER Supplement 1).

<sup>206</sup> LBP-07-9, 65 NRC at 622.

TEDE to 25 mrem per year. Should one or more new reactors be non-LWRs, the per-site limit applicable to them under Part 20 is 100 mrem, but a CP or COL application for such reactors would not be approved unless the applicant seeking to build them demonstrated that their emissions would be ALARA.

It is not necessary to address compliance with the ALARA requirements in an ESP proceeding because, as noted above, Part 100 provides that an ESP applicant need only show that “[r]adiological effluent release limits associated with normal operation from the type of facility proposed to be located at the site *can be met* for any individual located offsite.”<sup>207</sup> The Board found that the record was sufficient to meet the relevant Part 100 requirements.<sup>208</sup>

Notwithstanding this finding, the Board expressed concern during the evidentiary hearing that the estimated releases from the proposed new reactors were 20 times the calculated doses from the two existing reactors.<sup>209</sup> It questioned whether brand-new reactors could be said to be ALARA if they are expected to emit significantly higher radiation levels than the existing reactors on the site.

To respond to this concern, the scope of the Staff’s ESP review bears repeating here. In making its determination on the postulated source terms, the Staff did not, and need not, authorize the proposed reactors to release radioactivity in the amounts used in connection with the dose estimates. Rather, the Staff used conservative estimates to conclude that two new units bounded by the postulated source terms *could* comply with applicable radiation standards found in 10 C.F.R. Part 20. However, *actual compliance* with applicable radiation standards is deferred at the ESP stage, and can only be determined in a COL or CP proceeding, when the applicant must proffer necessary design information and proposed operational programs.

*c. Board Question 3: How Can the Gas-Cooled Reactor Designs in the ESP Application Be Deemed To Meet the NRC Safety Regulations, When There Are No Specific Standards for Them and Most of the Standards Apply Only to Light-Water-Cooled Reactors?*

The Board asked how the Commission can determine that a gas-cooled design meets NRC requirements when specific standards have not yet been set for non-LWRs. We observe that, if a COL or CP applicant chooses to pursue a new reactor design before the Commission has set specific standards applicable to that type of reactor, then the applicant will be subject to the existing requirement of 10 C.F.R.

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<sup>207</sup> 10 C.F.R. § 100.21(c)(1) (emphasis added); *see* 10 C.F.R. § 52.17(a)(1).

<sup>208</sup> LBP-07-9, 65 NRC at 601.

<sup>209</sup> *See* Tr. at 470-76-EH (discussing estimates in the ER, Rev. 9, at p. 3-5-147, and FSER Supplement 1, at p.11-4). *See also* LBP-07-9, 65 NRC at 585, 622.

§ 20.1301(a)(1), and will further be required to demonstrate that its emissions will be ALARA pursuant to 10 C.F.R. §§ 50.34a, 50.36a, and 20.1101. While the design objectives found in Appendix I could potentially serve as guidance to the Staff in performing its review in this area, they would not bind such a CP or COL applicant.

*d. Board Question 4: How Should the 25-mrem Dose Limit Imposed by 10 C.F.R. § 20.1301(e) and 40 C.F.R. § 190.10 Be Allocated as Between Preexisting Reactor and New Reactor Licensees on the Same Site?*

The Board questioned how, as a practical matter, the NRC can administer a “per-site” standard where there are multiple reactors and multiple licensees. The Board posed the question, by way of example, whether there would be a violation if the existing licensee at the North Anna site emitted 3 mrem and the new reactors emitted 24 mrem.<sup>210</sup> If a regulatory violation occurred, who would be responsible?

Because this operational issue is appropriately addressed in the context of a CP or COL application, we decline to determine today whether, or how, the Staff should “allocate” dose limits between new and existing reactors on a single site. However, we offer the following observations.

The Staff has stated that it does not allocate doses considered under Part 190 among multiple reactors on the same site for any reason; rather, the dose is considered to be a cumulative dose for all operations at a given site.<sup>211</sup> The Staff further indicates that, in the past, compliance with C.F.R. Part 190 at sites with four or fewer units has been ensured through compliance with the Appendix I dose objectives.<sup>212</sup>

As indicated in the Staff’s Response Brief, and as discussed in its earlier response to Board Safety Question 80, the technical specifications for each LWR currently require a demonstration of compliance with 40 C.F.R. Part 190 when Appendix I reporting levels, also in the technical specifications, are exceeded.<sup>213</sup> The Staff has also stated that, under current practice, if a *reactor* were to exceed the dose limits of Part 190 or any other Part 20 requirement, it would perform an inspection to identify the cause of the exceedance, and determine whether proper response and corrective action has been taken by the licensee.<sup>214</sup> Although we decline today to direct the Staff in the conduct of its regulatory responsibilities in this area, we note that its current approach has proven to be effective thus far, and

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<sup>210</sup> LBP-07-9, 65 NRC at 625.

<sup>211</sup> See Staff’s Response Brief at 19, citing the “NRC Staff Legal Brief in Response to Licensing Board’s Safety-Related Questions” at 8-9 (Feb. 8, 2007).

<sup>212</sup> *Id.*

<sup>213</sup> Staff’s Response Brief at 19-20.

<sup>214</sup> Staff Response to Board Question 80, Staff Exh. 6, Attachment A, at 72-73.

does not seem unreasonable, as a general matter, as guidance for future practices in the context of new reactor licensing.

## F. Other Matters

In CLI-07-23, we invited the Staff and Dominion to address “the suggestions in LBP-07-9 regarding perceived deficiencies in the NRC Staff’s and Dominion’s evidence and arguments . . .”<sup>215</sup> In this vein, the Staff addressed two issues that merit brief mention.

### 1. Tritium

In LBP-07-9, the Board specifically requested that both Dominion and the Staff provide expert testimony and respond to questions on the “sources, release mechanisms, approximate contributions, pathways, and concentrations of tritium associated with nuclear power reactors[,]” including the existing North Anna Power Station and the proposed ESP site.<sup>216</sup> The Board noted that Dominion ultimately proposed a PPE for this proposed ESP that included a tritium liquid effluent release rate of 850 Ci/yr.<sup>217</sup> The Board criticized the Staff for having “made no effort” to determine whether 850 Ci/yr is a reasonable value for operation of an Advanced CANDU Reactor (ACR) 700, one of the reactor designs contemplated by Dominion.<sup>218</sup>

In this regard, we note that the Staff did not err in performing its review. The ESP application at issue here employed a PPE, a set of design parameters, as opposed to design characteristics associated with a particular reactor design. As such, the Staff considered whether a plant with design characteristics bounded by the design parameters in the PPE *can be* constructed and operated on a site possessing the characteristics of the proposed North Anna ESP site. With respect to the relevant design parameter for tritium, the Staff determined that at least *some designs* would have tritium release rates bounded by the 850 Ci/yr value, and therefore concluded that the design parameter itself was not unreasonable for evaluating whether radioactive effluents could meet applicable regulatory requirements at the North Anna ESP site.<sup>219</sup> Approval of an ESP does not — and is not intended to — approve the construction or operation of reactor(s) of any

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<sup>215</sup> 66 NRC at 36 (footnote omitted).

<sup>216</sup> LBP-07-9, 65 NRC at 579.

<sup>217</sup> *Id.*, 65 NRC at 581.

<sup>218</sup> *Id.*, 65 NRC at 581-82.

<sup>219</sup> Staff’s Response Brief at 42, citing Tr. at 332-EH; Staff Exh. 2 at pp. 11-3 to 11-5.

specific design at the proposed ESP site. As such, the Staff's review of the PPE value for tritium liquid effluent release rate was not in error.

## 2. *Hydrology*

Regarding PPE values related to hydrology, the Board expressed concern about the Staff's review of the composition of radioactive waste effluents and related radionuclide transport. The Board therefore instructed the Staff to produce one or more experts to respond to questions concerning the following proposed permit condition, designated proposed Permit Condition 4:<sup>220</sup>

[a]n applicant for a CP or COL referencing this ESP shall ensure that any new unit's radioactive waste management systems, structures, and components, as defined in Regulatory Guide 1.143, for a future reactor include features to preclude accidental releases of radionuclides into potential liquid pathways.<sup>221</sup>

During the evidentiary hearing, the Board spent considerable time clarifying its understanding as to the scope and intent of the permit condition.<sup>222</sup> The Staff's evidence notwithstanding, the Board, in LBP-07-9, appeared to be disinclined to follow Commission precedent regarding Permit Condition 4. However, as the Board acknowledged, in prior ESP proceedings, we have squarely addressed this issue and approved the permit condition as one way to enable the Staff to make the requisite finding of 10 C.F.R. § 100.20(c)(3).<sup>223</sup> Specific matters associated with the implementation of Permit Condition 4 are appropriately deferred and addressed in conjunction with any CP or COL application that may be submitted referencing this ESP. We see no reason to revisit the issue here.

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<sup>220</sup> In the FSER, this proposed condition stated:

The NRC staff proposes to include a condition in any ESP that might be issued in connection with this application requiring that an applicant referencing such an ESP design any new unit's radwaste systems with features to preclude any and all accidental releases of radionuclides into any potential liquid pathway.

FSER at p. A-3; FEIS at p. J-9. Subsequently, the Staff conformed the wording of this proposed condition to that approved by the Commission for identical conditions in the *Grand Gulf* and *Clinton* ESP proceedings. LBP-07-9, 65 NRC at 576, citing the "NRC Staff's Written Statement of Position," at 12 n.21 (April 10, 2007).

<sup>221</sup> This permit condition is numbered 3.E.3 in the draft permit proffered as Staff Exhibit 17.

<sup>222</sup> LBP-07-9, 65 NRC at 576-79.

<sup>223</sup> *Id.*, 65 NRC at 600-01. See *Clinton II*, CLI-07-12, 65 NRC at 206-07; *Grand Gulf*, CLI-07-14, 65 NRC at 217-18.

### 3. Board Findings on NEPA Baseline Issue 3

Finally, we invited the Staff and Dominion to address any other issues in LBP-07-9 that, in their view, warranted comment.<sup>224</sup> The Staff noted that, in addressing its findings on NEPA Baseline Issue 3, the Board stated:

It is our determination that the ESP should be issued and should include the proposed permit conditions contained in Staff Exhibit 17, and the permit conditions, COL action items, site characteristics, plant parameter envelope values, *representations, assumptions, and unresolved issues* specified in Appendices I and J to the FEIS.<sup>225</sup>

The Staff takes the position that the “representations, assumptions, and unresolved issues” set forth in FEIS Appendix J should not be incorporated into the permit. For the reasons set forth below, we agree.

NEPA Baseline Issue 3 requires the Board to determine “whether the construction permit . . . should be issued, denied, or appropriately conditioned to protect environmental values.”<sup>226</sup> Should the Commission approve issuance of this ESP, the regulations in 10 C.F.R. Part 52 specifically contemplate inclusion of: site characteristics and plant parameters (including plant parameter envelope values),<sup>227</sup> and permit conditions.<sup>228</sup>

In addition, we agree that COL Action Items should be included in the permit. As stated in the FSER Supplement:

The [COL action items] identify certain matters that shall be addressed in the final safety analysis report (FSAR) by an applicant who submits an application referencing the North Anna ESP. These items constitute information requirements . . . . An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. . . . The staff identified the [COL action items] with respect to individual site characteristics *in order to ensure that particular significant issues are tracked and considered during the review of a*

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<sup>224</sup> CLI-07-23, 66 NRC at 36.

<sup>225</sup> LBP-07-9, 65 NRC at 616 (emphasis added).

<sup>226</sup> 10 C.F.R. § 51.105(a)(3).

<sup>227</sup> 10 C.F.R. § 52.39 (referring to “‘site parameters’ included in the permit); 10 C.F.R. § 52.79 (referring to “‘the parameters specified in the early site permit’”). By way of explanation, we clarified these terms in the recently revised Part 52, correctly referencing (among other things) “‘site characteristics” and “‘design parameters.” See 72 Fed. Reg. at 49,370-71, 49,518 (definitions to be codified at 10 C.F.R. § 52.1). The new rule adds definitions of and explains use of the terms. The term “‘site characteristics” is defined as “‘the actual physical, environmental, and demographic features of a site. Site characteristics are specified in an [ESP] . . . .” The term “‘design parameters” is defined as “‘the postulated features of a reactor or reactors that could be built at a proposed site. Design parameters are specified in an [ESP].”

<sup>228</sup> 10 C.F.R. § 52.24.

*later application referencing any ESP that might be issued for the North Anna ESP site.*<sup>229</sup>

Like permit conditions, site characteristics, and plant parameter values, the COL action items identify significant information requirements that do not affect the Staff's ability to make the requisite safety findings for issuance of an ESP, but nevertheless merit tracking and resolution during the safety review performed for a subsequent CP or COL application referencing the ESP.

By contrast, the "representations, assumptions, and unresolved issues" discussed in the FEIS serve a different purpose. The Staff explains that, in assessing the environmental impacts associated with construction and operation of two new units on the North Anna ESP site, it relied on a number of representations made by Dominion in its application, and developed certain assumptions of its own.<sup>230</sup> The FEIS goes on to state:

Should a CP or COL applicant reference the ESP, and the staff ultimately determine that a representation or assumption has not been satisfied at the CP/COL stage, that information would be considered new, and potentially significant, and the affected impact area could be subject to re-examination.<sup>231</sup>

In short, these "representations and assumptions," as well as any other key assumptions that are captured within the text of the FEIS, help to form the basis for the staff's "finality" determinations in the environmental arena during any subsequent CP or COL proceeding. However, they neither place limitations on the ESP or the ESP holder, nor bind a CP or COL applicant in the preparation of future applications referencing the ESP.

Further, Appendix J of the FEIS lists seven key "unresolved" issues; for example, the FEIS did not consider need for power, energy alternatives, or decommissioning.<sup>232</sup> Here again, it is clear that this list of significant unresolved issues was not intended to condition the ESP, but rather to provide a reference for future potential CP or COL applicants and the Staff. As such, it is primarily for ease of reference that these categories of items are set forth in Appendix J of the FEIS:

Table J-1 references Dominion's *representations* and the staff's *assumptions* about design ([FEIS] Appendix I, the plant parameter envelope), permits and authorizations ([FEIS] Appendix L), mitigation (Section 4.10 and 5.11 of the [F]EIS),

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<sup>229</sup> FSER Supplement 1, at p. A-4 (emphasis added).

<sup>230</sup> FEIS at p. J-1.

<sup>231</sup> *Id.* See 10 C.F.R. § 52.39(a)(2).

<sup>232</sup> FEIS at p. J-8.

and the site redress plan ([FEIS] section 4.11). Table J-2 contains references to *representations and assumptions* organized by technical area . . . Table J-3 is a list of unresolved issues. . . .

The . . . tables are meant to aid the staff and the applicant in the event this [F]EIS is referenced in a CP or COL application. The tables are not meant to replace the analysis in the [F]EIS.<sup>233</sup>

We therefore agree with the Staff that, in the environmental context, the contents of the FEIS bounds the reach of both issue preclusion and Staff inquiry into new and significant information in a future CP or COL proceeding referencing an ESP granted for the North Anna ESP site.<sup>234</sup>

### III. CONCLUSION

For the foregoing reasons, we authorize the Staff to issue the ESP.  
IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 20th day of November 2007.

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<sup>233</sup> *Id.* at p. J-1 (emphasis added).

<sup>234</sup> *See* 10 C.F.R. §§ 52.79(a)(1), 52.89.

### **Commissioner Jaczko Respectfully Dissenting, in Part**

I concur with my colleagues on most of this decision, but dissent, in part, on the environmental justice portion of the Memorandum and Order. Environmental justice is a critical component of the agency's NEPA review. It seeks to ensure that environmental, social, economic, and health issues are all appropriately considered in the context of minority and low-income populations where the impacts of actions may be remarkably different from the impacts on the majority. Although the Staff obtained underlying data on minority and low-income populations and provided its conclusions on the potential environmental impacts on those populations in the Environmental Impact Statement (EIS), I do not believe that the Staff sufficiently explained how it reached its conclusions regarding environmental justice. Without such an explanation, I believe it is difficult for the Commission, or the public, to determine whether the Staff has examined environmental justice issues "in greater detail" — as we, in our Environmental Justice Policy Statement, directed the Staff to do. I fully support my colleagues' efforts in this Memorandum and Order to ensure that future environmental justice reviews are supported by a level of detail that would transparently describe the basis for the Staff's conclusions. I diverge from my colleagues on this issue in one respect: I would have also directed the Staff to prepare a Supplemental EIS that provides a supporting analysis for its conclusions prior to the issuance of this Early Site Permit.

I recognize that requiring additional work in the environmental justice area would then impact the finality of this Early Site Permit. I also recognize that this could cause the applicant to adjust its future plans, even though it is the agency's, not the applicant's, responsibility to consider environmental justice issues. But as I have previously stated, this agency exists to serve the public. I have consistently demanded that applicants present thorough and high-quality applications to this agency and it would be inconsistent for me not to demand the same in the Staff's review of those applications. Both are necessary for the NRC to be able to transparently demonstrate how we meet our mission. In this instance, I believe we could have provided a supplemental environmental justice analysis at the cost of a bit more time, but with the benefit of being certain that the agency had a thorough analysis supporting issuance of this Early Site Permit.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Alex S. Karlin**, Chairman  
**Dr. Richard E. Wardwell**  
**Dr. Thomas S. Elleman**

**In the Matter of**

**Docket No. 50-271-LR**  
**(ASLBP No. 06-849-03-LR)**

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

**November 7, 2007**

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS (NEW  
CONTENTIONS)**

The proposed new contention, challenging the adequacy of the applicant's recently issued metal fatigue calculations, meets the three-factor test of 10 C.F.R. § 2.309(f)(2)(i)-(iii) because it was filed in a timely manner soon after this new and materially different information became available. It also meets the six-factor test of 10 C.F.R. § 2.309(f)(1). It is therefore admissible.

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS (NEW  
CONTENTIONS)**

The first step in assessing the admissibility of a new contention in an ongoing proceeding is to determine if it is timely under 10 C.F.R. § 2.309(f)(2)(iii). Timely new (non-NEPA) contentions are subject to a three-factor test under 10 C.F.R.

§ 2.309(f)(2). Nontimely new contentions are subject to a more stringent standard — the eight-factor balancing test specified in 10 C.F.R. § 2.309(c).

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS (NEW AND MATERIALLY DIFFERENT INFORMATION)**

A new non-NEPA contention is admissible under 10 C.F.R. § 2.309(f)(2)(i)-(iii) if it is based on information that was not previously available, if the new information is materially different from previously available information, and if the contention is submitted in a timely manner once the new information becomes available. In this case, the applicant's release of a revised metal fatigue analysis constitutes new and materially different information.

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS (TIMELINESS OF NEW CONTENTIONS)**

NRC regulations do not provide a specific deadline for determining whether a new contention is timely for purposes of 10 C.F.R. § 2.309(f)(2)(iii). A specific rule may be established by a licensing board in the initial scheduling order for a case. Many boards have established a 30-day rule in this way.

**RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS (GENERAL)**

The six-factor contention admissibility test in 10 C.F.R. § 2.309(f)(1) applies regardless of whether a contention is submitted at the beginning of a proceeding, as a timely new contention under 10 C.F.R. § 2.309(f)(2), or as a nontimely new contention under 10 C.F.R. § 2.309(c).

**RULES OF PRACTICE: CONTENTIONS (SCOPE OF LICENSE RENEWAL PROCEEDING)**

In a license renewal proceeding, safety contentions must focus on topics related to the detrimental effects of aging and related time-limited issues mentioned in 10 C.F.R. Part 54. Metal fatigue is an example of age-related degradation that properly falls within the scope of a license renewal proceeding.

**RULES OF PRACTICE: SELECTION OF HEARING PROCEDURES**

Under 10 C.F.R. § 2.310(a), upon admission of a new contention, the Board must identify the specific hearing procedures to be used. The Board makes

this determination on a contention-by-contention basis, selecting the hearing procedure most appropriate for each contention.

#### **RULES OF PRACTICE: SELECTION OF HEARING PROCEDURES**

Absent any mandatory hearing procedure under 10 C.F.R. § 2.310(b)-(h), the Board must exercise its discretion under 10 C.F.R. § 2.310(a) and select the hearing procedure most appropriate for a newly admitted contention. There is no mandatory or automatic “default” to Subpart L.

### **MEMORANDUM AND ORDER (Ruling on NEC Motions To File and Admit New Contention)**

Before this Atomic Safety and Licensing Board (Board) are two motions by the New England Coalition (NEC) to file and admit a new contention relating to the application of Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (collectively, Entergy) to renew its operating license for the Vermont Yankee Nuclear Power Station (VYNPS) in Windham County, Vermont.<sup>1</sup> The motions each propound a single contention (they are substantially identical) that challenges the adequacy of Entergy’s calculations concerning metal fatigue on key reactor components during the proposed 20-year renewal period. For the reasons stated below, the Board grants the second motion and admits a new contention on this subject.

#### **I. BACKGROUND**

On January 25, 2006, Entergy filed an application to extend its operating license for the VYNPS for an additional 20 years beyond the current expiration date of March 21, 2012.<sup>2</sup> Subsequently, the Commission published a notice of opportunity to request a hearing on the application, several requests were filed, and, on September 22, 2006, this Board issued an order granting the hearing requests of two entities, the Vermont Department of Public Service (DPS) and NEC. LBP-06-20, 64 NRC 131 (2006). One of the admitted contentions dealt with metal fatigue, as follows:

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<sup>1</sup>[NEC] Motion To File a Timely New or Amended Contention (July 12, 2007) [NEC Motion One]. [NEC] Motion To File a Timely New or Amended Contention (Sept. 4, 2007) [NEC Motion Two].

<sup>2</sup>[VYNPS] License Renewal Application (Jan. 25, 2006), ADAMS Accession No. ML060300085 [Application]. Entergy has since supplemented and amended its application several times.

*NEC Contention 2:* Entergy's License Renewal Application does not include an adequate plan to monitor and manage the effects of aging [due to metal fatigue] on key reactor components that are subject to an aging management review, pursuant to 10 C.F.R. § 54.21(a) and an evaluation of the time limited aging analysis, pursuant to 10 C.F.R. § 54.21(c).

*Id.* at 183.

NEC Contention 2 is based on the fact that Entergy's renewal application specified that, if the license were extended for 20 years, certain key components and piping of VYNPS would have a metal fatigue cumulative use factor (CUF) greater than unity (CUF > 1), meaning that they would be likely to develop metal fatigue cracks that might affect their function. Application at 4.3-6 to 4.3-8. Under such circumstances, NRC regulations require, *inter alia*, that the applicant "demonstrate" that the effects of aging (i.e., cracks) "will be adequately managed for the period of extended operation." 10 C.F.R. § 54.21(c)(1)(iii). Entergy responded to this regulatory requirement by stating that it would satisfy the regulation *either* by refining its CUF calculations to show that the CUFs were really less than unity, *or* by managing the metal fatigue cracking at locations where the CUF remained greater than unity via an inspection and replacement program.<sup>3</sup> NEC contended that Entergy's application failed to demonstrate that it would safely manage the metal fatigue aging and cracking process, and instead simply provided a list of three options: (a) recalculate the CUFs, (b) inspect affected locations, and/or (c) repair or replace pipes or components, as needed, at locations where calculated CUFs were greater than unity.<sup>4</sup>

On September 22, 2006, the Board concluded that NEC Contention 2 satisfied the admissibility criteria of 10 C.F.R. § 2.309(f)(1). This was based on NEC's position that Entergy's application contained what amounted to a list of options for the development of future plans, not an actual demonstration of regulatory compliance. LBP-06-20, 64 NRC at 186-87. In so doing, the Board noted that

Efforts by Entergy's attorneys to justify the options presented in the Application, for example by claiming that reanalyzing the CUF factors is a feasible option, fail to address NEC's concern that the brief presentation in the Application provides no information at all about *how* Entergy intends to reanalyze the CUF factors if it should become necessary to do so. Where such reanalysis does not produce a CUF less than 1, Entergy's statement that it will implement "management of fatigue at the affected locations by an inspection program that has been reviewed and approved by the NRC (e.g., periodic nondestructive examination of the affected locations at

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<sup>3</sup> Application at 4.3-7; Entergy's Answer to [NEC]'s Petition for Leave To Intervene, Request for Hearing, and Contentions (June 22, 2006) at 18-19.

<sup>4</sup> [NEC] Petition for Leave To Intervene, Request for a Hearing, and Contentions (May 26, 2006) at 16 (citing Application at 4.3-7) [NEC Petition].

inspection intervals to be determined by a method acceptable to NRC)’’ is a bit vague.

*Id.* (citations omitted).

On June 12, 2007, during a prehearing teleconference, counsel for Entergy informed us of a new development in its plan to deal with metal fatigue during the proposed renewal period. Tr. at 568. Specifically, we learned that Entergy, with the help of its consultants, had been performing revised fatigue analyses incorporating environmentally assisted fatigue (i.e., a further refinement of its CUF analyses) that ostensibly would demonstrate that all CUFs were less than unity ( $CUF < 1$ ) for the entire renewal period. Tr. at 568-69. If the revised analyses showed all CUFs less than unity, then this would establish that environmentally assisted metal fatigue would be low enough during the 20-year renewal period to eliminate the need for Entergy to have a program to manage such metal fatigue. Entergy’s counsel suggested that these revised analyses, when finalized, would render NEC Contention 2 moot. Tr. at 569. Entergy’s counsel added that, on June 7, 2007, Entergy had provided the parties with draft versions of the relevant fatigue analyses reports (prepared by Entergy’s consultant). Tr. at 572-74.

On July 12, 2007, NEC filed NEC Motion One, seeking the admission of a new contention challenging the adequacy of the revised metal fatigue analyses contained in the draft CUF analyses reports disclosed in June.<sup>5</sup> In its answer to this motion, Entergy requested that a ruling on the motion await release of the final report of the revised analyses.<sup>6</sup> In its reply, NEC agreed with Entergy that a ruling on its first motion should be delayed.<sup>7</sup>

On August 2, 2007, counsel for Entergy provided all parties with a copy of its final reports and recalculations regarding the metal fatigue and CUF issues.<sup>8</sup> Accordingly, on September 4, 2007, NEC filed NEC Motion Two, seeking admission of a new contention (designated herein as NEC Contention 2A) challenging the adequacy of the revised metal fatigue analyses contained in the nine *final* reports disclosed on August 2, 2007. NEC Motion Two at 1.

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<sup>5</sup> The NRC regulations create a two-decision process for the initiation of new contentions. First, the parties litigate, and the Board decides, whether the intervenor should be granted leave to file a new contention. 10 C.F.R. § 2.309(f)(2). If so, then the parties litigate, and the Board decides, whether the contention satisfies the requirements of 10 C.F.R. § 2.309(f)(1). In our initial scheduling order, we eliminated this “new contention two-step” and consolidated the briefing on these issues. Licensing Board Order (Initial Scheduling Order) (Nov. 17, 2006) at 6 (unpublished) [Initial Scheduling Order]. The parties followed this consolidated process here.

<sup>6</sup> Entergy’s Response to [NEC Motion One] (Aug. 6, 2007) at 1.

<sup>7</sup> [NEC] Reply to Entergy and Staff Answers to [NEC Motion One] (Aug. 10, 2007) at 1.

<sup>8</sup> NEC Motion Two, Attach. 1, Letter from Matias F. Travieso-Diaz, Counsel for Entergy, to Mary C. Baty, Sarah Hofmann, and Karen L. Tyler (Aug. 2, 2007).

NEC Motion One is superseded by NEC Motion Two, and therefore the Board only addresses the latter.

## II. LEGAL STANDARDS FOR ADMISSION OF NEW 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 new and timely contentions; 10 C.F.R. § 2.309(c), which deals with the admission of new but nontimely 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).<sup>9</sup> If so, a new (non-NEPA<sup>10</sup>) contention is evaluated under the three-factor test of 10 C.F.R. § 2.309(f)(2), which was promulgated in 2004. This regulation 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;
- (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.<sup>11</sup>

In sum, if the petitioner is able to show that new and materially different information has become available during the processing of the application, and the petitioner promptly files a new contention based on this new information,

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<sup>9</sup> 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).

<sup>10</sup> New contentions arising under the National Environmental Policy Act (NEPA) are subject to a different standard. See 10 C.F.R. § 2.309(f)(2). Otherwise, the three-factor test of 10 C.F.R. § 2.309(f)(2)(i)-(iii) applies.

<sup>11</sup> 10 C.F.R. § 2.309(f)(2) (emphasis added). The regulations do not set a specific number of days for determining whether a new contention motion is “timely” as required by 10 C.F.R. § 2.309(f)(2)(iii). It is subject to a reasonableness standard, depending on the facts and circumstances of each situation. However, many boards, including this one, have established a general 30-day rule for the filing of such motions. Initial Scheduling Order at 7.

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)).<sup>12</sup>

If a proposed new contention is *not timely* under 10 C.F.R. § 2.309(f)(2)(iii), then its admissibility is governed by 10 C.F.R. § 2.309(c), which deals with “nontimely filings.” While timely new contentions are subject to a three-factor test, the admissibility of nontimely new contentions is evaluated by a more stringent standard — the eight-factor balancing test specified in 10 C.F.R. § 2.309(c) (as well as the six general contention admissibility standards contained in 10 C.F.R. § 2.309(f)(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). We reviewed this six-factor test earlier in this proceeding, and need not repeat that discussion here. LBP-06-20, 64 NRC at 146-51.

### III. POSITIONS OF THE PARTIES

NEC’s motions focus on 10 C.F.R. § 2.309(f)(2) and assert that “Entergy’s new analysis of environmentally assisted metal fatigue is materially different from the analysis of this phenomenon reported in Entergy’s License Renewal Application” because it “employed different methods, and produced different results.” See NEC Motion Two at 1. NEC posits that its motion is timely because our Initial Scheduling Order established a 30-day deadline for filing timely new or amended contentions under 10 C.F.R. § 2.309(f)(2)(iii). *Id.* NEC points out that Entergy filed its final report on the new metal fatigue analyses on August 3, 2007, and NEC Motion Two was filed on September 4, 2007, thus meeting the 30-day requirement.<sup>13</sup>

Turning to the six fundamental admissibility criteria of 10 C.F.R. § 2.309(f)(1)(i)-(vi), NEC states that NEC Contention 2A incorporates its admitted contention, NEC Contention 2, and adds the following:

NEC now contends . . . that the analytical methods employed in Entergy’s [environmentally corrected CUF or] CUFen Reanalysis were flawed by numerous

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<sup>12</sup> NRC typically initiates its adjudicatory proceedings at a very early stage in the administrative process — when the application is docketed. Normally a great deal of new and material information becomes available to the public after the docketing, as for example when the applicant amends its license application or submits additional information or when the NRC Staff issues its safety evaluation report and final environmental documents. Section 2.309(f)(2) accommodates this fact by allowing a petitioner to assert new contentions, if they are filed in a timely fashion, based on such new information. This satisfies section 189a of the Atomic Energy Act, 42 U.S.C. § 2239a.

<sup>13</sup> *Id.* at 2. The 30th day occurred on a weekend and the following Monday was a legal holiday. See 10 C.F.R. § 2.306.

uncertainties, unjustified assumptions, and insufficient conservatism, and produced unrealistically optimistic results. Entergy has not, by this flawed reanalysis, demonstrated that the reactor components assessed will not fail due to metal fatigue during the period of extended operation.

NEC Motion Two at 3 (citations omitted). In support of this new contention, NEC submits the declaration of an expert, Dr. Joram Hopfenfeld.<sup>14</sup> According to Dr. Hopfenfeld, the environmentally corrected cumulative use factors (CUFens) that Entergy and its consultants calculated as part of their August 3, 2007, reanalyses reports were “unrealistically low.” *Id.* ¶9. Among Dr. Hopfenfeld’s specific allegations are that Entergy failed to perform an error analysis to show the error range for each variable in the CUFen analyses, relied on incorrect guidance when calculating environmental fatigue correction factors (Fens), failed to use sufficient care in adapting equations derived from laboratory experiments to actual reactor components, and “did not use the equations properly at low oxygen and low temperatures.” *Id.* ¶¶ 16-18. Dr. Hopfenfeld also alleges that Entergy’s calculation of 60-year CUFs does not provide sufficient information about key assumptions to substantiate the claim that the result is “conservative” or “bounding.” *Id.* ¶20. Dr. Hopfenfeld includes his own proposed recalculation of CUFen values (some exceeding unity) based on the CUF values originally presented in the Application and on what Dr. Hopfenfeld asserts are appropriate “bounding” values for the Fens. *Id.* ¶¶ 28-32 & Table 1.

Entergy opposes admission of NEC’s new contention and argues that the pending NEC Contention 2 should be dismissed.<sup>15</sup> Entergy does not dispute NEC’s assertion that the new contention is timely or that it meets the three criteria of 10 C.F.R. § 2.309(f)(2). Rather, Entergy claims that the new contention fails to satisfy the general contention pleading requirements of 10 C.F.R. § 2.309(f)(1)(i) because it does not include a “specific statement of the issue of law or fact to be raised or controverted.” Entergy Answer at 1-2. According to Entergy, NEC’s pleading is “impermissibly vague” and does not “provide sufficient notice of the specific alleged deficiencies against which Entergy must defend.” *Id.* at 2. Furthermore, Entergy says, the declaration of NEC’s expert witness “broadly assails” the revised calculations and does not “identif[y] any specific errors or deficiencies” that could influence the results. *Id.* Entergy goes on to present a point-by-point rebuttal to the issues raised by NEC’s expert, arguing that this rebuttal shows the new contention fails to demonstrate the existence of a genuine dispute as required by 10 C.F.R. § 2.309(f)(1)(vi). *Id.* at 3-6. Finally, Entergy argues that the original NEC Contention 2 was rendered moot by the completion of the revised fatigue analysis, and that the pending contention should therefore

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<sup>14</sup> Sixth Declaration of Dr. Joram Hopfenfeld (Aug. 31, 2007) [Hopfenfeld Decl.].

<sup>15</sup> Entergy’s Response to [NEC Motion Two] (Oct. 1, 2007) at 1 [Entergy Answer].

be dismissed. *Id.* at 6-7. In the alternative, Entergy argues that any hearing on the metal fatigue issue should be limited to NEC's challenges to the revised analysis, and that there is no need to consider the second and third options originally proposed in the Application, *see supra* pp. 264-65, because Entergy has now selected the first of the three. Entergy Answer at 7-8.

The NRC Staff does not object to the admission of NEC's new contention.<sup>16</sup> In its earlier answer to NEC Motion One, which was based on Entergy's draft report of the revised metal fatigue analyses, the Staff asserted that the new NEC contention met the pleading requirements of 10 C.F.R. § 2.309(f)(1) and (2) and was therefore admissible.<sup>17</sup> According to the Staff, the contention in NEC Motion Two is the same as the contention in NEC Motion One, except for being based on the final fatigue analysis report rather than the draft, and the reasoning in the Staff's answer to the first motion therefore applies equally to the second. Staff Answer at 1.

In its reply, NEC argues that Entergy's strategy is one of "supplying incomplete information, and then faulting the intervenor for lack of specificity in response," and claims that the CUF reanalysis does "not include the information necessary to meet Entergy's burden of proof" regarding compliance with 10 C.F.R. § 54.21(c)(1).<sup>18</sup> NEC further notes that an intervenor is not required to put forward a "comprehensive study" rebutting an applicant's submittals at the contention admissibility stage of a proceeding. NEC Reply at 6. Rather, NEC states that intervenors are required to make a showing sufficient to demonstrate that further inquiry is appropriate. NEC asserts that it has met this standard. *Id.* Finally, NEC requests that its previously admitted contention be held in abeyance, rather than dismissed, so that it may be revived if the Board finds that Entergy's reanalysis is inadequate. *Id.*

#### IV. RULING

The Board grants NEC's motion to file a timely new or amended contention and admits NEC Contention 2A. We find that NEC has satisfied both the new contention pleading requirements of 10 C.F.R. § 2.309(f)(2)(i)-(iii) and the general contention pleading requirements of 10 C.F.R. § 2.309(f)(1)(i)-(vi).

No party disputes NEC's assertion that Entergy's revised fatigue analysis is new and materially different from information that was available previously. Similarly, there is no dispute that NEC filed its new contention within the time

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<sup>16</sup> NRC Staff Answer to [NEC Motion Two] (Oct. 1, 2007) [Staff Answer].

<sup>17</sup> NRC Staff Answer to [NEC Motion One] (Aug. 6, 2007) at 3-6.

<sup>18</sup> [NEC] Reply to Entergy's Answer to [NEC Motion Two] (Oct. 9, 2007) at 3 [NEC Reply].

prescribed in our Initial Scheduling Order. Accordingly, no elaborate discussion of the new contention requirements in 10 C.F.R. § 2.309(f)(2) is necessary.

We therefore turn to Entergy's assertion that NEC's new contention fails to meet the general contention pleading requirements of 10 C.F.R. § 2.309(f)(1). We first address Entergy's assertion that the contention fails because it does not include a "specific statement of the issue of law or fact to be raised or controverted." Entergy Answer at 1-2. While it is better practice for the petitioner to specify the precise wording of its new contention, NEC's new contention is clear enough to us. The following excerpt from NEC's motion provides a concise statement of the contention:

NEC now contends . . . that the analytical methods employed in Entergy's [environmentally corrected CUF, or] CUFen Reanalysis were flawed by numerous uncertainties, unjustified assumptions, and insufficient conservatism, and produced unrealistically optimistic results. Entergy has not, by this flawed reanalysis, demonstrated that the reactor components assessed will not fail due to metal fatigue during the period of extended operation.

NEC Motion Two at 3 (citations omitted).

Going beyond the overall statement of the contention, we have no difficulty determining that NEC's criticisms of the fatigue analysis generally fall into two broad categories: a critique of Entergy's calculations of environmental fatigue correction factors (Fens), and a critique of the calculations of 60-year CUFs. Hopenfeld Decl. ¶¶ 14-18 and 19-26, respectively. The only other issue raised is NEC's claim that Entergy is required to "calculate the partial usage factor for each stress cycle" as a step toward calculating environmentally corrected cumulative use factors (CUFens), and that Entergy has not done so. *Id.* ¶ 27. These two categories and one additional issue provide a rationale for the general statement of the contention and thereby satisfy the basis requirement in 10 C.F.R. § 2.309(f)(1)(ii).

The Board previously concluded that the metal fatigue issue, and Entergy's approach to meeting the requirements of 10 C.F.R. § 54.21(c)(1)(i)-(iii) with respect to that issue, was "an aging management issue that is clearly within the scope of a license renewal proceeding." LBP-06-20, 64 NRC at 186. NEC's new contention is conceptually similar and likewise satisfies the scope requirement of 10 C.F.R. § 2.309(f)(1)(iii). Similarly, we previously found that a legitimate challenge to Entergy's aging management program for metal fatigue constituted a genuine, material dispute. *Id.* Because NEC's new contention is a challenge to Entergy's new aging management program, it likewise satisfies the materiality requirement of 10 C.F.R. § 2.309(f)(1)(iv) and the genuine dispute requirement of 10 C.F.R. § 2.309(f)(1)(vi).

Dr. Hopenfeld's affidavit serves as the "concise statement of supporting fact

or expert opinion’’ required by 10 C.F.R. § 2.309(f)(1)(v). Entergy’s assertions notwithstanding, NEC is not required to present its entire case at the contention admissibility stage of the proceeding.<sup>19</sup> Nor is it required to demonstrate that it will prevail on the merits. LBP-06-20, 64 NRC at 151. Rather, NEC is required to provide sufficient information to show that a more comprehensive inquiry is warranted. *Id.* By submitting a detailed critique of Entergy’s revised fatigue analysis, supported by an affidavit by an expert witness, NEC has satisfied this regulatory requirement.

Regarding the fate of the original NEC Contention 2, NEC claims that its original contention remains valid and should be held in abeyance pending the resolution of its new contention. NEC Reply at 6. We agree, with one proviso. When this litigation began, Entergy’s application showed certain CUFs to be greater than unity, and Entergy indicated that it would manage such metal fatigue over the 20-year renewal period. NEC’s original Contention 2 challenged the adequacy of Entergy’s demonstration of its metal fatigue *management* program. Now Entergy says it has recalculated the CUFs to show that they all are less than 1, thus eliminating the need to manage metal fatigue over the renewal period. NEC Contention 2A challenges Entergy’s *recalculation of the CUFs*. If NEC Contention 2A is successful and Entergy’s revised CUF analyses are not shown to be sufficient, then Entergy might return to relying on a fatigue management program as a way of satisfying the Part 54 regulations.

Thus, we conclude that NEC Contention 2A will be litigated now, and NEC Contention 2 will be held in abeyance. The proviso is that the parties are not to litigate Contention 2 unless and until Entergy returns to reliance on a metal fatigue management program (as would likely happen if NEC prevails on NEC Contention 2A). If Entergy proposes a new metal fatigue management program that differs from the one originally submitted in the Application, then NEC may need to amend NEC Contention 2 to address and support its challenges to the revised program. This approach is more efficient than dismissing NEC Contention 2 entirely, and then relitigating its admission later as a ‘‘new’’ contention.

## V. SELECTION OF HEARING PROCEDURES

As charged by 10 C.F.R. § 2.310(a), upon admission of a contention, the Board must identify the specific hearing procedures to be used. The Board makes this determination on a contention-by-contention basis, selecting the hearing procedure

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<sup>19</sup> *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004); *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004).

“most appropriate for the specific contentions before it.”<sup>20</sup> The regulation provides, “[e]xcept as determined through the application of paragraphs (b) through (h) of this section, proceedings . . . *may* be conducted under the procedures of Subpart L of this part.” 10 C.F.R. § 2.310(a) (emphasis added). Paragraphs (b) through (h) outline specific instances where certain hearing procedures are available or mandated. Unfortunately, none of the parties addressed the question of which hearing procedures should apply to the new NEC Contention 2A.

Absent any mandatory hearing procedure under 10 C.F.R. § 2.310(b)-(h), the Board must exercise its discretion under 10 C.F.R. § 2.310(a) and select the hearing procedure most appropriate for NEC Contention 2A. There is no mandatory or automatic “default” to Subpart L. A general discussion of this issue is found in *Vermont Yankee*, LBP-04-31, 60 NRC at 704-06.

Our selection of the appropriate hearing procedure for newly admitted NEC Contention 2A is influenced by the fact that the other two contentions admitted herein are currently subject to the Subpart L procedures. LBP-06-20, 64 NRC at 201-04. While the original selection of hearing procedures for the other contentions is not immutable, there is no indication that any party will seek to change it. Under these circumstances, and lacking any suggestion that a different procedure would be appropriate for the newly admitted contention, we conclude that NEC Contention 2A should be heard under the Part 2, Subpart L hearing procedures.

If any party objects to the selection of this hearing procedure for the newly admitted contention, then, within 10 days hereof, it may file a motion, not to exceed five pages in length, supporting the selection of a different hearing procedure. Seven days thereafter, any other party or interested state may file a response, not to exceed five pages in length, supporting or opposing the motion.

## VI. FURTHER MOTIONS

The NRC Staff has stated that it plans to issue its final Safety Evaluation Report (SER) in November.<sup>21</sup> Based on our Initial Scheduling Order, the issuance of the SER in November will likely result in our holding the evidentiary hearing in the second quarter of 2008 (calendar year). Given this limited intervening time frame, henceforth no motions for summary disposition or motions to dismiss as moot may be filed herein, on NEC Contention 2A or any other contention, without prior motion for leave to file and a showing of good cause why such a proposed motion: (a) would not be disruptive of the ability of the parties to prepare for,

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<sup>20</sup> *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-31, 60 NRC 686, 705 (2004).

<sup>21</sup> Letter from Mary C. Baty, Counsel for NRC Staff, to the Licensing Board (Nov. 1, 2007) at 2.

and submit all appropriate evidence for, the evidentiary hearing, and (b) would materially expedite the ultimate resolution of the proceeding. If a motion for leave is filed, it need not include the proposed motion for summary disposition or motion to dismiss as moot, and if it does, the responding parties need not address such attached proposed motions in their answers, unless and until at least 10 days after the Board grants the motion for leave. This will conserve effort and minimize disruption to preparations for the evidentiary hearing.

It is so ORDERED.

FOR THE ATOMIC SAFETY  
AND LICENSING BOARD<sup>22</sup>

Alex S. Karlin, Chairman  
ADMINISTRATIVE JUDGE

Dr. Richard E. Wardwell  
ADMINISTRATIVE JUDGE

Dr. Thomas S. Elleman  
(by E. Roy Hawkens)  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
November 7, 2007

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<sup>22</sup> Copies of this Order were sent this date by internet e-mail transmission to counsel for (1) Licensees Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.; (2) Intervenor Vermont Department of Public Service and New England Coalition of Brattleboro, Vermont; (3) the NRC Staff; and (4) the State of New Hampshire.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**COMMISSIONERS:**

**Dale E. Klein**, Chairman  
**Gregory B. Jaczko**  
**Peter B. Lyons**

**In the Matter of**

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

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

**December 12, 2007**

**RULES OF PRACTICE: COMMISSION DEFERENCE**

In matters of case management, such as censure orders, the Commission generally defers to the Board.

**MEMORANDUM AND ORDER**

Before us is an appeal of the Atomic Safety and Licensing Board's December 3, 2007 Order censuring Mr. Sherwood Martinelli, the lay representative for a petitioner to intervene in this proceeding. In particular, the Board censured Mr. Martinelli for both his failure to comply with a procedural Board Order and an *ad hominem* charge in response to a Board action. The charge appeared in correspondence with the NRC Staff that Mr. Martinelli provided to the Board members and other participants. Unpublished Order at 2 & n.2 (Dec. 3, 2007), citing Sherwood Martinelli's letter to Sherwin Turk at 1.

In matters of case management such as this, we generally defer to the Board. We view the Board's Order as a reasonable response to Mr. Martinelli's conduct. See 10 C.F.R. § 2.314(c) (authorizing reprimand, censure, or suspension for "contemptuous conduct"); *Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 2), ALAB-474, 7 NRC 746, 748-49 (1978) (chastising a *pro se*

intervenor for using ‘‘insulting and disrespectful’’ language). We therefore defer to the Board and affirm its December 3 Order.

IT IS SO ORDERED.

For the Commission

ANNETTE L. VIETTI-COOK  
Secretary of the Commission

Dated at Rockville, Maryland,  
this 12th day of December 2007.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**Lawrence G. McDade**, Chairman  
**Richard F. Cole**  
**G. Paul Bollwerk, III**

**In the Matter of**

**Docket No. 70-143-CO**  
**(ASLBP No. 07-857-01-CO-BD01)**  
**(Confirmatory Order)**

**NUCLEAR FUEL SERVICES, INC.**  
**(Special Nuclear Facility)**

**December 13, 2007**

**RULES OF PRACTICE: SCOPE OF PROCEEDING**

By Commission design, the scope of an enforcement proceeding is narrow and is expressly restricted by the *Federal Register* Notice of Opportunity for Hearing which initiates the proceeding. In past enforcement proceedings, the Commission has limited the scope of the proceeding to whether an enforcement order should be sustained. As provided in longstanding Commission policy, this means that a petitioner must show that he, she, or it would be adversely affected by the enforcement order as it exists, not that they are harmed by the failure of the Commission to impose a hypothetical order the petitioner asserts would be an improvement. *Alaska Department of Transportation and Public Facilities*, CLI-04-26, 60 NRC 399, 404-06 (2004).

**RULES OF PRACTICE: SCOPE OF PROCEEDING**

“Boards are not to consider whether [enforcement] orders need strengthening.” *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406. To the extent a request for hearing seeks to enhance the enforcement measures already

outlined in an enforcement order, this is outside the scope of the proceeding, and accordingly, the request for hearing must be denied.

**RULES OF PRACTICE: STANDING TO INTERVENE**

To establish standing, a petitioner must show an injury in fact that is fairly traceable to the challenged action, and that is likely to be redressed by a favorable decision. *Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), CLI-04-5, 59 NRC 52, 57 n.16 (2004) (citing *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71-72 (1994)). This three-part inquiry is conducted by reviewing the alleged injury stemming from the regulatory action at issue, not that asserted to arise generally from the operation of the facility or the actions of the licensee involved in the proceeding. *See Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-92-27, 36 NRC 196, 198 (1992).

**RULES OF PRACTICE: STANDING TO INTERVENE (RELATING TO SCOPE OF PROCEEDING)**

To establish standing, a petitioner must show an injury in fact that is fairly traceable to the challenged action, and that is likely to be redressed by a favorable decision. *Maine Yankee*, CLI-04-5, 59 NRC at 57 n.16 (citing *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 71-72). Because a petitioner must show an injury, the issue of standing is directly related to the issue of the scope of the proceeding. If there is no injury, i.e., no adverse effect, the petitioner's request for hearing is not within the scope of the proceeding. *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405-06. Consequently, the petitioner also has not established standing. *Id.* For these reasons, the hearing request must be denied. *Id.*

**RULES OF PRACTICE: STANDING TO INTERVENE (RELATING TO SCOPE OF PROCEEDING)**

To establish standing, a petitioner must show an injury in fact that is fairly traceable to the challenged action, and that is likely to be redressed by a favorable decision. *Maine Yankee*, CLI-04-5, 59 NRC at 57 n.16 (citing *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 71-72). If a petitioner "requests a remedy that is beyond the scope of the [proceeding], then the hearing request must be denied" because the request is incapable of being redressed by a favorable decision. This is because the Board does not have the authority to review the request. *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405.

#### **RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY)**

Although a proximity presumption has been invoked when resolving issues of standing for cases involving reactor licensing, in a case involving an enforcement order, the standing requirement is based on an alleged adverse effect stemming from the promulgation of the order. Therefore, something in addition to the distance of the petitioner from the facility is necessary to establish standing — a link between the order and the alleged harm to the petitioner. *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 75 n.22; *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406.

#### **RULES OF PRACTICE: CONTENTIONS**

The admissibility of contentions is set out in 10 C.F.R. § 2.309(f)(1). An admissible contention must (1) provide a specific statement of the legal or factual issue sought to be raised; (2) “provide a brief explanation of the basis for the contention”; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) “[d]emonstrate that the issue raised . . . is material to the findings the NRC must make to support the action that is involved in the proceeding”; (5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner’s position and upon which the petitioner intends to rely at the hearing; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief. 10 C.F.R. § 2.309(f)(1)(i)-(vi). Failure to comply with any of these requirements is grounds for the dismissal of the contention. 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

#### **RULES OF PRACTICE: CONTENTIONS (SCOPE OF PROCEEDING)**

If a petitioner fails to show that his or her contention is within the scope of the proceeding, it must be denied for failure to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iii).

#### **RULES OF PRACTICE: SCOPE OF REPLY**

The Commission has instructed that the scope of a reply filed pursuant to 10 C.F.R. § 2.309(h)(2) “should be narrowly focused on the legal or logical arguments presented in the applicant/licensee or NRC staff answer.” 69 Fed.

Reg. at 2203. Replies that are not so limited, that raise additional arguments not raised in a petitioner’s hearing request or addressed by the applicant/licensee or the NRC Staff in their respective answers, are not properly before the Board.

**RULES OF PRACTICE: CONTENTIONS (NONTIMELY FILINGS)**

A hearing request that is filed after the period designated in the Notice of Opportunity for Hearing published in the *Federal Register*, which was not filed pursuant to an extension of time granted under 10 C.F.R. § 2.307(a), and which does not address the factors that the Board is required to balance in its determination on the admissibility of a nontimely filing, must be denied. *See* 10 C.F.R. § 2.309(c).

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

**I. INTRODUCTION**

Currently before the Licensing Board are six hearing requests (one purportedly on behalf of an organization) seeking to challenge a February 21, 2007 Confirmatory Order issued by the Nuclear Regulatory Commission (NRC) Staff to Nuclear Fuel Services, Inc. (NFS). That Confirmatory Order, which was effective immediately, modifies NFS's (10 C.F.R. Part 70) special nuclear materials license which authorizes operation of its Erwin, Tennessee uranium fuel fabrication facility by incorporating certain additional requirements agreed to by NFS and the Staff. According to the Order, these additional mandates were intended to address safety culture deficiencies identified as a result of recent NRC inspections and investigations associated with several safety-related incidents at the facility, including a March 2006 uranyl nitrate solution spill that could have resulted in a nuclear criticality accident.

Both NFS and the Staff oppose the grant of any of these hearing petitions. For the reasons set forth below, we find that the various petitioners lack standing and/or seek to raise issues outside the scope of this proceeding, and thus deny the hearing petitions.

**II**

**A. Synopsis of Confirmatory Order**

On February 21, 2007, the NRC Staff issued a Confirmatory Order to NFS, holder of Special Materials License No. SNM-124.<sup>1</sup> This license allows NFS to "receive, acquire, possess, and transfer byproduct, source, and special nuclear material," and use nuclear material in the course of its operations in accordance with the Atomic Energy Act (AEA), NRC regulations, and the conditions outlined in the NFS Part 70 license.<sup>2</sup> The Confirmatory Order was originally designated as "Official Use Only," but on July 30, 2007, the NRC released it for publication in the *Federal Register* and provided an opportunity for "[a]ny person adversely affected by this Confirmatory Order, other than the Licensee" to request a hearing within 20 days of its publication.<sup>3</sup>

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<sup>1</sup> 72 Fed. Reg. 41,528, 41,528-29 (July 30, 2007).

<sup>2</sup> See, e.g., NFS SNM-124 Amendment 77, at 1 (May 9, 2007) (ADAMS Accession No. ML072630342); see also 72 Fed. Reg. at 41,529.

<sup>3</sup> 72 Fed. Reg. at 41,530.

The NRC specified that any person submitting a request for hearing “shall set forth with particularity the manner in which his interest is adversely affected by this Order and shall address the criteria set forth in 10 CFR 2.309(d) and (f).”<sup>4</sup> Consistent with longstanding Commission precedent associated with the *Bellotti v. NRC* proceeding,<sup>5</sup> the scope of any hearing in this matter was expressly limited to the issue of “whether th[e] Confirmatory Order should be sustained.”<sup>6</sup>

The Confirmatory Order was issued after two alternative dispute resolution sessions between the NRC and NFS concerning a number of apparent violations at NFS that were observed during NRC inspections, which included an inadequate response to a March 6, 2006 spill of high enriched uranyl nitrate solution.<sup>7</sup> Based on an acknowledgment that (1) NFS had not developed “corrective actions capable of preventing recurrence of violations; (2) a deficient safety culture at NFS appeared to be a contributor to the recurrence of violations; and (3) a comprehensive, third party review and assessment of the safety culture at NFS” was necessary,<sup>8</sup> the NRC Staff and NFS agreed that the following corrective actions would be taken:

1. . . . Within 60 days of the date of this Order, NFS will provide NRC written documentation of the reasons for the violations, the corrective actions taken and planned to prevent recurrence, and the completion dates for each corrective action.

2. . . . Within 60 days of the date of the Order . . . , NFS will submit, for NRC approval, a request to amend the license to revise the [configuration management (CM)] program. The amendment request will include a plan and schedule for implementation of the revised program.

3. NFS will conduct, via a third-party, an independent safety culture assessment(s), which includes nuclear material security, within the [parameters outlined in Section V.3.a. through e. of the Confirmatory Order].<sup>9</sup>

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<sup>4</sup> *Id.* at 41,531.

<sup>5</sup> *Boston Edison Co.* (Pilgrim Nuclear Power Station), CLI-82-16, 16 NRC 44, 45-46 (1982), *aff’d*, *Bellotti v. NRC*, 725 F.2d 1380 (D.C. Cir. 1983).

<sup>6</sup> 72 Fed. Reg. at 41,531.

<sup>7</sup> *Id.* at 41,529.

<sup>8</sup> *Id.*

<sup>9</sup> *Id.* at 41,530. Relative to item 2, above, in an August 24, 2007 letter, NFS represents that it filed its CM program pursuant to the Confirmatory Order on April 20, 2007. *See* Letter from B. Marie Moore, NFS Vice President, Regulatory and Safety, to Director, NRC Office of Nuclear Material Safety and Safeguards, at 1 (Aug. 24, 2007) (ADAMS Accession No. ML072820133). The CM program is currently evolving as the NRC generates Requests for Additional Information on the CM program and NFS responds to those requests. *See, e.g.*, Letter from B. Marie Moore, NFS Vice President, Regulatory and Safety, to Director, NRC Office of Nuclear Material Safety and Safeguards, at 1-2 (Oct. 31, 2007) (ADAMS Accession No. ML073090652).

(Continued)

In addition, the NRC noted it retained the authority to pursue “other potential escalated enforcement actions, including those that could result from issues previously identified in inspection reports and issues under review by the NRC’s Office of Investigations,” if deficiencies in NFS’s safety culture persisted.<sup>10</sup>

## **B. Requests for Hearing**

As noted above, the NRC received six requests for hearing pursuant to the July 30, 2007 *Federal Register* Notice. These requests were received from (1) Ken Silver, filed on August 17, 2007; (2) Sierra Club and We the People, Inc., filed on August 20, 2007; (3) R. Feher, filed on August 20, 2007; (4) A. Christine Tipton, filed on August 27, 2007; (5) Barbara A. O’Neal, filed on August 27, 2007; and (6) Wanda Sue Kelley, filed on August 27, 2007.

On August 27 and 28, 2007, the Commission referred these requests for hearing to the Atomic Safety and Licensing Board Panel,<sup>11</sup> which established this Licensing Board on August 29, 2007.<sup>12</sup> As NRC regulations provide, the Board will grant a request for hearing to any petitioner who establishes standing and raises at least one admissible contention pursuant to the standards outlined in the agency’s regulations.<sup>13</sup>

## **C. Standards Governing Standing**

To establish standing, a Petitioner must show (1) an injury in fact; (2) fairly traceable to the challenged action; and (3) likely to be redressed by a favorable

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In connection with item 3, NFS complied with section V.3.a. of the Confirmatory Order when it timely submitted a May 22, 2007 letter outlining its independent safety culture assessment. Letter from Douglas M. Collins, Director, NRC Division of Fuel Facility Inspection, to D.B. Ferguson, Jr., NFS President and Chief Executive Officer, at 1 (Aug. 29, 2007) (ADAMS Accession No. ML072410378). The Staff required confirmation that NFS would make specific changes to the assessment and suggested additional changes for NFS to consider making to the assessment. *Id.* at 1-4. Thereafter, in a letter dated September 24, 2007, NFS requested an additional 90 days within which to allow the third party to conduct the independent safety culture assessment under section V.3.b. *See* Letter from B. Marie Moore, NFS Vice President, Regulatory and Safety, to Dr. William D. Travers, Regional Administrator, NRC Region II, at 1 (Sept. 24, 2007) (ADAMS Accession No. ML072820542). If the Staff allows the extension, this would extend the third party’s current obligation to complete the assessment within 270 days of the date of issuance of the Confirmatory Order to 360 days. *See id.*; 72 Fed. Reg. at 41,530.

<sup>10</sup> 72 Fed. Reg. at 41,530.

<sup>11</sup> Secretary Hearing Referral Memorandum to Chief Administrative Judge, ASLBP (Aug. 27, 2007); Secretary Hearing Referral Memorandum to Chief Administrative Judge, ASLBP (Aug. 28, 2007).

<sup>12</sup> *See* 72 Fed. Reg. 50,991, 50,991 (Sept. 5, 2007).

<sup>13</sup> 10 C.F.R. § 2.309(a).

decision.<sup>14</sup> “If the petitioner requests a remedy that is beyond the scope of the hearing, then the hearing request must be denied because redressability is an element of standing.”<sup>15</sup> Accordingly, “it is unlikely that petitioners will often obtain hearings on confirmatory enforcement orders.”<sup>16</sup>

In the context of an enforcement proceeding, the scope of the proceeding is directly related to the issue of standing in that, to establish standing in such a proceeding, an individual or organization requesting a hearing must show that he, she, or it would be adversely affected by the enforcement order as it exists, rather than being adversely affected by the existing order as it might be compared to a hypothetical order that the petitioner asserts would be an improvement.<sup>17</sup>

#### **D. Standards Governing Contention Admissibility**

Section 2.309(f) of Title 10 of the *Code of Federal Regulations* sets out the requirements that must be met if a contention is to be admitted in an agency licensing or enforcement adjudication. An admissible contention must (1) provide a specific statement of the legal or factual issue sought to be raised; (2) “[p]rovide a brief explanation of the basis for the contention”; (3) demonstrate that the issue raised is within the scope of the proceeding; (4) “[d]emonstrate that the issue raised . . . is material to the findings the NRC must make to support the action that is involved in the proceeding”; (5) provide a concise statement of the alleged facts or expert opinions, including references to specific sources and documents, that support the petitioner’s position and upon which the petitioner intends to rely at the hearing; and (6) provide sufficient information to show that a genuine dispute exists with regard to a material issue of law or fact, including references to specific portions of the application that the petitioner disputes, or in the case when the application is alleged to be deficient, the identification of such deficiencies and supporting reasons for this belief.<sup>18</sup>

The purpose of the contention rule is to “focus litigation on concrete issues and result in a clearer and more focused record for decision.”<sup>19</sup> The Commission has

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<sup>14</sup> *Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), CLI-04-5, 59 NRC 52, 57 n.16 (2004) (citing *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71-72 (1994)).

<sup>15</sup> *Alaska Department of Transportation and Public Facilities*, CLI-04-26, 60 NRC 399, 405 (2004).

<sup>16</sup> *Id.* at 406 n.28.

<sup>17</sup> *Id.* at 406.

<sup>18</sup> 10 C.F.R. § 2.309(f)(1)(i)-(vi).

<sup>19</sup> 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004); see also *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.* 435 U.S. 519, 553-54 (1978); *Business and Professional People for the Public Interest v. AEC*, 502 F.2d 424, 428 (D.C. Cir. 1974); *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20 (1974).

stated that it “should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing.”<sup>20</sup> The Commission has emphasized that the rules on contention admissibility are “strict by design.”<sup>21</sup> Failure to comply with any of these requirements is grounds for the dismissal of a contention.<sup>22</sup>

The application of these requirements has been further developed as summarized below.

### ***1. Brief Explanation of the Basis for the Contention***

A “brief explanation of the basis for the contention” is a necessary prerequisite of an admissible contention.<sup>23</sup> “[A] petitioner must provide some sort of minimal basis indicating the potential validity of the contention.”<sup>24</sup> The brief explanation helps define the scope of a contention — “[t]he reach of a contention necessarily hinges upon its terms coupled with its stated bases.”<sup>25</sup>

### ***2. Within the Scope of the Proceeding***

A petitioner must “[d]emonstrate that the issue raised in the contention is within the scope of the proceeding,”<sup>26</sup> which is defined by the Commission in its initial hearing notice and order referring the proceeding to the Licensing Board.<sup>27</sup> Any contention that falls outside the specified scope of the proceeding must be rejected.<sup>28</sup>

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<sup>20</sup> 69 Fed. Reg. at 2202.

<sup>21</sup> *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *reconsideration denied*, CLI-02-1, 55 NRC 1 (2002).

<sup>22</sup> 69 Fed. Reg. at 2221; *see also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999); *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

<sup>23</sup> 10 C.F.R. § 2.309(f)(1)(ii).

<sup>24</sup> 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989).

<sup>25</sup> *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir. 1991), *cert. denied*, 502 U.S. 899 (1991); *see also Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002).

<sup>26</sup> 10 C.F.R. § 2.309(f)(1)(iii).

<sup>27</sup> *Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985).

<sup>28</sup> *Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289-90 n.6 (1979).

### 3. *Materiality*

To be admissible, a petitioner must demonstrate that the contention asserts an issue of law or fact that is “material to the findings the NRC must make to support the action that is involved in the proceeding.”<sup>29</sup> That is, the Petitioner must demonstrate that the subject matter of the contention would impact the decision on a pending matter.<sup>30</sup> “Materiality” requires that the petitioner show why the alleged error or omission is of possible significance to the result of the proceeding.<sup>31</sup> This means that there must be some significant link between the claimed deficiency and either the health and safety of the public, or the environment.<sup>32</sup>

### 4. *Concise Allegation of Supporting Facts or Expert Opinion*

Contentions must be supported by “a concise statement of the alleged facts or expert opinions which support the requestor’s/petitioner’s position on the issue . . . together with references to the specific sources and documents on which [it] intends to rely to support its position.”<sup>33</sup> It is the obligation of the petitioner to present the factual information and expert opinions necessary to support its contention adequately.<sup>34</sup> Failure to do so requires that the contention be rejected.<sup>35</sup>

Determining whether the contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits.<sup>36</sup> The petitioner does not have to prove its contention at the admissibility stage.<sup>37</sup> The contention

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<sup>29</sup> 10 C.F.R. § 2.309(f)(1)(iv).

<sup>30</sup> *Id.*

<sup>31</sup> *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80 (1998).

<sup>32</sup> *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 75-76 (1996), *rev’d in part on other grounds*, CLI-96-7, 43 NRC 235 (1996); *see also Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied*, CLI-03-12, 58 NRC 185, 191 (2003).

<sup>33</sup> 10 C.F.R. § 2.309(f)(1)(v).

<sup>34</sup> *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, *vacated in part and remanded on other grounds*, CLI-95-10, 42 NRC 1, and *aff’d in part*, CLI-95-12, 42 NRC 111 (1995).

<sup>35</sup> *Palo Verde*, CLI-91-12, 34 NRC at 155.

<sup>36</sup> *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1654 (1982).

<sup>37</sup> *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004).

admissibility threshold is less than is required at the summary disposition stage.<sup>38</sup> Nevertheless, while a “Board may appropriately view Petitioners’ support for its contention in a light that is favorable to the Petitioner,”<sup>39</sup> the petitioner must provide some support for his or her contention, either in the form of facts or expert testimony.<sup>40</sup>

In this regard, “[m]ere ‘notice pleading’ is insufficient. . . . A petitioner’s issue will be ruled inadmissible if the petitioner ‘has offered no tangible information, no experts, no substantive affidavits,’ but instead only ‘bare assertions and speculation.’”<sup>41</sup> Further, if a petitioner neglects to provide the requisite support for its contentions, the Board should not make assumptions of fact that favor the petitioner, or supply information that is lacking.<sup>42</sup> Any supporting material provided by a petitioner, including those portions of the material that are not relied upon, is subject to Board scrutiny.<sup>43</sup> Likewise, providing any material or document as a basis for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of the contention.<sup>44</sup>

In short, the information, facts, and expert opinions provided by the petitioner will be examined by the Board to confirm that they do indeed supply adequate support for the contention.<sup>45</sup> But at the contention admissibility stage, all that is required is that the petitioner provide “some alleged fact or facts in support of its position.”<sup>46</sup>

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<sup>38</sup> Compare 10 C.F.R. § 2.710(c). “[A]t the contention filing stage the factual support necessary to show that a genuine dispute exists need not be in affidavit or formal evidentiary form and need not be of the quality necessary to withstand a summary disposition motion.” 54 Fed. Reg. at 33,171.

<sup>39</sup> *Palo Verde*, CLI 91-12, 34 NRC at 155.

<sup>40</sup> *Id.*

<sup>41</sup> *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003) (citing *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)); see also *Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 55 (2004).

<sup>42</sup> *Georgia Tech Research Reactor*, LBP-95-6, 41 NRC at 305; see also *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001).

<sup>43</sup> *Yankee Nuclear*, LBP-96-2, 43 NRC at 90.

<sup>44</sup> See *Fansteel, Inc.*, CLI-03-13, 58 NRC at 205.

<sup>45</sup> *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), vacated in part on other grounds and remanded, CLI-90-4, 31 NRC 333 (1990).

<sup>46</sup> 54 Fed. Reg. at 33,170. “This requirement does not call upon the intervenor to make its case at this stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention.” 54 Fed. Reg. at 33,170.

### **5. *Genuine Dispute Regarding Specific Portions of Application***

All contentions must “show that a genuine dispute exists” with regard to the license application in question, challenge and identify either specific portions of, or alleged omissions from, the application, and provide the supporting reasons for each dispute.<sup>47</sup> Any contention that fails directly to controvert the application, or that mistakenly asserts that the application does not address a relevant issue, may be dismissed.<sup>48</sup>

### **6. *Challenges to NRC Regulations***

In addition to the requirements set out above, with limited exceptions not applicable in this case, “no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding.”<sup>49</sup> By the same token, any contention that amounts to an attack on applicable statutory requirements or represents a challenge to the basic structure of the Commission’s regulatory process must be rejected.<sup>50</sup> Additionally, the adjudicatory process is not the proper venue for the evaluation of a petitioner’s own view regarding the direction regulatory policy should take.<sup>51</sup>

Applying the above-stated standards, our rulings on the various contentions are outlined below.

## **III**

### **A. *Specific Request for Hearing — Silver***

#### **1. *Hearing Request of Ken Silver***

Dr. Ken Silver is an Assistant Professor of Environmental Health at East Tennessee State University in the College of Public and Allied Health, which is located in Johnson City, Tennessee.<sup>52</sup> In his hearing request, Dr. Silver represents

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<sup>47</sup> 10 C.F.R. § 2.309(f)(1)(vi).

<sup>48</sup> *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined*, CLI-94-2, 39 NRC 91 (1994); *see also Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992), *vacated as moot*, CLI-93-10, 37 NRC 192, 205 (1993).

<sup>49</sup> 10 C.F.R. § 2.335(a); *see also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003).

<sup>50</sup> *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982) (*citing Peach Bottom*, ALAB-216, 8 AEC at 20-21).

<sup>51</sup> *Peach Bottom*, ALAB-216, 8 AEC at 21 n.33.

<sup>52</sup> Hearing Request of Ken Silver (Aug. 17, 2007) at 1-2 [hereinafter Silver Request].

that he lives approximately 17 miles from the NFS plant.<sup>53</sup> As grounds for his Petition, Dr. Silver cites a climate of “pervasive fear of discussing[,] in . . . public[,] issues related to plant health and safety” as the source of his concern, and explains that the purpose of his hearing request is to compel the NRC to hold a public hearing and issue a report on safety and health concerns at NFS in order to “lift the veil of unnecessary secrecy and bring [the NFS] facility into the modern era of community right to know about health and safety issues.”<sup>54</sup> In his Petition, Dr. Silver also asserts that he has standing based on his “interest in nuclear facilities like NFS,” his research and publications, and the field experiences he provides for his students, in addition to his proximity to the NFS facility.<sup>55</sup>

## 2. *NRC Answer to Silver Hearing Request*

The NRC Staff filed its Answer to the Hearing Request of Ken Silver on September 11, 2007.<sup>56</sup> In its response, the Staff notes that Dr. Silver filed a timely Request for Hearing, but urges the Board to deny his hearing request because “he fails to demonstrate he will be adversely affected by the Confirmatory Order”<sup>57</sup> and, accordingly, lacks standing and has not presented a contention that is admissible in this proceeding.

According to the Staff, the preliminary issue is whether petitioner Silver’s request is within the scope of the proceeding because, under the reasoning of *Bellotti v. NRC*, the Commission can limit the scope of a hearing on an enforcement order to the issue of “whether the order should be sustained.”<sup>58</sup> The Staff then argues that, in this proceeding, the Commission did so limit the proceeding in the Confirmatory Order.<sup>59</sup> The Staff further states that the issue of the scope of the proceeding is related to the issue of standing, and that in a proceeding such as this, to demonstrate standing an individual must show that he or she would be adversely affected by the enforcement order as it exists, rather than by the failure of the order to contain provisions the petitioner asserts are needed.<sup>60</sup> The Staff summarizes its position that: “[i]n essence, requests for relief going beyond the actions in an enforcement order are requests for relief that are outside the scope of

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<sup>53</sup> *Id.* at 2.

<sup>54</sup> *Id.* at 1-2.

<sup>55</sup> *Id.* at 2.

<sup>56</sup> NRC Staff’s Response to Hearing Request of Ken Silver (Sept. 11, 2007) at 7 [hereinafter Staff Answer — Silver].

<sup>57</sup> *Id.* at 2.

<sup>58</sup> *Id.* at 3 (citing *Bellotti v. NRC*, 725 F.2d at 1381).

<sup>59</sup> *Id.* at 5.

<sup>60</sup> *Id.* at 3-4.

the proceeding,’’<sup>61</sup> and, in making such requests, an individual has not established injury-in-fact required for standing.<sup>62</sup>

The Staff states that Dr. Silver’s expressed purpose of requesting a hearing to force the agency to publicize health and safety information about the NFS plant that had been previously held secret under the “Official Use Only” categorization policy is outside the scope of the proceeding because it goes beyond the actions in the enforcement order, which only addresses NFS’s response to specified safety violations, not the NRC’s release of (or decision not to release) information regarding those safety violations.<sup>63</sup> As an aside, the Staff further argues that Dr. Silver does not qualify for standing based on his proximity to the NFS facility because, although he lives near the plant, he has not alleged he would suffer any injury at that location stemming from the Order.<sup>64</sup>

Accordingly, the Staff argues that Mr. Silver’s hearing request must be denied.<sup>65</sup>

### **3. NFS Answer to Silver Hearing Request**

On September 19, 2007, NFS filed an Answer to the hearing request of Dr. Silver.<sup>66</sup> In its Answer, NFS requests that the Board deny his Request for Hearing because Dr. Silver “has not demonstrated standing, raises issues entirely beyond the scope of the Confirmatory Order and has identified no admissible contentions.”<sup>67</sup> On the issue of standing, NFS argues that Dr. Silver has not alleged an injury-in-fact,<sup>68</sup> and that his academic interest in the proceeding does not confer standing.<sup>69</sup> In addition, NFS argues that Dr. Silver’s proximity to the NFS facility, without an additional showing of injury related to that proximity, does not establish standing.<sup>70</sup> Therefore, according to NFS, Dr. Silver has not met the requirements of 10 C.F.R. § 2.309(d) and his hearing request must be denied.<sup>71</sup>

On the issue of scope of the proceeding, NFS argues, as does the Staff, that the Commission, pursuant to the reasoning in *Bellotti*, limited the scope of the

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<sup>61</sup> *Id.* at 4.

<sup>62</sup> *See id.* at 4-5.

<sup>63</sup> *See id.* at 5-6.

<sup>64</sup> *Id.* at 6 n.4.

<sup>65</sup> *Id.* at 7.

<sup>66</sup> Licensee’s Answer to Request for a Hearing of Ken Silver (Sept. 19, 2007) at 16 [hereinafter NFS Answer — Silver].

<sup>67</sup> *Id.* at 1.

<sup>68</sup> *Id.* at 4.

<sup>69</sup> *Id.* at 3.

<sup>70</sup> *Id.* at 3-4.

<sup>71</sup> *Id.* at 2.

proceeding to “whether this Confirmatory Order should be sustained.”<sup>72</sup> NFS then notes that Dr. Silver’s request was actually that the NRC publicly address the safety and health issues at the NFS facility, which is not within the scope of the proceeding.<sup>73</sup> Accordingly, NFS argues that, to the extent that Dr. Silver requested enforcement measures in addition to those outlined in the Confirmatory Order, his request is outside the scope of the proceeding as provided in *Bellotti* and its progeny.<sup>74</sup>

NFS argues in the alternative, that even if Dr. Silver had standing, he has not proffered an admissible contention as required under 10 C.F.R. § 2.309(f) and the July 30, 2007 *Federal Register* Notice.<sup>75</sup> First, NFS argues that the threshold issue for admissibility of contentions is whether the contention is within the scope of the proceeding.<sup>76</sup> As discussed in its prior standing analysis relating to the scope of the proceeding, NFS asserts that Dr. Silver’s request that the NRC publicize the health and safety issues at the NFS plant is outside the scope of the proceeding and is therefore not an admissible contention.<sup>77</sup> Second, NFS references the requirements of 10 C.F.R. § 2.309(f), all of which must be met in order for a contention to be admitted.<sup>78</sup> Specifically, NFS argues that Dr. Silver failed to meet the requirements of 10 C.F.R. § 2.309(f)(1)(i), (ii), (v), and (vi) by failing to support his assertion that “‘secrecy ‘imperils public understanding of health risks,’ ”<sup>79</sup> with facts, expert opinions, documents, or by providing any other factual basis for this assertion, and by failing to connect this assertion with the Confirmatory Order.<sup>80</sup> Therefore, NFS requests that the Board deny Dr. Silver’s request for a hearing.<sup>81</sup>

#### **4. Board Ruling on Hearing Request of Ken Silver<sup>82</sup>**

Dr. Silver’s Request for Hearing is denied because he has not shown that he has standing, nor has he proffered an admissible contention. As discussed in

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<sup>72</sup> *Id.* at 4.

<sup>73</sup> *Id.* at 4-5.

<sup>74</sup> *See id.* at 5-9.

<sup>75</sup> *Id.* at 9.

<sup>76</sup> *Id.*

<sup>77</sup> *Id.* at 15.

<sup>78</sup> *Id.* at 12-15.

<sup>79</sup> *Id.* at 15 (quoting Silver Request at 1).

<sup>80</sup> *Id.*

<sup>81</sup> *Id.* at 15-16.

<sup>82</sup> Dr. Silver requested additional time within which to reply to the Staff Response to his Hearing Request. Silver Request for Extension of Deadline (Sept. 25, 2007) at 1. The Board granted that  
(Continued)

Parts II.C and II.D, above, the issue of standing in an enforcement proceeding is directly related to the issue of whether a request for hearing raises allegations that are within the scope of the proceeding.<sup>83</sup> The individual is required to show that his or her request is within the scope of the proceeding by demonstrating that he or she will be adversely affected by the actual terms of the enforcement order as they exist, rather than as a consequence of the Order lacking certain provisions the petitioner claims are necessary.<sup>84</sup> If the individual fails to make such a showing of adverse effect, the hearing request must be denied for failure to meet the requirements of 10 C.F.R. § 2.309(a), (d), and (f).<sup>85</sup>

As both NFS and the Staff correctly point out, Dr. Silver's hearing request fails to address how he will be adversely affected by the Confirmatory Order. Instead, Dr. Silver calls for the release of information such that the public would be able to openly discuss the health and safety issues at the NFS facility.<sup>86</sup> This request fails to confront the existence of the order itself or to address whether its existence adversely affects Dr. Silver. Moreover, to the extent that Dr. Silver's request for release of information seeks to enhance the enforcement measures already outlined by the Staff in the Confirmatory Order, this is also outside the scope of the proceeding.<sup>87</sup>

It is well established that "Boards are not to consider whether [enforcement] orders need strengthening."<sup>88</sup> Therefore, having failed to demonstrate that his hearing request is within the scope of this enforcement proceeding, Dr. Silver has not established the requisite standing to be admitted as a party to a hearing before this Board.

Furthermore, Dr. Silver's reliance on his proximity to the NFS facility is insufficient to meet the standing requirements in this case. Although a proximity presumption has been invoked when resolving issues of standing for cases involving reactor licensing,<sup>89</sup> in a case such as this one involving an enforcement order, the standing requirement is also based on the Confirmatory Order itself

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request in part, allowing Dr. Silver to reply to the NRC Staff's Response until October 15, 2007. Licensing Board Order (Granting in Part, Silver Request for Extension of Time) (Oct. 5, 2005) (unpublished). However, no reply from Dr. Silver to the NRC Staff Response to his Hearing Request was subsequently received by the Board.

<sup>83</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405.

<sup>84</sup> *Id.* at 406.

<sup>85</sup> See 10 C.F.R. § 2.309(a) ("[T]he . . . Board designated to rule on the request for hearing and/or petition for leave to intervene will grant the request/petition if it determines that the requestor/petitioner has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section").

<sup>86</sup> See *supra* Part III.A.1.

<sup>87</sup> See *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 404.

<sup>88</sup> *Id.*

<sup>89</sup> *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 75 n.22.

and the adverse effect of the Confirmatory Order.<sup>90</sup> Therefore, something in addition to the distance of the individual from the facility is necessary to establish standing — a link between the Confirmatory Order and the alleged harm to the individual.<sup>91</sup> As described above, Dr. Silver has not made this connection between the Confirmatory Order and any alleged harm he will suffer.

Because Dr. Silver has not established his standing, it is unnecessary for the Board to review in great detail the factors in the NRC regulations governing the admissibility of contentions. It is apparent, however, that all six contention admissibility requirements under 10 C.F.R. § 2.309(f)(1) must be met in order for a contention to be admitted.<sup>92</sup> Moreover, one of the main requirements for admission of contentions is that they be within the scope of the proceeding, or within the scope of the issues the Board is permitted to review.<sup>93</sup> As discussed above, Dr. Silver's request to foster a public discussion about health and safety issues surrounding NFS is not within the narrow issue (as defined in the Staff's July 30, 2007 *Federal Register* Notice) of whether the Confirmatory Order should be sustained.<sup>94</sup> Having clearly failed to meet the third requirement governing contention admissibility, Dr. Silver is unable to proffer an admissible contention.

Dr. Silver has not shown that he has standing and has not proffered an admissible contention. Therefore, his Request for Hearing is denied.

## **B. Specific Request for Hearing — Sierra Club**

### ***1. Hearing Request of the Sierra Club and We the People, Inc.***

In a Petition To Intervene, the Sierra Club, joined by We the People, Inc., likewise seeks a hearing on the Confirmatory Order. The hearing petition was submitted by Linda Modica, who represents that she is acting on behalf of the national Sierra Club as the Chair of the Sierra Club's national Radiation Committee, and that she lives 10 miles from the NFS facility in Jonesborough, Tennessee.<sup>95</sup>

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<sup>90</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406.

<sup>91</sup> *Id.* (determining that the injury must be “attributable to the Confirmatory Order” to establish standing) (emphasis in original)). Proximity undoubtedly would be a pertinent consideration if a petitioner asserted that the activities contemplated in the challenged order would result in circumstances that would generate particular offsite impacts (e.g., radiation releases) at the relevant distance, a showing Dr. Silver certainly has not made in this instance.

<sup>92</sup> 10 C.F.R. § 2.309(a), (f)(1).

<sup>93</sup> 10 C.F.R. § 2.309(f)(1)(iii).

<sup>94</sup> *See* 72 Fed. Reg. at 41,531.

<sup>95</sup> Hearing Request of the National Sierra Club (Aug. 20, 2007) at 1, 3 [hereinafter Sierra Club Request].

The Sierra Club asserts that it has organizational standing to request a hearing based on a prior grant of standing in NFS's license amendment applications regarding the NFS Blended Low Enriched Uranium (BLEU) project and based on its interest in serving "the general public's interests . . . [in] clean air, clean water and clean energy."<sup>96</sup> In addition, the Sierra Club asserts that it has third-party standing through the interests of its members in "clean air, clean water, clean energy, clean land . . . [and] public health and safety."<sup>97</sup> Moreover, the Petition represents that Ms. Modica, a Sierra Club member, lives in proximity to the NFS facility.<sup>98</sup>

The Sierra Club outlines the ways in which it and its members are adversely affected by the Confirmatory Order as follows:<sup>99</sup>

1. The NRC did not make an assessment of the environmental impacts of the Confirmatory Order. If an assessment was made, but categorized as "Official Use Only," it should now be produced to the public.
2. NFS remains in "serial non-compliance with NRC regulations" and the Confirmatory Order is insufficient to address those violations, particularly the March 2006 spill and its impacts.
3. The Confirmatory Order harms the public interest because it fails to regulate NFS effectively, a continuation of Region II's previous failures that include granting NFS prior license amendments and in issuing Findings of No Significant Impact.
4. The categorization of documents as "Official Use Only" harmed the public because it prevented the Agency for Toxic Substances and Disease Registry from gaining a complete understanding of the hazards at NFS when it performed its Public Health Assessment at the NFS site.
5. The Confirmatory Order does not sufficiently address the security violation at NFS ("two security officers [who] willfully failed to conduct a vehicle search"), which is a problem because a Ninth Circuit decision requires the NRC to "consider the impacts of terrorist attacks to a licensed facility." Therefore, the Confirmatory Order does not adequately protect the public from terrorist attacks.
6. The categorization of documents as "Official Use Only" harmed the public because it violated the public trust.

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<sup>96</sup> *Id.* at 1.

<sup>97</sup> *Id.*

<sup>98</sup> *See id.* at 3.

<sup>99</sup> *Id.* at 1-2.

The Sierra Club concludes its hearing request by demanding the release of certain categories of documents between the NRC, NFS, and the Department of Energy regarding the NFS facility that had been previously categorized as “Official Use Only.”<sup>100</sup>

## **2. NRC Answer to Hearing Request of the Sierra Club and We the People, Inc.**

The NRC Staff filed an Answer to the hearing request of the Sierra Club on September 14, 2007,<sup>101</sup> in which it urges the Board to deny the Sierra Club’s Request for Hearing because the Sierra Club “fails to demonstrate that they will be adversely affected by the Confirmatory Order,” and therefore cannot establish standing or proffer an admissible contention.<sup>102</sup>

First, the NRC Staff contends that the Sierra Club failed to demonstrate that it has standing to intervene.<sup>103</sup> The Staff argues that the Sierra Club cannot rely on the fact that it had standing in a prior NFS proceeding to show that it has standing in the Confirmatory Order proceeding.<sup>104</sup> In addition, the Staff argues that the Sierra Club’s general interests in clean air, clean water, and clean energy are insufficient to confer standing.<sup>105</sup> As an aside, the Staff claims that, to the degree that the Sierra Club seeks to establish its representative standing based on Ms. Modica’s proximity to the NFS facility, she does not provide the requisite showing for such standing because, although she lives near the plant, she has not alleged any injury stemming from the Order.<sup>106</sup>

Second, the Staff argues that the Sierra Club’s hearing request should be denied because the Sierra Club did not meet “‘the threshold question’” of “‘whether the hearing request is within the scope of the proceeding as outlined in the order.’”<sup>107</sup> According to the Staff, this is because the Sierra Club’s contentions either demand stricter enforcement measures than those set out in the Confirmatory Order (contentions 1, 2, 3, and 5), which is outside the scope of the proceeding under *Bellotti*, or because the Sierra Club’s contentions do not even relate to or mention the Confirmatory Order (contentions 4 and 6).<sup>108</sup> Because the

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<sup>100</sup> *Id.* at 2-3.

<sup>101</sup> NRC Staff’s Response to Hearing Request of the Sierra Club’s National Radiation Committee and We the People, Inc. (Sept. 14, 2007) at 9 [hereinafter Staff Answer — Sierra Club].

<sup>102</sup> *Id.* at 2.

<sup>103</sup> *Id.* at 5.

<sup>104</sup> *Id.*

<sup>105</sup> *Id.* at 5-6.

<sup>106</sup> *Id.* at 5-6 n.5.

<sup>107</sup> *Id.* at 6 (quoting *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405).

<sup>108</sup> *Id.* at 6-8.

Sierra Club has not established that it has standing or proffered an admissible contention, the Staff argues that the Board should deny the Sierra Club's request for a hearing.

**3. NFS Answer to Hearing Request of the Sierra Club and We the People, Inc.**

NFS filed an Answer to the Sierra Club's Request for Hearing on September 19, 2007.<sup>109</sup> In its Answer, NFS argues that the Board should deny the Sierra Club's hearing request because the Sierra Club "has not demonstrated standing, raises issues entirely beyond the scope of the Confirmatory Order, and has identified no admissible contentions."<sup>110</sup> On the issue of standing, NFS enumerates four arguments as to why the Sierra Club has failed to demonstrate it has standing for a hearing before this Board.<sup>111</sup> NFS contends that (1) the Sierra Club's reliance on the grant of standing for the proceeding involving NFS's BLEU project is insufficient; (2) the Sierra Club has not demonstrated that one of its members has standing to establish third-party, representational standing; (3) the Sierra Club has not demonstrated that, as an organization, it has standing; and (4) "the Sierra Club's claim 'to serve the general public's interest in clean air, water, and energy' is insufficient to confer standing."<sup>112</sup>

On the issue of the scope of the proceeding, NFS explains that the Commission, as it has the authority to do under *Bellotti*, limited the scope of the proceeding to "whether this Confirmatory Order should be sustained."<sup>113</sup> NFS then states that all six contentions, which NFS characterizes as challenges to the NRC's regulation of NFS and the NRC's "Official Use Only" policy, are proffers that refer to matters outside of the Confirmatory Order or involve requests for additional enforcement measures that should be taken against NFS.<sup>114</sup> NFS thus argues that the Board should deny the Sierra Club's request for hearing because its claims are outside the scope of the proceeding.<sup>115</sup>

Finally, on the contention admissibility issue, NFS asserts that the Sierra Club's hearing request should be denied because the Sierra Club has not proffered an admissible contention under 10 C.F.R. § 2.309(f).<sup>116</sup> As discussed in

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<sup>109</sup> Licensee's Answer to Request for a Hearing of the Sierra Club National Radiation Committee (Sept. 19, 2007) at 20 [hereinafter NFS Answer — Sierra Club].

<sup>110</sup> *Id.* at 1.

<sup>111</sup> *Id.* at 3-5.

<sup>112</sup> *Id.*

<sup>113</sup> *Id.* at 5.

<sup>114</sup> *Id.* at 6-12.

<sup>115</sup> *Id.* at 5, 12.

<sup>116</sup> *Id.* at 12-13, 15.

its prior analysis of the scope of the proceeding, NFS asserts that the Sierra Club's challenges to NRC regulatory policy regarding NFS do not meet the "fundamental requirement" that the contention "address[] matters within the scope of the proceeding and . . . not seek to attack NRC regulations governing the proceeding."<sup>117</sup> NFS also challenges the Sierra Club's contentions based on the six contention admissibility factors provided in 10 C.F.R. § 2.309(f)(i)-(vi) and, in general, argues that the Sierra Club does not support their assertions with facts, expert opinions, documents, or any other factual basis, and fails to connect these assertions with the Confirmatory Order.<sup>118</sup> Accordingly, NFS requests that the Board deny the Sierra Club's request for a hearing.<sup>119</sup>

#### **4. Reply of the Sierra Club and We the People, Inc.**

The Sierra Club filed a Reply to the NRC Staff's Answer to the Sierra Club's Request for Hearing on October 15, 2007.<sup>120</sup> In its Reply, the Sierra Club reiterates that it has demonstrated organizational standing because of its past involvement in nuclear issues and notes that it has made public statements about the recent safety issues at the NFS facility.<sup>121</sup> The Sierra Club argues that it has demonstrated third-party standing because "[We the People, Inc. Executive Director] Ann Harris and [Ms. Modica] have participated in NRC meetings at NFS, prior and current interventions regarding NFS license amendments," as well as other public and private meetings regarding the NFS facility.<sup>122</sup> The Sierra Club emphasizes:

like the hundreds of other members of Sierra Club and We The People who vote, pay taxes, reside, hike, fish, paddle, raft, eat, drink, breathe, shop, visit friends, go to

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<sup>117</sup> *Id.* at 12-13.

<sup>118</sup> *Id.* at 12-19.

<sup>119</sup> *Id.* at 19.

<sup>120</sup> Sierra Club Reply to NRC Staff's Response to Hearing Request of the Sierra Club's National Radiation Committee and We the People, Inc. (Oct. 15, 2007) at 1 [hereinafter Sierra Club Reply]. The Sierra Club's original deadline for reply to the NRC Staff's response was September 21, 2007. Licensing Board Order (Granting In Part, Sierra Club's Request for Extension of Time) at 1-2 (Oct. 5, 2007) (unpublished). However, the Sierra Club requested an extension of time to reply on September 26, 2007. See Sierra Club Request for Extension of Deadline to Reply to NRC Staff's Response to Hearing Request of the Sierra Club's National Radiation Committee and We the People, Inc. (Sept. 26, 2007) at 1. In an October 5, 2007 Order, the Board granted the Sierra Club's request for an extension of time, permitting the Sierra Club to file its reply on or before October 15, 2007. Licensing Board Order (Granting in Part, Sierra Club's Request for Extension of Time) at 3-4 (Oct. 5, 2007) (unpublished).

<sup>121</sup> Sierra Club Reply at 2-3.

<sup>122</sup> *Id.* at 3.

movies &/or attend festivals near NFS, Ann Harris and [Ms. Modica] are personally harmed by the Confirmatory Order at issue in this Proceeding.<sup>123</sup>

The Sierra Club explains that it and its members are harmed by the Confirmatory Order because the NRC, in essence, takes an inadequate “honor-system approach to regulation”<sup>124</sup> as exemplified by the Confirmatory Order, the fact that NFS operations pose (and have posed in the past) health and safety issues the extent of which the NRC is seemingly unaware,<sup>125</sup> and the NRC’s failure to issue an Environmental Impact Statement during the previous NRC licensing of NFS’s BLEU project.<sup>126</sup> As a remedy for these alleged harms, the Sierra Club requests that the NRC suspend NFS’s Special Materials License SNM-124, release all documents categorized under the “Official Use Only” policy, conduct an Environmental Impact Study for the BLEU process, and ensure that “a bona fide Safety Culture is in place.”<sup>127</sup>

##### ***5. Board Ruling on Hearing Request of the Sierra Club and We the People, Inc.***

The Sierra Club’s hearing request is denied because it has not demonstrated that it has standing and has not raised any admissible contentions. As discussed in Parts II.C and II.D, above, the issue of standing in an enforcement proceeding is closely intertwined with the issue of whether a request for hearing raises allegations that are within the scope of the proceeding.<sup>128</sup> The individual must show that his request is within the scope of the proceeding by demonstrating that he will be adversely affected by the enforcement order as it exists, not as measured in comparison to a hypothetical order the petitioner would like to see implemented. If the individual fails in making this showing of adverse effect, the hearing request must be denied for failure to meet the requirements under 10 C.F.R. § 2.309(a), (d), and (f).<sup>129</sup>

NFS and the Staff are correct in pointing out that the Sierra Club has not sufficiently addressed how its organization or its members will be harmed by the

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<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> *Id.* at 4-6.

<sup>126</sup> *Id.* at 6-7.

<sup>127</sup> *Id.*

<sup>128</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405.

<sup>129</sup> See 10 C.F.R. § 2.309(a) (“[T]he . . . Board designated to rule on the request for hearing and/or petition for leave to intervene will grant the request/petition if it determines that the requestor/petitioner has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section”).

Confirmatory Order. Even though the Sierra Club represents in both its Request for Hearing and its Reply that it and its members are adversely affected by the Confirmatory Order,<sup>130</sup> its assertions do not show that the Sierra Club or its members will be worse off if the Confirmatory Order is implemented (i.e., they will affirmatively be harmed if the NFS enforcement issues are addressed by the safety measures instituted by the NRC), which, as the *Bellotti* and *Alaska Department of Transportation & Public Facilities* cases instruct, is the fundamental issue when determining standing and contention admissibility in a proceeding involving an enforcement order.<sup>131</sup> Instead, the Sierra Club raises allegations that attack the NRC's regulatory policy regarding NFS, and urges that greater enforcement measures should be taken against NFS (including suspension of its Special Materials License).<sup>132</sup> In its request, the Sierra Club attempts to relitigate its concerns regarding the licensing of NFS's BLEU project, and refers to matters other than whether the Confirmatory Order should be sustained. Accordingly, the issues raised by the Sierra Club are outside the scope of this proceeding.<sup>133</sup> The Board simply does not have the authority under the agency's regulations or the terms of the referral specified in the July 30, 2007 *Federal Register* Notice to grant a hearing based on these issues.

Moreover, the Sierra Club's arguments that it has standing because it had standing in past licensing actions involving the NFS facility or because of its participation in public statements about the recent safety issues at NFS are insufficient to meet the three-part framework the Board uses for standing inquiries. Under this three-part test, a petitioner must show (1) an injury-in-fact (2) that is fairly traceable to the challenged action and (3) is likely to be redressed by a favorable decision.<sup>134</sup> This inquiry is conducted by reviewing the alleged injury stemming from the regulatory action at issue, not that asserted to arise generally from the facility or the Licensee involved in the proceeding.<sup>135</sup>

The Sierra Club's generalized statements concerning its experience with issues regarding NFS and its members' proximity to the NFS facility do not address

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<sup>130</sup> See Sierra Club Request at 1 (stating that the Sierra Club's interests "are adversely affected by the Confirmatory Order in a number of particular ways"); Sierra Club Reply at 3 (stating that "Ann Harris & [Ms. Modica] are personally harmed by the Confirmatory Order at issue in this Proceeding").

<sup>131</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405 (citing *Bellotti v. NRC*, 725 F.2d at 1381).

<sup>132</sup> See, e.g., Sierra Club Reply at 6-7.

<sup>133</sup> See *supra* Parts III.B.1 and III.B.4.

<sup>134</sup> *Maine Yankee*, CLI-04-5, 59 NRC at 57 n.16 (2004) (citing *Sequoyah Fuels Corp. & General Atomics*, CLI-92-12, 40 NRC at 71-72).

<sup>135</sup> See *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-92-27, 36 NRC 196, 198 (1992) ("[M]erely because a petitioner may have had standing in an earlier proceeding does not automatically grant standing in subsequent proceedings, even if the scope of the earlier and later proceedings is similar").

the issue of whether it or its members has suffered an injury-in-fact linked to the agency action at issue — the Confirmatory Order. Although the Sierra Club alleges that its members are at risk living and conducting their daily lives near the NFS facility, it has failed to link this to the existence of the Confirmatory Order. The Sierra Club is unable to show that its claimed injuries are capable of being redressed by a favorable Board decision because, as analyzed above, it has not raised any issues that the Board has the authority to review.

Furthermore, even assuming that the Sierra Club were able to demonstrate standing, the Sierra Club's Request for Hearing fails because the Sierra Club is unable to raise an admissible contention. Under 10 C.F.R. § 2.309(f)(1), all six factors for contention admissibility must be met in order for the Board to admit a contention.<sup>136</sup> Just as it has relevance to the matter of standing, the concept of the scope of the proceeding is also intertwined with the matter of contention admissibility.<sup>137</sup> Title 10 of the *Code of Federal Regulations*, section 2.309(f)(1)(iii), requires that the Petitioner “[d]emonstrate that the issue raised in the contention is within the scope of the proceeding.”<sup>138</sup> The Sierra Club is unable to meet this third contention admissibility factor because its claims, which in essence attack the NRC's regulatory policy regarding NFS by requesting enforcement measures stricter than those taken in the Confirmatory Order, are outside the scope of this proceeding. And because the Sierra Club likewise does not meet the requisite showing under the third contention admissibility factor, it therefore cannot meet all six contention admissibility requirements so as to have its contentions admitted.

The Sierra Club's Request for Hearing is denied, having failed to demonstrate that it has standing or to raise an admissible contention as is required for a hearing under 10 C.F.R. § 2.309(a).

## **C. Specific Request for Hearing — R. Feher**

### **1. Hearing Request of R. Feher**

In his Petition, Mr. Feher represents that he is a resident of Jonesborough, Tennessee, who lives “just over the mountain from NFS.”<sup>139</sup> Mr. Feher argues that, in addition to his proximity to the NFS facility, he has standing to request a hearing because he and his family drink water taken from the Nolichucky River, which is processed through the Jonesborough Water Treatment Plant that

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<sup>136</sup> 10 C.F.R. § 2.309(a), (f)(1).

<sup>137</sup> See 10 C.F.R. § 2.309(f)(1)(iii); see also *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405.

<sup>138</sup> *Id.*

<sup>139</sup> See Hearing Request of R. Feher (Aug. 20, 2007) at 1 [hereinafter Feher Request].

he alleges “NFS pollutes” “from its ‘normal’ operations,” “spills and other accidents,” and because he lives near the NFS firing range where NFS security guards are trained.<sup>140</sup> Mr. Feher further argues that he is adversely affected by the Confirmatory Order because (1) “the Order does not at all address the impact on [his] drinking water that the secret March 6, 2006 [uranyl nitrate] spill had, or how the NRC is going to protect [his] . . . family’s health through the Order”;<sup>141</sup> (2) the Order did not include a fine against NFS that, as a small business owner, he would have been subjected to in similar situation;<sup>142</sup> (3) the Order did not address “the noise and stray bullet hazards” from the nearby NFS firing range;<sup>143</sup> and (4) the Order does not address “the problem of water pollution threats” from the NFS firing range.<sup>144</sup> Mr. Feher also questions the ability of NFS to develop a safety culture under the Confirmatory Order.<sup>145</sup>

## **2. NRC Answer to Hearing Request of R. Feher**

The NRC Staff filed an Answer to the hearing request of Mr. Feher on September 14, 2007.<sup>146</sup> The NRC Staff argues that the Board should deny Mr. Feher’s hearing request because he “fails to demonstrate he will be adversely affected by the Confirmatory Order and, for that reason, is unable to establish that he has either standing to participate in a hearing or is able to proffer an admissible contention.”<sup>147</sup>

First, the Staff claims that Mr. Feher has not met the standing requirements because he has not demonstrated how he would be injured by the Order.<sup>148</sup> As the Staff explains its position, in a case involving an enforcement order, “the relevant points of comparison are the individual’s positions with and without the Staff’s order — the question is not whether the individual’s position would be improved by some hypothetical substitute order.”<sup>149</sup> The Staff emphasizes, “[a]n individual ‘simply is not adversely affected by a Confirmatory Order that improves the safety situation over what it was in the absence of the order.’”<sup>150</sup> The Staff then argues

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<sup>140</sup> *Id.* at 1-2.

<sup>141</sup> *Id.* at 1.

<sup>142</sup> *Id.* at 1-2.

<sup>143</sup> *Id.* at 2.

<sup>144</sup> *Id.*

<sup>145</sup> *Id.*

<sup>146</sup> NRC Staff’s Response to Hearing Request of R. Feher (Sept. 14, 2007) at 7 [hereinafter Staff Answer — Feher].

<sup>147</sup> *Id.* at 2.

<sup>148</sup> *Id.* at 5.

<sup>149</sup> *Id.* at 4 (citing *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406).

<sup>150</sup> *Id.* (quoting *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406).

that Mr. Feher does not make this required showing because his claims invoke a hypothetical order, or what he would like to see added to the Confirmatory Order, rather than the Order as it exists.<sup>151</sup>

Further, the Staff argues, Mr. Feher's reliance on his proximity to the NFS facility to establish standing is insufficient.<sup>152</sup> The Staff explains that a proximity theory applies in proceedings that do not involve reactor licensing where, as here, the Petitioner must provide a showing of adverse consequences stemming from the Confirmatory Order.<sup>153</sup> And, according to the Staff, because the Petitioner has not made a showing that there are any adverse consequences relevant to his position with and without the Order, he has not made the appropriate showing under a proximity theory.<sup>154</sup> The Staff thus claims that the Board should deny Mr. Feher's hearing request because the matters he complains about and the relief he seeks for that purported injury does not show he is adversely affected by the Confirmatory Order, and so is insufficient to demonstrate standing.<sup>155</sup>

Second, the NRC Staff argues that Mr. Feher's hearing request should be denied because "each of his concerns is outside the scope of this proceeding."<sup>156</sup> The limited issue for consideration, the NRC Staff asserts, is whether the enforcement order should be sustained, not whether it should be strengthened.<sup>157</sup> The NRC Staff points out that Mr. Feher "seeks to impose additional measures on [NFS]" by requiring that the Order address his specific public health and safety concerns involving the NFS facility and the NFS firing range, and that the NRC impose a fine on NFS.<sup>158</sup> Therefore, the NRC Staff argues, Mr. Feher's requests are outside the scope of the proceeding, and accordingly, Mr. Feher's hearing request should be denied.<sup>159</sup>

### **3. NFS Answer to Hearing Request of R. Feher**

NFS filed its Answer to the hearing request of Mr. Feher on September 19, 2007.<sup>160</sup> In its Answer, NFS argues that Mr. Feher's hearing request should be denied "because Mr. Feher has not demonstrated standing, raises issues entirely

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<sup>151</sup> See *id.* at 5-6.

<sup>152</sup> *Id.*

<sup>153</sup> *Id.* at 6 & n.4.

<sup>154</sup> *Id.*

<sup>155</sup> *Id.* at 6.

<sup>156</sup> *Id.*

<sup>157</sup> *Id.* (citing *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 404).

<sup>158</sup> *Id.* at 5.

<sup>159</sup> *Id.* at 7.

<sup>160</sup> Licensee's Answer to Request for a Hearing of R. Feher (Sept. 19, 2007) at 17 [hereinafter NFS Answer — Feher].

beyond the scope of the Confirmatory Order and has identified no admissible contentions.’’<sup>161</sup>

NFS first argues that Mr. Feher’s hearing request fails because he has not shown that he has standing. Similar to the Staff’s proximity argument, NFS declares that Mr. Feher has not alleged an injury-in-fact as required for a showing of standing because he relies on his proximity to the NFS facility without also demonstrating ‘‘ ‘a causal link between the distance [he] reside[s] from the facility and injury to [his] legitimate interests.’ ’’<sup>162</sup> NFS further claims that the injuries Mr. Feher does allege are unrelated to the Confirmatory Order.<sup>163</sup> According to NFS, Mr. Feher concedes that the alleged water pollution and firing range hazards he raises were present before the existence of the Confirmatory Order and, therefore, the harm they might cause cannot stem from the Confirmatory Order so as to provide a basis for standing.<sup>164</sup>

NFS also maintains that Mr. Feher’s request that NFS receive a fine fails to achieve the injury-in-fact element required for standing.<sup>165</sup> To the extent Mr. Feher alleges he has suffered a competitive economic injury based on his claim that, as a small business owner, he likely would receive a fine instead of a type of settlement agreement in a similar situation, NFS declares that Mr. Feher has failed to establish a basis for his standing in that he has not shown that a competitive economic injury ‘‘falls within the protections of the AEA or [the National Environmental Policy Act].’’<sup>166</sup>

Finally, NFS asserts that Mr. Feher’s contentions are inadmissible because they are outside the scope of the proceeding.<sup>167</sup> NFS states that the NRC limited the scope of this proceeding to ‘‘whether the order should be sustained,’’ as it has the authority to do under *Bellotti*, thereby excluding requests to increase the enforcement measures in the Confirmatory Order.<sup>168</sup> Mr. Feher’s proffered contentions regarding water pollution, firing range hazards, and the lack of a fine are, NFS maintains, all requests for increased enforcement measures.<sup>169</sup> Therefore, following *Bellotti* and its progeny, Mr. Feher’s proffered contentions are outside the scope of the proceeding and should be denied.<sup>170</sup> NFS also reviews

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<sup>161</sup> *Id.* at 1.

<sup>162</sup> *Id.* at 3 (quoting *Babcock & Wilcox* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 84 (1993)).

<sup>163</sup> *Id.* at 4.

<sup>164</sup> *Id.*

<sup>165</sup> *Id.*

<sup>166</sup> *Id.* at 4-5.

<sup>167</sup> *Id.* at 5.

<sup>168</sup> *Id.* at 5-9.

<sup>169</sup> *Id.* at 9.

<sup>170</sup> *Id.*

the six standards governing the admissibility of contentions under 10 C.F.R. § 2.309(f)(1)(i)-(vi), and declares that Mr. Feher's contentions fail by not meeting all of the six standards.<sup>171</sup> Because Mr. Feher has not demonstrated that he has standing and is unable to proffer an admissible contention, NFS urges the Board to deny Mr. Feher's Request for Hearing.<sup>172</sup>

#### **4. Board Ruling on Hearing Request of R. Feher**

Mr. Feher's Request for Hearing also is denied because he has not demonstrated that he has standing and has not raised any admissible contentions. As discussed in Parts II.C and II.D, above, the issue of standing in an enforcement proceeding is closely related to the issue of whether a request for hearing raises allegations that are within the scope of the proceeding.<sup>173</sup> The individual must show that his request is within the scope of the proceeding by demonstrating that he will be adversely affected by the enforcement order as it exists, rather than as compared to an order that the petitioner would like to have implemented. If the individual fails to make this showing, the hearing request will be denied for failure to meet the requirements under 10 C.F.R. § 2.309(a), (d), and (f).<sup>174</sup>

NFS and the NRC Staff are correct in pointing out that Mr. Feher has not sufficiently addressed how he will be adversely affected by the Confirmatory Order. Even though Mr. Feher claims he is adversely affected by the Confirmatory Order in his Request for Hearing,<sup>175</sup> he has not shown he will be harmed by the terms of the Confirmatory Order (i.e., that in addressing the NFS enforcement issues, the measures instituted by the NRC are contrary to the public health and safety), which, as the *Bellotti* and *Alaska Department of Transportation & Public Facilities* cases instruct, is the fundamental issue when determining standing and contention admissibility in a proceeding involving an enforcement order.<sup>176</sup> Instead, Mr. Feher's Request for Hearing consists of requests to the NRC that would involve increased enforcement measures taken against NFS outside of the Confirmatory Order. Mr. Feher asks that the NRC address the potential for water pollution and hazards from the NFS firing range where NFS security guards

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<sup>171</sup> *Id.* at 10-16.

<sup>172</sup> *Id.* at 17.

<sup>173</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405.

<sup>174</sup> See 10 C.F.R. § 2.309(a) ("[T]he . . . Board designated to rule on the request for hearing and/or petition for leave to intervene will grant the request/petition if it determines that the requestor/petitioner has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section").

<sup>175</sup> See Feher Request at 1.

<sup>176</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405 (citing *Bellotti v. NRC*, 725 F.2d at 1381).

are trained and that the agency impose a fine against NFS for the enforcement violations addressed in the Confirmatory Order.<sup>177</sup>

It is well established that “Boards are not to consider whether [enforcement] orders need strengthening.”<sup>178</sup> These claims do not address whether the Confirmatory Order should be sustained, and are therefore outside the scope of the proceeding. The Board does not have the authority under NRC regulations or the terms of the referral specified in the July 30, 2007 *Federal Register* Notice to grant a hearing based on these claims.

Furthermore, Mr. Feher’s purported proximity to the NFS facility is insufficient to meet the standing requirement in this case. Although the Board has used a proximity presumption when resolving issues of standing for cases involving reactor licensing,<sup>179</sup> in a case involving an enforcement order, such as this one, the standing requirement is based on the Confirmatory Order itself, and the petitioner must show that he will be adversely affected by the Confirmatory Order.<sup>180</sup> Simple closeness to the facility is not sufficient to establish standing. The petitioner must also demonstrate a link between the Confirmatory Order and the alleged harm to himself or herself.<sup>181</sup> Because Mr. Feher has not alleged a harm stemming from the Confirmatory Order, he is unable to demonstrate that the proximity presumption has been met.

Additionally, even assuming Mr. Feher were able to demonstrate standing, his Request for Hearing fails because he has not raised an admissible contention. Under 10 C.F.R. § 2.309(f)(1), all six factors for contention admissibility must be met for the Board to admit a contention.<sup>182</sup> The scope of the proceeding issue, just as it is intertwined with the standing issue, is also relevant to the issue of contention admissibility.<sup>183</sup> Title 10 of the *Code of Federal Regulations*, section 2.309(f)(1)(iii) requires the petitioner to “[d]emonstrate that the issue raised in the contention is within the scope of the proceeding.”<sup>184</sup> Mr. Feher does not meet this third contention admissibility factor because his claims, which in essence request that the NRC take additional enforcement action against NFS, are outside the scope of this proceeding. And because Mr. Feher has not provided the requisite showing under the third contention admissibility factor, he cannot meet all six contention admissibility requirements so as to have his contentions admitted.

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<sup>177</sup> See *supra* Part III.C.1.

<sup>178</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 404.

<sup>179</sup> *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 75 n.22.

<sup>180</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406.

<sup>181</sup> *Id.* (determining that the injury must be “attributable to the Confirmatory Order” to establish standing) (emphasis in original).

<sup>182</sup> 10 C.F.R. § 2.309(a), (f)(1).

<sup>183</sup> 10 C.F.R. § 2.309(f)(1)(iii).

<sup>184</sup> *Id.*

Having failed to demonstrate he has standing or raise an admissible contention as is required for admission as a party pursuant to 10 C.F.R. § 2.309(a), Mr. Feher's Request for Hearing is denied.

#### **D. Specific Request for Hearing — A. Christine Tipton**

##### **1. Hearing Request of A. Christine Tipton**

In her Request for Hearing, A. Christine Tipton represents that she is a resident of Erwin, Tennessee, and lives 1 mile from the NFS facility.<sup>185</sup> She alleges that she has standing to request a hearing because of her proximity to the site, and because “[a]ccidents with radioactive elements, human failures at a nuclear facility and NRC violations definitely affect myself, my family, my property, my community and my well being and peace of mind.”<sup>186</sup> Ms. Tipton raises the following concerns regarding the Confirmatory Order: (1) the “Official Use Only” information-withholding policy led to a loss of the public trust in NFS; (2) the “Official Use Only” policy prevents her and others in her community from knowing of and protecting themselves from possible danger at the NFS facility;<sup>187</sup> and (3) she is skeptical that NFS will adhere to the requirements of the Confirmatory Order and other applicable NRC Regulations.<sup>188</sup> Accordingly, she requests a hearing to address these concerns.<sup>189</sup>

##### **2. NRC Answer to Hearing Request of A. Christine Tipton**

The Staff filed an Answer to Ms. Tipton's hearing request on September 19, 2007.<sup>190</sup> In its response, the Staff first argues that Ms. Tipton's hearing request should be denied because it was not timely filed.<sup>191</sup> Second, the Staff asserts that the Board should deny Ms. Tipton's request because she “fails to demonstrate that she will be adversely affected by the Confirmatory Order and, for that reason, is unable to establish that she has either standing to participate in a hearing or is able to proffer an admissible contention.”<sup>192</sup>

The Staff claims that Ms. Tipton's hearing request was not timely filed because

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<sup>185</sup> Hearing Request of A. Christine Tipton (Aug. 27, 2007) at 2 [hereinafter Tipton Request].

<sup>186</sup> *Id.*

<sup>187</sup> *Id.* at 3.

<sup>188</sup> *Id.* at 2-4.

<sup>189</sup> *Id.* at 4.

<sup>190</sup> NRC Staff's Response to Hearing Request of A. Christine Tipton (Sept. 19, 2007) at 8 [hereinafter Staff Answer — Tipton].

<sup>191</sup> *Id.* at 2.

<sup>192</sup> *Id.*

she filed it more than 20 days after the Notice of Opportunity for Hearing was published and did not request an extension of time to file her hearing request beyond the 20 days.<sup>193</sup> The NRC Staff explains, the Notice of Opportunity for Hearing set the deadline for hearing requests within 20 days of the issuance of the hearing notice, or within 20 days of July 30, 2007, which was August 20, 2007.<sup>194</sup> According to the Staff, having been submitted 7 days after the filing deadline without requesting an extension of time, Ms. Tipton's hearing request should be denied as nontimely.<sup>195</sup>

The Staff further argues that Ms. Tipton has not demonstrated standing or raised an admissible contention because she has not shown how she is adversely affected by the Confirmatory Order. The Staff explains that “‘the threshold question — related to both standing and admissibility of contentions — is whether the hearing request is within the scope of the proceeding as outlined in the order.’”<sup>196</sup> In this case, the Staff declares, to demonstrate the hearing request is within the scope of the proceeding, this petitioner must demonstrate that she is adversely affected by the Confirmatory Order.<sup>197</sup>

In that regard, the Staff maintains that Ms. Tipton “‘never even alleges that she is adversely affected by the Order,’” instead raising “‘generalized grievances’” regarding NFS's current operations and ability to conform to the Confirmatory Order rather than an injury stemming from the Confirmatory Order itself.<sup>198</sup> Because she has not demonstrated that her request is within the scope of the proceeding, she has not demonstrated standing.<sup>199</sup> In addition, the NRC Staff notes that Ms. Tipton's proximity to the NFS facility is insufficient to establish standing since in an enforcement action, the relevant inquiry is injury from the Order, which requires a showing of more than proximity.<sup>200</sup>

The NRC Staff concludes that because Ms. Tipton failed to demonstrate that her request is within the scope of the proceeding, she has not demonstrated her standing or proffered an admissible contention.<sup>201</sup> The NRC Staff thus requests that the Board deny Ms. Tipton's hearing petition.<sup>202</sup>

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<sup>193</sup> *Id.* at 5-6.

<sup>194</sup> *Id.* at 5.

<sup>195</sup> *Id.* at 6.

<sup>196</sup> *Id.* (quoting *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405).

<sup>197</sup> *Id.*

<sup>198</sup> *Id.* at 6-7.

<sup>199</sup> *Id.*

<sup>200</sup> *Id.* at 6-7 & n.6.

<sup>201</sup> *Id.* at 7-8.

<sup>202</sup> *Id.*

### 3. NFS Answer to Hearing Request of A. Christine Tipton

NFS filed an Answer to Ms. Tipton's hearing request on September 19, 2007.<sup>203</sup> In its Answer, NFS asks that the Board deny Ms. Tipton's Request for Hearing because she "did not file within the time allowed, has not demonstrated standing, raises issues entirely beyond the scope of the Confirmatory Order and has identified no admissible contentions."<sup>204</sup>

As was the case with the Staff, NFS first argues that Ms. Tipton's hearing request was not timely filed because she submitted it 7 days after the deadline for petitions without requesting an extension of time to file.<sup>205</sup> NFS further argues that Ms. Tipton did not discuss the eight-factor balancing test under 10 C.F.R. § 2.309(c)(1), which must be addressed by a petitioner if the Board is to consider the merits of a nontimely intervention petition.<sup>206</sup> Therefore, NFS argues, the Board should deny Ms. Tipton's hearing request as nontimely.<sup>207</sup>

Second, NFS argues that Ms. Tipton's statement that she lives near the NFS facility is insufficient to establish standing without a demonstration of injury-in-fact stemming from the Confirmatory Order.<sup>208</sup> NFS argues that Ms. Tipton's alleged injuries are not related to the Confirmatory Order and, therefore, Ms. Tipton is unable to establish standing because she cannot show causation and redressability, the second and third prongs of the standing inquiry.<sup>209</sup>

Third, NFS claims that Ms. Tipton's Request for Hearing is outside the scope of the proceeding.<sup>210</sup> This is because her petition amounts to a challenge to the NRC's enforcement of its regulations and the former "Official Use Only" policy, both of which are unrelated to the Confirmatory Order.<sup>211</sup> Further, NFS alleges Ms. Tipton did not address the issue of whether the Confirmatory Order should be sustained, and to the extent that she implies that the Order should be more stringent, her allegations are outside the scope of the proceeding.<sup>212</sup>

Fourth, NFS argues that Ms. Tipton has not proffered an admissible contention.<sup>213</sup> NFS states that Ms. Tipton has not met the requirements of 10 C.F.R. § 2.309(f)(1) because her contentions are not within the scope of the proceeding

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<sup>203</sup> Licensee's Answer to Request for a Hearing of A. Christine Tipton (Sept. 19, 2007) at 17 [hereinafter NFS Answer — Tipton].

<sup>204</sup> *Id.* at 1.

<sup>205</sup> *Id.* at 2-3.

<sup>206</sup> *Id.*

<sup>207</sup> *Id.* at 3.

<sup>208</sup> *Id.* at 4.

<sup>209</sup> *Id.* at 3-5.

<sup>210</sup> *Id.* at 5.

<sup>211</sup> *Id.* at 5-6.

<sup>212</sup> *Id.* at 5-10.

<sup>213</sup> *Id.* at 10.

and are not supported with facts, expert opinions, documents, or any other factual basis.<sup>214</sup> Accordingly, NFS requests that the Board deny Ms. Tipton's hearing request.<sup>215</sup>

#### **4. Board Ruling on Hearing Request of A. Christine Tipton**

Ms. Tipton's hearing request must be denied. Even though Ms. Tipton's hearing request was 7 days late, which alone would be enough to deny her request,<sup>216</sup> the Board also finds that Ms. Tipton's hearing request cannot be admitted on its merits. As is the case with the other Petitioners discussed above, she has not demonstrated standing and has not raised an admissible contention.

As was noted in Parts II.C and II.D, above, the issue of standing in an enforcement proceeding is closely related to the issue of whether a hearing request raises allegations that are within the scope of the proceeding.<sup>217</sup> The individual is required to show that his or her request is within the scope of the proceeding by demonstrating that he or she will be adversely affected by the enforcement order as it exists, as opposed to how asserted adverse effects arise because the order does not contain revised or additional provisions that the petitioner considers necessary.<sup>218</sup> If the individual fails to make this showing, the hearing request will be denied for failure to meet the requirements of 10 C.F.R. § 2.309(a), (d), and (f).<sup>219</sup>

As both NFS and the Staff correctly point out, Ms. Tipton's hearing request fails to address how she will be adversely affected by the Confirmatory Order. Instead, Ms. Tipton expresses generalized concerns about the "Official Use Only" policy and her ability to find out about and prepare for future safety and health hazards as well as NFS's ability to conform to the terms of the Confirmatory Order.<sup>220</sup> Although Ms. Tipton's concerns have some relationship to the Confirmatory Order in the sense that they address some of the circumstances in which the Confirmatory Order was issued, they nonetheless are not relevant to the issue in this proceeding — whether she is worse off with the Confirmatory Order in place. Further, to the extent Ms. Tipton's concerns regarding NFS's ability to conform

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<sup>214</sup> *Id.* at 10-16.

<sup>215</sup> *Id.* at 17.

<sup>216</sup> *See* 10 C.F.R. § 2.309(c).

<sup>217</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405.

<sup>218</sup> *Id.* at 406.

<sup>219</sup> *See* 10 C.F.R. § 2.309(a) ("[T]he . . . Board designated to rule on the request for hearing and/or petition for leave to intervene will grant the request/petition if it determines that the requestor/petitioner has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section").

<sup>220</sup> *See supra* Part III.D.1.

to the Confirmatory Order imply that further enforcement measures should be taken, this is outside the scope of the proceeding.<sup>221</sup> It is well established that “Boards are not to consider whether [enforcement] orders need strengthening.”<sup>222</sup> Therefore, Ms. Tipton has not demonstrated that her hearing request is within the scope of this proceeding, and thus has not established the requisite standing to be admitted as a party to a hearing before this Board.

Furthermore, Ms. Tipton’s proximity to the NFS facility is insufficient to fulfill the standing requirement in this case. Although the Board has used a proximity presumption when resolving issues of standing for cases involving reactor licensing,<sup>223</sup> in a case involving an enforcement order, such as this one, the standing requirement is based on the Confirmatory Order and the petitioner’s showing that he or she will be adversely affected by the Confirmatory Order.<sup>224</sup> Therefore, something more than distance from the facility is necessary to establish standing, i.e., a link between the Confirmatory Order and the alleged harm to the individual.<sup>225</sup> As discussed above, Ms. Tipton has not made the requisite connection between the Confirmatory Order and any alleged harm she will suffer.

Even assuming that Ms. Tipton had been able to demonstrate standing, however, her Request for Hearing must also fail because she has not raised an admissible contention. Under 10 C.F.R. § 2.309(f)(1), all six factors for contention admissibility must be met for the Board to admit a contention.<sup>226</sup> As noted above, Title 10 of the *Code of Federal Regulations*, section 2.309(f)(1)(iii) requires the Petitioner to “[d]emonstrate that the issue raised in the contention is within the scope of the proceeding.”<sup>227</sup> Ms. Tipton does not meet this third contention admissibility factor because her claims, which in essence touch only on the circumstances in which the order was issued — rather than on the order itself — are outside the scope of this proceeding. Having thus failed to meet the required showing under the third contention admissibility factor, Ms. Tipton cannot meet all six contention admissibility requirements so as to have her contentions admitted.

Ms. Tipton has not demonstrated that she has standing or raised an admissible contention as is required for a hearing under 10 C.F.R. § 2.309(a). Ms. Tipton’s Request for Hearing therefore must be denied.

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<sup>221</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 404.

<sup>222</sup> *Id.*

<sup>223</sup> *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 75 n.22.

<sup>224</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406.

<sup>225</sup> *Id.* (determining that the injury must be “attributable to the Confirmatory Order” to establish standing) (emphasis in original).

<sup>226</sup> 10 C.F.R. § 2.309(a), (f)(1).

<sup>227</sup> 10 C.F.R. § 2.309(f)(1)(iii).

## **E. Specific Request for Hearing — Barbara A. O’Neal**

### **1. Hearing Request of Barbara A. O’Neal**

In her Request for Hearing Barbara A. O’Neal declares that she is a resident of Erwin, Tennessee.<sup>228</sup> Ms. O’Neal further represents that she lives less than half a mile from the NFS facility.<sup>229</sup> Ms. O’Neal argues that she has standing based on her proximity to the facility and that she is adversely affected by the Confirmatory Order in the following ways: (1) the secrecy of the March 6, 2006 uranyl nitrate spill caused a loss of taxpayer dollars and loss of the public trust; (2) the public is not sufficiently informed about the safety of the air and water because the Agency for Toxic Substances and Disease Registry could not conduct a full assessment of the community without knowledge of the spill; (3) NFS is not sufficiently protected from terrorist attacks; (4) NFS has not established a plan for public safety or evacuation in the event of an accident; (5) the secrecy of the March 6, 2006 spill prevented Ms. O’Neal from making an informed personal decision regarding her health and whether to remain near the NFS facility; and (6) NFS’s history of accidents and violations makes it psychologically stressful to live near the facility.<sup>230</sup> In addition, Ms. O’Neal questions the Staff’s determination that with the Confirmatory Order, “the public health and safety are reasonably assured,”<sup>231</sup> requesting that the NRC release aerial photographs of her home, and demanding that the NRC “tell [her], with particularity, how [she] was or could have been harmed by this March 6, 2006 spill, or any other violations, and how it is going to insure [her] safety in the future.”<sup>232</sup>

### **2. NRC Answer to Hearing Request of Barbara A. O’Neal**

The Staff filed its Answer to the hearing request of Barbara A. O’Neal on September 19, 2007.<sup>233</sup> The Staff requests that the Board deny Ms. O’Neal’s hearing request because Ms. O’Neal “fails to demonstrate that she will be adversely affected by the Confirmatory Order and, for that reason, is unable to

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<sup>228</sup> Hearing Request of Barbara A. O’Neal (Aug. 27, 2007) at 1 [hereinafter O’Neal Request].

<sup>229</sup> *Id.*

<sup>230</sup> *Id.* at 1-3.

<sup>231</sup> *Id.* at 2 (emphasis omitted).

<sup>232</sup> *Id.* at 3 (emphasis omitted).

<sup>233</sup> NRC Staff’s Response to Hearing Request of Barbara A. O’Neal (Sept. 19, 2007) at 9 [hereinafter Staff Answer — O’Neal].

establish that she has either standing to participate in a hearing or is able to proffer an admissible contention.”<sup>234</sup>

On the issue of standing, the NRC Staff states, “[Ms. O’Neal]’s geographic proximity to the Licensee’s facility and her alleged injury from the Licensee’s activities are not sufficient to establish standing in this type of proceeding.”<sup>235</sup> This is because, the Staff explains, in an enforcement proceeding the injury must derive from the Confirmatory Order, so that proximity alone is not enough to establish standing.<sup>236</sup> Arguing that Ms. O’Neal does not show she will be injured by the steps taken in the Confirmatory Order that are designed to improve the safety culture at NFS, the Staff concludes that Ms. O’Neal has not established standing.<sup>237</sup>

The Staff further argues that all of Ms. O’Neal’s concerns — the “Official Use Only” policy, the impact of the March 6, 2006 spill, and the treatment of future health and safety issues at NFS — are outside the scope of the proceeding because they did not address the narrow issue of whether the order should be sustained.<sup>238</sup> The “additional safety measures that she wants NFS to implement,”<sup>239</sup> the Staff declares, are also outside the scope of the proceeding.<sup>240</sup> Having not established standing or raised an admissible contention within the scope of the proceeding, the NRC Staff urges that Ms. O’Neal’s hearing request be denied.<sup>241</sup>

### **3. NFS Answer to Hearing Request of Barbara A. O’Neal**

NFS filed its Answer to the hearing request of Barbara A. O’Neal on September 19, 2007.<sup>242</sup> In its Answer, NFS urges the Board to deny Ms. O’Neal’s hearing request because she “has not demonstrated standing, raises issues entirely

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<sup>234</sup> *Id.* at 2. The Staff, along with NFS, also urged the Board to deny Ms. O’Neal’s hearing request because, having been submitted 7 days after the deadline set by the hearing notice without a request for an extension of time, it was untimely. *Id.* at 2, 5-6; Licensee’s Answer to Request for a Hearing of Barbara A. O’Neal (Sept. 19, 2007) at 2-3 [hereinafter NFS Answer — O’Neal]. In an October 5, 2007 Order, the Board determined that Ms. O’Neal’s hearing request was timely filed. *See* Licensing Board Order (Determining That O’Neal Request for Hearing Was Timely Filed) at 1-2 (Oct. 5, 2007) (unpublished). Because this issue has already been decided relative to Ms. O’Neal, the Board need focus here only on the parties’ standing and contention admissibility arguments.

<sup>235</sup> Staff Answer — O’Neal at 7.

<sup>236</sup> *Id.*

<sup>237</sup> *Id.*

<sup>238</sup> *Id.* at 7-8.

<sup>239</sup> *Id.* at 8.

<sup>240</sup> *Id.*

<sup>241</sup> *Id.* at 9.

<sup>242</sup> NFS Answer — O’Neal at 18.

beyond the scope of the Confirmatory Order and has identified no admissible contentions.’’<sup>243</sup>

NFS argues that Ms. O’Neal has not established that she has standing because she has not alleged an injury-in-fact caused by the Confirmatory Order.<sup>244</sup> NFS explains that Ms. O’Neal’s reliance on her proximity to the NFS facility is insufficient to confer standing in proceedings other than those involving reactors, and that the harms she alleges are not caused by the Confirmatory Order.<sup>245</sup> NFS further states that because Ms. O’Neal’s allegations are unrelated to the Confirmatory Order, they are not redressable in this proceeding involving the issue of whether the Order should be sustained.<sup>246</sup> NFS thus argues Ms. O’Neal has not established standing so that her Request for Hearing should be denied.<sup>247</sup>

Reiterating its claim that Ms. O’Neal does not address whether the Confirmatory Order should be sustained, NFS argues that Ms. O’Neal’s hearing request is outside the scope of the proceeding and must be denied on that basis.<sup>248</sup> NFS also makes the related claim that since she has not shown that her Request for Hearing is within the scope of the proceeding, she is unable to meet the contention admissibility requirements of 10.C.F.R. § 2.309(f)(1)(iii).<sup>249</sup> Further, NFS states that Ms. O’Neal cannot meet any of the other five contention admissibility requirements under 10 C.F.R. § 2.309(f)(1) because she has not provided support for her contentions with facts, expert opinions, documents, or any other factual basis,<sup>250</sup> or shown that her contentions are ‘‘material to the findings that the NRC must make.’’<sup>251</sup> Accordingly, NFS requests that the Board deny Ms. O’Neal’s hearing request.<sup>252</sup>

#### **4. Reply of Barbara A. O’Neal**

On October 12, 2007, Ms. O’Neal filed a Reply to the Staff and NFS Answers

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<sup>243</sup> *Id.* at 1. As discussed above in Part III.E.2, *supra* note 234, NFS also argued that Ms. O’Neal’s hearing request should be dismissed because it was not timely, but the Board has already decided that issue, ruling that the O’Neal request was timely filed.

<sup>244</sup> NFS Answer — O’Neal at 4.

<sup>245</sup> *Id.* at 4-5.

<sup>246</sup> *Id.* at 5.

<sup>247</sup> *Id.* at 3, 5.

<sup>248</sup> *Id.* at 5-10.

<sup>249</sup> *Id.* at 10-11.

<sup>250</sup> *Id.* at 12-17.

<sup>251</sup> *Id.* at 11.

<sup>252</sup> *Id.* at 18.

to her Request for Hearing.<sup>253</sup> In her Reply, Ms. O’Neal reasserts that she has standing based on her proximity to the NFS facility and because her “interest is adversely affected.”<sup>254</sup> Ms. O’Neal’s concerns are summarized below:

1. The Confirmatory Order was not released to the public after it was issued on February 21, 2007 due to the “Official Use Only” policy, so she and the public were denied due process because they were not aware of a right to request a hearing at that time.<sup>255</sup>
2. NFS has had a number of safety violations over the years and the NRC has not effectively regulated NFS to ensure that these violations will not continue to occur.<sup>256</sup>
3. The non-public (under the “Official Use Only” policy) license amendments that NFS received from September 13, 2004, through March 1, 2007, violated the public’s due process rights because they were unable to determine whether these amendments “pose a threat to [their] health, safety, and environment.”<sup>257</sup> Additionally, these amendments may require that environmental impact studies be performed.<sup>258</sup>
4. She and the public do not have a full understanding of the environmental impact of the BLEU facility because an EIS was never performed when the NRC granted NFS a license amendment for the BLEU facility.<sup>259</sup>
5. The public’s rights were violated when the NRC and NFS engaged in alternative dispute resolution for the Confirmatory Order because they “had no place at the table and no input.”<sup>260</sup>

Ms. O’Neal further requests that (1) NFS inform the public of the composition of NFS’s proposed “Safety Culture Board of Advisers” and allow the public to

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<sup>253</sup> Petitioner Barbara A. O’Neal’s Additional Response to Request for a Public Hearing (Oct. 12, 2007) at 1 [hereinafter O’Neal Reply]. Ms. O’Neal requested an extension of time to file her reply on September 28, 2007. *See* Petitioner Barbara A. O’Neal’s Response to NRC Staff Response to Hearing Request (Sept. 28, 2007) at 1. In the same October 5, 2007 Order in which the Board determined that Ms. O’Neal’s Request for Hearing was timely filed, the Board extended Ms. O’Neal’s deadline for filing her reply to October 15, 2007. *See supra* note 234. Ms. O’Neal’s October 12, 2007 Reply was timely filed because it was within the deadline set by the Board.

<sup>254</sup> O’Neal Reply at 2.

<sup>255</sup> *Id.*

<sup>256</sup> *Id.* at 2-6.

<sup>257</sup> *Id.* at 7.

<sup>258</sup> *Id.*

<sup>259</sup> *Id.* at 2, 7.

<sup>260</sup> *Id.* at 2.

“meet with them periodically”;<sup>261</sup> (2) the NRC vacate the Confirmatory Order;<sup>262</sup> and (3) the NRC “go back and address the Special Nuclear Material License 124 to determine whether it is adequate to protect the public’s welfare.”<sup>263</sup> The NRC should also perform “a full Environmental Impact Study (EIS)” and include a review of “Studsvik, Inc. co-located with NFS on NFS property” to determine the “cumulative impact . . . on the air (especially), as well as the soil, surface and ground water, and vegetation.”<sup>264</sup>

##### **5. Board Ruling on Hearing Request of Barbara A. O’Neal**

Ms. O’Neal’s Request for Hearing is denied because she has not demonstrated that she has standing and has not raised any admissible contentions.

As discussed in Parts II.C and II.D, above, the issue of standing in an enforcement proceeding and the issue of whether a request for hearing raises allegations that are within the scope of the proceeding are closely related.<sup>265</sup> The individual is required to show that his or her request is within the scope of the proceeding by demonstrating that he or she will be adversely affected by the existing terms of the enforcement order, with any purported “adverse” effects arising by reason of the order’s failure to include revised or additional provisions sought by a petitioner deemed irrelevant for this purpose.<sup>266</sup> If the individual fails to make a showing regarding such adverse effects, the hearing request will be denied for failure to meet the requirements of 10 C.F.R. § 2.309(a), (d), and (f).<sup>267</sup>

NFS and the Staff correctly point out that Ms. O’Neal has not addressed how she will be adversely affected by the Confirmatory Order. Even though Ms. O’Neal claims in both her Request for Hearing and her Reply that she is adversely affected by the Confirmatory Order,<sup>268</sup> she does not show that she will be worse off with the Confirmatory Order in place, which, as the *Bellotti* and *Alaska Department of Transportation & Public Facilities* cases instruct, is the fundamental issue when determining standing and contention admissibility in

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<sup>261</sup> *Id.* at 5.

<sup>262</sup> *Id.* at 7.

<sup>263</sup> *Id.*

<sup>264</sup> *Id.* (emphasis omitted).

<sup>265</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405.

<sup>266</sup> *Id.* at 406.

<sup>267</sup> See 10 C.F.R. § 2.309(a) (“[T]he . . . Board designated to rule on the request for hearing and/or petition for leave to intervene will grant the request/petition if it determines that the requestor/petitioner has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section”).

<sup>268</sup> See O’Neal Request at 1-2; O’Neal Reply at 2.

a proceeding involving an enforcement order.<sup>269</sup> Instead, Ms. O’Neal’s claims amount to unrelated challenges to the NRC’s “Official Use Only” policy and its regulatory policy with regard to NFS, assertions that greater enforcement measures are required to be taken against NFS, and an attempt to relitigate twenty-eight prior amendments to the NFS license, including the licensing of the BLEU project that was subject to another Atomic Safety and Licensing Board proceeding.<sup>270</sup> These claims refer to matters that go far beyond the issue of whether the Confirmatory Order should be sustained and, therefore, are outside the scope of this proceeding.

Furthermore, Ms. O’Neal’s requests in her Reply that the Confirmatory Order be vacated and the NRC perform a review of NFS’s Special Material License miss the point. The scope of this proceeding is narrow so that “the pertinent time contrast is between the petitioner’s position with and without the order in question — not between the disputed order and a hypothetical substitute order.”<sup>271</sup> Her requests invoke a hypothetical order or additional enforcement action that would, in Ms. O’Neal’s eyes, improve public health and safety. She does not suggest in her pleadings that the enforcement action that the NRC took against NFS in the Confirmatory Order would diminish the public health and safety, only that it was not enough. The Board does not have the authority under NRC regulations or the terms of the July 30, 2007 Confirmatory Order that established the scope of this proceeding to grant a hearing based on these allegations or requests.

Moreover, Ms. O’Neal’s argument that she has standing because she lives “less than a half-mile from NFS”<sup>272</sup> is insufficient to meet the standing requirement in this case. Although the Board has used a proximity presumption when resolving issues of standing for cases involving reactor licensing,<sup>273</sup> in a case involving an enforcement order, such as this one, the standing requirement is based on the Confirmatory Order itself, and the petitioner must show that he or she will be adversely affected by the Confirmatory Order.<sup>274</sup> Therefore, something more than distance from the facility, i.e., a link between the Confirmatory Order

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<sup>269</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405 (citing *Bellotti v. NRC*, 725 F.2d at 1381).

<sup>270</sup> See *supra* Parts III.E.1 and III.E.4; see also, e.g., LBP-04-5, 59 NRC 186 (2004) (BLEU proceeding). Additionally, Ms. O’Neal’s concerns regarding the prior license amendments that she raises in her Reply are not properly before this Board because they were not raised in her hearing request. A petitioner’s “reply should be narrowly focused on the legal or logical arguments presented in the applicant/licensee or NRC staff answer.” 69 Fed. Reg. at 2203. Given this new argument is also outside the scope of the proceeding, the Board rejects it on that basis as well.

<sup>271</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406.

<sup>272</sup> O’Neal Reply at 2.

<sup>273</sup> *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 75 n.22.

<sup>274</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406.

and the alleged harm to the individual, is necessary to establish standing.<sup>275</sup> As described above, Ms. O’Neal has not made the appropriate connection between the Confirmatory Order and any alleged harm she will suffer.

Finally, even assuming Ms. O’Neal were able to demonstrate standing, her Request for Hearing fails because she has not set forth an admissible contention. Under 10 C.F.R. § 2.309(f)(1), all six factors for contention admissibility must be met before the Board can admit a contention.<sup>276</sup> Title 10 of the *Code of Federal Regulations*, section 2.309(f)(1)(iii) requires that the Petitioner “[d]emonstrate that the issue raised in the contention is within the scope of the proceeding.”<sup>277</sup> Ms. O’Neal does not meet this third contention admissibility factor because her claims, as discussed above, are outside the scope of this proceeding. And, because Ms. O’Neal does not meet the required showing under the third contention admissibility factor, she cannot meet all six contention admissibility requirements so as to have her contentions admitted.

Ms. O’Neal has not demonstrated that she has standing or raised an admissible contention as required for a hearing under 10 C.F.R. § 2.309(a). Ms. O’Neal’s Request for Hearing therefore must be denied.

## **F. Specific Request for Hearing — Wanda Sue Kelley**

### **1. Hearing Request of Wanda Sue Kelley**

Wanda Sue Kelley is a resident of Erwin, Tennessee.<sup>278</sup> She represents that she lives 3 miles from the NFS facility.<sup>279</sup> Ms. Kelley argues that (1) the public was denied due process as required under AEA § 189 when the Confirmatory Order was not released to the public on February 21, 2007, because the public’s “rightful place at the table was denied”; (2) the secrecy of the Confirmatory Order prevented the Agency for Toxic Substances and Disease Registry from performing “its job thoroughly during a . . . health assessment” that followed the March 6, 2006 spill; (3) the news coverage of this proceeding increases the risk that NFS will be the target of a terrorist attack; and (4) the “NRC is failing in its ‘mission’ ” in its regulation of NFS, considering NFS’s repeated violations “with little or no consequences from the NRC.”<sup>280</sup> She “request[s] that the NRC hold a meeting (hearing) in this area to explain to the public why the serious spill of

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<sup>275</sup> *Id.* (determining that the injury must be “attributable to the Confirmatory Order” to establish standing) (emphasis in original).

<sup>276</sup> 10 C.F.R. § 2.309(a), (f)(1).

<sup>277</sup> 10 C.F.R. § 2.309(f)(1)(iii).

<sup>278</sup> Hearing Request of Wanda Sue Kelley (Aug. 27, 2007) at 1 [hereinafter Kelley Request].

<sup>279</sup> *Id.*

<sup>280</sup> *Id.* at 1-2.

highly enriched uranium in March 2006 was kept secret from the local community and why it was classified,’’<sup>281</sup> and explain “what the Commission is doing about it now, and what the Commission intends to do about it in the future.’’<sup>282</sup> She concludes, “[t]he bottom line is that I am afraid for my health and safety and the health and safety of my family and friends and everyone living remotely close to this city including the animals.’’<sup>283</sup>

## 2. *NRC Answer to Hearing Request of Wanda Sue Kelley*

The Staff filed its Answer to the hearing request of Ms. Kelley on September 21, 2007.<sup>284</sup> The Staff requests that the Board deny Ms. Kelley’s hearing request because she “fails to demonstrate she will be adversely affected by the Confirmatory Order and, for that reason, is unable to establish she has either standing to participate in a hearing or any admissible contention.’’<sup>285</sup>

The Staff argues that Ms. Kelley has not established that she has standing and has not raised an admissible contention because her request is devoid of any claim that she would be adversely affected by the Confirmatory Order.<sup>286</sup> According to the Staff, “the Petitioner is seeking a hearing primarily to obtain additional information about chemical spills at the Licensee’s facility and the NRC’s responses to those incidents.’’<sup>287</sup> Further, characterizing Ms. Kelley’s Request for Hearing, the Staff states that “the Petitioner seems to be advocating that the Commission hold something more in the style of a public legislative hearing involving NRC policy issues than an adjudicatory hearing focused on any perceived harm to the Petitioner resulting from the Confirmatory Order.’’<sup>288</sup> Because her Request for Hearing does not address how she is adversely affected by the Confirmatory Order, the Staff asserts that her request is outside the scope of the proceeding and, therefore, she does not have standing (despite her proximity to the NFS facility) and has not raised an admissible contention.<sup>289</sup> Accordingly, the Staff urges the Board to deny Ms. Kelley’s Request for Hearing.<sup>290</sup>

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<sup>281</sup> *Id.* at 1.

<sup>282</sup> *Id.* at 2.

<sup>283</sup> *Id.*

<sup>284</sup> NRC Staff’s Response to Hearing Request of Wanda Sue Kelley (Sept. 21, 2007) at 7 [hereinafter Staff Answer — Kelley].

<sup>285</sup> *Id.* at 2.

<sup>286</sup> *Id.* at 6.

<sup>287</sup> *Id.*

<sup>288</sup> *Id.*

<sup>289</sup> *Id.*

<sup>290</sup> *Id.* at 7.

### 3. NFS Answer to Hearing Request of Wanda Sue Kelley

NFS filed its Answer to Ms. Kelley’s Request for Hearing on September 19, 2007.<sup>291</sup> In that Answer NFS likewise asks that the Board deny Ms. Kelley’s hearing request on the grounds that “Ms. Kelley has not demonstrated standing, raises issues entirely beyond the scope of the Confirmatory Order and has identified no admissible contentions.”<sup>292</sup>

Initially, NFS argues that Ms. Kelley lacks standing because she has not alleged an injury-in-fact caused by the Confirmatory Order.<sup>293</sup> According to NFS, Ms. Kelley’s allegations are “remote and speculative hypotheses” that are unrelated to the Confirmatory Order, and are insufficient to show a cognizable injury-in-fact.<sup>294</sup> Furthermore, NFS argues that “[b]ecause the alleged injuries also do not relate to the Confirmatory Order, they cannot be redressed by the Confirmatory Order.”<sup>295</sup> NFS thus declares that, having failed to demonstrate her standing, Ms. Kelley’s hearing request should be denied.<sup>296</sup>

NFS next argues that Ms. Kelley’s hearing request is outside the scope of the proceeding.<sup>297</sup> NFS explains that the *Federal Register* Notice defined the scope of the proceeding as “ ‘whether this Confirmatory Order should be sustained.’ ”<sup>298</sup> NFS again notes that Ms. Kelley’s hearing request is unrelated to the Confirmatory Order and also points out that her petition does not otherwise address whether the Confirmatory Order should be sustained.<sup>299</sup> NFS asserts that Ms. Kelley’s hearing request can be denied on this basis as well.<sup>300</sup>

Finally, NFS asserts that Ms. Kelley has not proffered an admissible contention.<sup>301</sup> Since she has not shown that her Request for Hearing is within the scope of the proceeding, NFS maintains she is unable to meet the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(iii).<sup>302</sup> Additionally, NFS argues she cannot meet any of the other five requirements under 10 C.F.R. § 2.309(f)(1) because she has not provided factual support for her contentions<sup>303</sup>

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<sup>291</sup> Licensee’s Answer to Request for a Hearing of Wanda Sue Kelley (Sept. 19, 2007) at 16 [hereinafter NFS Answer — Kelley].

<sup>292</sup> *Id.* at 1.

<sup>293</sup> *Id.* at 2-3.

<sup>294</sup> *Id.* at 4.

<sup>295</sup> *Id.*

<sup>296</sup> *Id.*

<sup>297</sup> *Id.* at 4.

<sup>298</sup> *Id.* (quoting 72 Fed. Reg. at 41,531).

<sup>299</sup> *Id.* at 4-9.

<sup>300</sup> *Id.* at 5.

<sup>301</sup> *Id.* at 9.

<sup>302</sup> *Id.* at 9-10.

<sup>303</sup> *Id.* at 9-16.

or shown that her contentions are “material to the findings that the NRC must make.”<sup>304</sup> This failure to proffer an admissible contention is, NFS maintains, further grounds for denying Ms. Kelley’s hearing request.<sup>305</sup>

#### **4. Replies of Wanda Sue Kelley**

Ms. Kelley filed a timely Reply to NFS’s Answer to her hearing request on September 28, 2007,<sup>306</sup> and a timely Reply to the Staff’s Answer to her hearing request on October 24, 2007.<sup>307</sup>

##### *a. Reply of Wanda Sue Kelley to NFS Answer*

In her Reply to the NFS Answer, Ms. Kelley asserts that she has standing under AEA § 189 in that twenty-eight prior proceedings to amend the Part 70 license for the NFS facility occurred under the “Official Use Only” policy of which she was not aware, each of which affected her interests.<sup>308</sup> In addition, Ms. Kelley argues that because the public was not informed of these amendments, she has standing given that the public’s due process rights were violated by not being able to participate in a hearing regarding these amendments.<sup>309</sup>

Ms. Kelley also alleges that she has suffered an injury sufficient to afford her standing because information about the March 6, 2006 spill was not released to the public when it occurred, and she remains unaware of “the extent, effect, harm or damages possibly incurred by th[is] accident.”<sup>310</sup> She further declares that the concerns she raises in her hearing request regarding the health of those who reside near the NFS facility stem from data she has reviewed regarding increased cancer rates among those who live in the area.<sup>311</sup> Nor did NRC and NFS address her concerns sufficiently at the two September 17, 2007 meetings the NRC held in

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<sup>304</sup> *Id.* at 9-10.

<sup>305</sup> *Id.* at 16.

<sup>306</sup> Reply to Licensee’s Answer of Wanda Sue Kelley (Sept. 28, 2007) at 1 [hereinafter Kelley Reply to NFS].

<sup>307</sup> Petitioner Wanda Sue Kelley’s Reply to NRC Staff’s Response to Hearing Request (Oct. 24, 2007) at 1 [hereinafter Kelley Reply to Staff]. In a letter dated October 5, 2007, Ms. Kelley requested an extension of time to reply to the Staff’s Answer. Kelley Request for Extension of Time at 1 (Oct. 5, 2007). In an October 15, 2007 Order, the Board granted Ms. Kelley an extension of time to file her reply on or before October 24, 2007. Licensing Board Order (Granting in Part Motion for Extension of Time To File Reply) at 2 (Oct. 15, 2007) (unpublished). Ms. Kelley’s reply was timely because it was filed by the deadline set by the Board.

<sup>308</sup> Kelley Reply to NFS at 2-3.

<sup>309</sup> *Id.* at 2.

<sup>310</sup> *Id.* at 1-2.

<sup>311</sup> *Id.* at 3.

Erwin, Tennessee, to discuss the public's concerns, which Ms. Kelley describes as "self-serving to NFS and NRC and not the public."<sup>312</sup>

In addition, Ms. Kelley questions whether the Confirmatory Order is sufficient to address NFS's safety practices given the history of violations at NFS.<sup>313</sup> She states that "[she has] absolutely no idea whether the Confirmatory Order improves the licensee's health and safety conditions or if they can even — if ever — be improved."<sup>314</sup> She also wants the NRC to explain whether an Environmental Impact Statement will be done "to check . . . air quality, water and the environment after th[e] accident of March 6, 2006."<sup>315</sup> And in order for her to obtain this relief, Ms. Kelley maintains that the Board must hold a public hearing on the Confirmatory Order.<sup>316</sup>

*b. Reply of Wanda Sue Kelley to NRC Staff Answer*

For the most part, in her Reply to the Staff's Answer to her hearing request, Ms. Kelley reiterates her Reply to the NFS Answer.<sup>317</sup> As in her Reply to NFS, she alleges that she has standing by reason of (1) the harm she suffered due to her inability to request a hearing for over a year on the originally nonpublic Confirmatory Order; (2) the "Official Use Only" policy that "kept [her] in the dark"; and (3) the "government's repeated failure to protect [her] from this hazardous company."<sup>318</sup> She reasserts that she and the public were denied due process under the AEA and the U.S. Constitution when NFS was granted twenty-eight amendments to its license without public knowledge of those revisions.<sup>319</sup> In addition, Ms. Kelley alleges she was "harmed by the Confirmatory Order because it was negotiated behind closed doors [without] the involvement of any elected officials who represent [her]."<sup>320</sup>

And just as she does in her Reply to NFS's Answer, she again questions the adequacy of the Confirmatory Order given the history of safety issues at NFS and criticizes the NRC's handling of these safety issues.<sup>321</sup> Ms. Kelley states that "[she] continue[s] to be harmed by the Confirmatory Order because it let NFS continue to operate in an unsafe manner. . . . As a result, this poses a

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<sup>312</sup> *Id.* at 4.

<sup>313</sup> *Id.* at 5.

<sup>314</sup> *Id.*

<sup>315</sup> *Id.*

<sup>316</sup> *Id.* at 1.

<sup>317</sup> See generally Kelley Reply to Staff at 2-10.

<sup>318</sup> *Id.* at 2.

<sup>319</sup> *Id.* at 3.

<sup>320</sup> *Id.* at 4.

<sup>321</sup> See generally *id.* at 2-10.

serious harm to [her] health caused by worrying about what the NRC will let happen next at NFS.’’<sup>322</sup> She elaborates further, stating that ‘‘[t]his is not an issue of the Confirmatory Order being an insufficient enforcement action. But instead, it’s a matter of the NRC failing to really study [NFS history] before it agreed to the [Confirmatory Order].’’<sup>323</sup> Accordingly, Ms. Kelley requests that the Confirmatory Order ‘‘be vacated and the NRC return and address the SNM License 124 with a comprehensive Environmental Impact Statement to determine if it is adequate to protect the public’s health and welfare,’’<sup>324</sup> including a consideration of the impacts ‘‘of a terrorist attack on NFS, Studsvik[,] or [the] CSX [railroad].’’<sup>325</sup>

### **5. Board Ruling on Hearing Request of Wanda Sue Kelley**

Ms. Kelley’s Request for Hearing must be denied because she has not demonstrated that she has standing and has not raised an admissible contention. As discussed in Parts II.C and II.D, above, the issue of standing in an enforcement proceeding is closely intertwined with the issue of whether a request for hearing raises allegations that are within the scope of the proceeding.<sup>326</sup> In an enforcement proceeding, the individual is required to show that his or her request is within the scope of the proceeding by demonstrating that he or she will be adversely affected by the enforcement order as it exists, without regard to any assertions of harm by the petitioner associated with the agency’s failure to adopt additional provisions that the petitioner contends should be imposed.<sup>327</sup> If the individual fails to make such a showing, the hearing request will be denied for failure to meet the requirements of 10 C.F.R. § 2.309(a), (d), and (f).<sup>328</sup>

NFS and the Staff correctly point out that Ms. Kelley does not address how she will be adversely affected by the Confirmatory Order. Even though Ms. Kelley claims in both her Request for Hearing and in her Replies that she is adversely affected by the Confirmatory Order,<sup>329</sup> she does not show that she

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<sup>322</sup> *Id.* at 4.

<sup>323</sup> *Id.* Relative to her claims about NFS history, Ms. Kelley encloses as an attachment to her Reply a time line of news coverage of the NFS facility from 1957 to 2007. *See id.*, Attach. (News Timelines — Nuclear Fuel Services (as of Oct 18, 2007)).

<sup>324</sup> Kelley Reply to Staff at 9.

<sup>325</sup> *Id.* at 7.

<sup>326</sup> *Alaska Dep’t of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405.

<sup>327</sup> *Id.* at 406.

<sup>328</sup> *See* 10 C.F.R. § 2.309(a) (‘‘[T]he . . . Board designated to rule on the request for hearing and/or petition for leave to intervene will grant the request/petition if it determines that the requestor/petitioner has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section’’).

<sup>329</sup> *See* Kelley Request at 1; Kelley Reply to NFS at 2; Kelley Reply to Staff at 2.

will be worse off by reason of the Confirmatory Order's provisions (i.e., the safety measures that were instituted by the NRC will affirmatively cause her harm), which, as the *Bellotti* and *Alaska Department of Transportation & Public Facilities* cases instruct, is the fundamental issue when determining standing and contention admissibility in a proceeding involving an enforcement order.<sup>330</sup> Instead, Ms. Kelley's claims challenge the NRC's "Official Use Only" policy and its regulatory policy with regard to NFS, request the imposition of greater enforcement measures to be taken against NFS, and attempt to relitigate twenty-eight past amendments to the NFS license.<sup>331</sup> These claims refer to matters outside the scope of whether the Confirmatory Order should be sustained, and are therefore outside the scope of this proceeding.

By the same token, Ms. Kelley's requests in her Replies that the Confirmatory Order be vacated and the NRC perform a review of NFS's Special Material License miss the point of this proceeding. By Commission design, the scope of this proceeding is narrow so that "the pertinent time contrast is between the petitioner's position with and without the order in question — not between the disputed order and a hypothetical substitute order."<sup>332</sup> Her requests invoke a hypothetical order or additional enforcement action that would, in Ms. Kelley's eyes, improve public health and safety. She does not suggest in her pleadings that the enforcement action the NRC took against NFS in the Confirmatory Order would diminish the public health and safety, only that it was not enough. The Board simply does not have the authority under agency regulations or the terms of the July 30, 2007 *Federal Register* Notice establishing the scope of this proceeding to grant a hearing based on these allegations or requests.

By the same token, Ms. Kelley's argument that she has standing because she lives 3 miles from the NFS facility is insufficient to meet the standing requirement in this case. Although the Board has used a proximity presumption when resolving issues of standing for cases involving reactor licensing,<sup>333</sup> in a case such as this one involving an enforcement order, a petitioner's standing is based on the Confirmatory Order itself, and the petitioner must show that he or she will be adversely affected by the Confirmatory Order.<sup>334</sup> Therefore, something

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<sup>330</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405 (citing *Bellotti v. NRC*, 725 F.2d at 1381).

<sup>331</sup> See *supra* Parts III.F.1 and III.F.4. Additionally, the concerns that Ms. Kelley raises in her Reply regarding the prior license amendments and whether an Environmental Impact Study will be performed are not properly before this Board because they were not raised in Ms. Kelley's hearing request. A petitioner's "reply should be narrowly focused on the legal or logical arguments presented in the applicant/licensee or NRC staff answer." 69 Fed. Reg. at 2203. However, since these new arguments are also outside the scope of the proceeding, the Board addresses them on the merits.

<sup>332</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406.

<sup>333</sup> *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 75 n.22.

<sup>334</sup> *Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 406.

more than distance from the facility is necessary to establish standing, that is, a link between the Confirmatory Order and the alleged harm to the individual.<sup>335</sup> As described above, Ms. Kelley has not made the appropriate connection between the Confirmatory Order and any alleged harm she will suffer.

Finally, even assuming Ms. Kelley were able to demonstrate standing, her Request for Hearing must fail because she has not raised an admissible contention. Under 10 C.F.R. § 2.309(f)(1), all six factors for contention admissibility must be met for the Board to admit a contention.<sup>336</sup> The matter of the scope of this proceeding, just as it is intertwined with the standing issue, is also intertwined with the issue of contention admissibility.<sup>337</sup> Title 10 of the *Code of Federal Regulations*, section 2.309(f)(1)(iii) requires the petitioner to “[d]emonstrate that the issue raised in the contention is within the scope of the proceeding.”<sup>338</sup> Ms. Kelley did not meet this third contention admissibility factor because her claims, as discussed above, are outside the scope of this proceeding. And because Ms. Kelley did not meet the required showing under the third contention admissibility factor, she cannot meet all six contention admissibility requirements so as to have her contentions admitted.

Ms. Kelley has not demonstrated that she has standing or raised an admissible contention as is required for a hearing under 10 C.F.R. § 2.309(a). As such, Ms. Kelley’s Request for Hearing is denied.

#### IV. CONCLUSION

Because each of the six Petitioners’ hearing requests suffers from the same deficiencies in that each Petitioner (1) lacks standing and (2) has failed to provide an admissible contention given that the issues they each seek to raise are outside the scope of this enforcement proceeding, the Board must deny their hearing requests and terminate this proceeding.

For the foregoing reasons it is, this 13th day of December 2007, ORDERED that:

1. The hearing requests of Ken Silver, the Sierra Club/We the People, Inc., R. Feher, A. Christine Tipton, Barbara A. O’Neal, and Wanda Sue Kelley regarding the February 21, 2007 Confirmatory Order issued by the NRC Staff to NFS are *denied*.<sup>339</sup>

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<sup>335</sup> *Id.* (determining that the injury must be “*attributable to the Confirmatory Order*” to establish standing) (emphasis in original).

<sup>336</sup> 10 C.F.R. § 2.309(a), (f)(1).

<sup>337</sup> *See* 10 C.F.R. § 2.309(f)(1)(iii).

<sup>338</sup> *Id.*

<sup>339</sup> As fully explained above, because it involved a Confirmatory Enforcement Order, under existing  
(Continued)

2. In accordance with the provisions of 10 C.F.R. § 2.311, as it rules upon intervention petitions, any appeal to the Commission from this Memorandum and Order must be taken within ten (10) days after it is served.

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>340</sup>

Lawrence G. McDade, Chairman  
ADMINISTRATIVE JUDGE

Richard F. Cole  
ADMINISTRATIVE JUDGE

G. Paul Bollwerk  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
December 13, 2007

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Commission precedent the potential scope of this proceeding, and thus the scope of any challenge to the Order, is very limited. *See Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 405; *Maine Yankee*, CLI-04-5, 59 NRC at 57 n.16 (citing *Sequoyah Fuels Corp. & General Atomics*, CLI-94-12, 40 NRC at 71-72). Given the Commission's previously expressed concern about misunderstandings regarding the scope of challenges to enforcement orders such as this one, *see Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 404, perhaps serious consideration should be given to revising the language of hearing notices in these cases to go beyond the somewhat euphemistic reference to the scope of the proceeding as being "whether this Confirmatory Order should be sustained." 72 Fed. Reg. at 41,531. Additional wording could be added to the notice to advise putative intervenors about the very limited opportunity for obtaining a hearing regarding such orders, as clearly articulated by the Commission in proceedings such as the *Alaska Department of Transportation* case. *See Alaska Dep't of Transp. & Pub. Facilities*, CLI-04-26, 60 NRC at 404 (petitioners cannot "challenge NRC Staff enforcement orders as too weak or otherwise insufficient"). This additional explanation might well result in (1) submitted petitions that are more directly focused on the applicable standard; or (2) a fully informed decision not to expend the energy in preparing and submitting a petition that almost inescapably faces dismissal. Certainly putting petitioners (particularly *pro se* petitioners such as are involved here) more clearly on notice about the fate that awaits petitions raising matters that are beyond the scope of what the Commission repeatedly has found to be litigable in challenging enforcement orders, while perhaps not alleviating their frustration about not being able to adjudicate the issues, nonetheless would avoid any bad feelings associated with unknowingly expending time on an effort that has no reasonable chance of success before the agency.

<sup>340</sup>Copies of this Order were sent this date by Internet electronic mail transmission to: (1) counsel for NFS and (2) counsel for the NRC Staff. Copies of this Order were also sent via Federal Express, Overnight Delivery to: (1) Barbara A. O'Neal, (2) Dr. Ken Silver, (3) A. Christine Tipton, (4) R. Feher, (5) Wanda Sue Kelley, and (6) the Sierra Club.

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

**ATOMIC SAFETY AND LICENSING BOARD**

**Before Administrative Judges:**

**E. Roy Hawkens**, Chairman  
**Dr. Paul B. Abramson**  
**Dr. Anthony J. Baratta**

**In the Matter of**

**Docket No. 50-0219-LR**  
**(ASLBP No. 06-844-01-LR)**

**AMERGEN ENERGY COMPANY, LLC**  
**(Oyster Creek Nuclear Generating**  
**Station)**

**December 18, 2007**

**LICENSING BOARDS: RESPONSIBILITIES (INFORMAL HEARING PROCEDURES)**

In conducting Subpart L hearings under 10 C.F.R. Part 2, Board members pose questions to the parties' witnesses in those areas that, in the Board's judgment, require additional clarification and development (10 C.F.R. § 2.1207(b)(6)). Boards are assisted in this endeavor by proposed written questions that the parties provide prior to, and during the course of, the hearing (10 C.F.R. § 2.1207(a)(3); 10 C.F.R. § 2.1207(b)(6)). Proposed questions that are proffered to the Board for this purpose "must be kept by the [Board] in confidence until they are either propounded by the [Board], or until issuance of the initial decision on the issue being litigated" (10 C.F.R. § 2.1207(a)(3)(iii)). After the Board issues its initial decision, the Board must provide these questions "to the Commission's Secretary for inclusion in the official record of the proceeding" (*ibid.*).

**LICENSE RENEWAL: SCOPE**

The scope of license renewal proceedings is limited. Such proceedings are "not

intended to ‘duplicate the Commission’s ongoing review of operating reactors’” (*Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 7 (2001) (quoting Final Rule: ‘Nuclear Power Plant License Renewal,’ 56 Fed. Reg. 64,943, 64,946 (Dec. 13, 1991)). Rather, they focus on the “potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs” (*ibid.*).

#### **LICENSE RENEWAL: SCOPE**

Intervenors may not challenge a licensee’s current licensing basis. The Commission has determined that such issues: (1) are not germane to aging management concerns; (2) previously have been the subject of thorough review and analysis; and, accordingly (3) need not be revisited in a license renewal proceeding. *See Turkey Point*, CLI-01-17, 54 NRC at 8-9. Additionally, arguments challenging the derivation of criteria encompassed in the current licensing basis are effectively an attack on the adequacy of the current licensing basis and must be rejected as beyond the scope of the proceeding.

#### **LICENSE RENEWAL: SCOPE**

A challenge to a licensee’s current compliance with its current licensing basis is outside the scope of a license renewal proceeding, because the Commission’s ongoing regulatory process — which includes inspection and enforcement activities — seeks to ensure a licensee’s current compliance with the current licensing basis. *See* 10 C.F.R. § 54.30; 60 Fed. Reg. 22,461, 22,473 (May 8, 1995). Challenges to a licensee’s current compliance with its current licensing basis or other operational requirements may be raised via a 10 C.F.R. § 2.206 petition.

#### **LICENSE RENEWAL: BURDEN OF PROOF**

Applicants for license renewal must “demonstrate how their [aging management] programs will be effective in managing the effects of aging during the proposed period of extended operation” (*Turkey Point*, CLI-01-17, 54 NRC at 8) (citing 10 C.F.R. § 54.21(a)). The Applicant must demonstrate, by a preponderance of the evidence, that its aging management program provides “reasonable assurance” that activities authorized by the renewed license will be conducted in a manner consistent with the current licensing basis, and that the effects of aging will be detected and corrected (*Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-616, 12 NRC 419, 421 (1980); *Turkey Point*, CLI-01-17, 54 NRC at 8; 60 Fed. Reg. at 22,469).

#### **LICENSE RENEWAL: BURDEN OF PROOF**

The “reasonable assurance” standard is not susceptible to formalistic quantification or mechanistic application. Rather, whether the reasonable assurance standard is satisfied is based on sound technical judgment applied on a case-by-case basis. *See Union of Concerned Scientists v. NRC*, 880 F.2d 552, 558 (D.C. Cir. 1989); *see also North Anna Environmental Coalition v. NRC*, 533 F.2d 655, 667 (D.C. Cir. 1973).

#### **LICENSE RENEWAL: BURDEN OF PROOF**

A touchstone for determining whether the reasonable assurance standard is satisfied is compliance with Commission regulations. *See Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), ALAB-161, 6 AEC 1003, 1009 (1973). Additionally, in the context of license renewal proceedings, whether the reasonable assurance standard is satisfied is directly linked to an assessment of the adequacy of the aging management program — i.e., whether an applicant can show that it is able to timely identify and correct degraded conditions. *See Turkey Point*, CLI-01-17, 54 NRC at 8; 60 Fed. Reg. at 22,469.

#### **CURRENT LICENSING BASIS: DOCKETED COMMITMENTS**

A licensee’s written commitments that are “docketed and in effect” constitute part of the “current licensing basis,” which is the “set of NRC requirements applicable to a specific plant” (10 C.F.R. § 54.3(a)).

#### **CURRENT LICENSING BASIS: DOCKETED COMMITMENTS**

A licensee’s discretionary use of testing and assessment criteria that are more conservative than those in the current licensing basis does not transform the former criteria into part of the current licensing basis. A contrary conclusion would be at odds with the regulatory definition of “current licensing basis.” *See* 10 C.F.R. § 54.3.

#### **RULES OF PRACTICE: APPELLATE PROCEDURE; TIMING (PETITIONS FOR REVIEW)**

Pursuant to Commission case law, requests for extension of time to file a petition for review are to be determined by the relevant appellate body, and accordingly, must be directed to that body. *See Consolidated Edison Co. of New York* (Indian Point, Unit 3), ALAB-281, 2 NRC 6, 7 n.2 (1975).

**INITIAL DECISION**  
**(Rejecting Citizens' Challenge to AmerGen's Application To Renew**  
**Its Operating License for the Oyster Creek Nuclear Generating Station)**

**I. INTRODUCTION**

AmerGen Energy Company, LLC (“AmerGen”) seeks a 20-year renewal of its operating license for the Oyster Creek Nuclear Generating Station (“Oyster Creek”), which expires on April 9, 2009. The intervenors in this case — six organizations hereinafter referred to collectively as Citizens<sup>1</sup> — argue that AmerGen’s license renewal request must be denied because its aging management program for corrosion of the drywell shell in the sand bed region is inadequate. More precisely, they argue that AmerGen’s plan to take ultrasonic testing (“UT”) measurements in the sand bed region every 4 years is not sufficiently frequent to ensure an adequate safety margin is maintained between measurements due to the uncertain condition of the drywell shell, the uncertain corrosive environment, and the uncertain corrosion rate. Having fully considered all the record evidence, including the testimony presented at the 2-day hearing conducted on September 24 and 25, 2007, we find that AmerGen has demonstrated that the frequency of its planned UT measurements, in combination with the other elements of its aging management program, provides reasonable assurance that the sand bed region of the drywell shell will maintain the necessary safety margin during the period of extended operation.

**II. BACKGROUND**

**A. The Drywell Shell**

The drywell shell is a steel structure enclosing the Oyster Creek reactor plant. It is designed to withstand the potential pressures and temperatures associated with a break of any of the enclosed reactor cooling system pipes, thereby containing the release of fission products and ensuring that offsite radiation consequences do not exceed acceptable limits. *See* AmerGen’s Exh. B, AmerGen’s Pre-Filed Direct Testimony Parts 1-7 (July 20, 2007), Pt. 1, A.8.

The drywell shell is about 100 feet tall and shaped like an inverted light bulb. It measures about 70 feet in diameter at the spherical base. At a height of about 71 feet 6 inches, it transitions from a spherical shape to a cylindrical shape that

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<sup>1</sup>The six organizations are Nuclear Information and Resource Service; Jersey Shore Nuclear Watch, Inc.; Grandmothers, Mothers and More for Energy Safety; New Jersey Public Interest Research Group; New Jersey Sierra Club; and New Jersey Environmental Federation.

is about 33 feet in diameter. *See* AmerGen Exh. B, Pt. 1, A.7; AmerGen Exh. 4, Schematic Drawing of the Cross-Section of the Drywell Shell.

The drywell shell — which is surrounded by a concrete shield wall — is set in and arises from a concrete pedestal atop the reactor building concrete foundation at an elevation of about 2 feet 3 inches relative to mean sea level. The shell is embedded in concrete on both sides from its bottom to a height of about 8 feet 11 inches, where the exterior drywell shell concrete floor is located. The interior of the shell remains embedded in concrete up to a height of about 11 feet (beneath the torus vent headers) and 12 feet 3 inches (areas between the torus vent headers). *See* AmerGen Exh. B, Pt. 1, A.7, A.9; AmerGen Exh. 4; AmerGen Exh. 5, Schematic Drawing of the Drywell Shell Exterior.<sup>2</sup>

The region of the shell known as the “sand bed” region begins at a shell height of 8 feet 11 inches (the level of the exterior concrete floor) and extends to 12 feet 3 inches. This region originally was constructed with a bed of sand on its exterior to structurally support the shell as it transitions from being embedded in concrete on both sides below 8 feet 11 inches to being embedded only on the interior. The sand bed region is divided into ten circumferential bays, each of which is designated with an odd number from one through nineteen, and each of which has an associated torus vent header. Five sand bed drains — equally spaced throughout the bays and located in the concrete floor of the external sand bed region — are designed to drain water that might reach the sand bed floor and flow into the torus room below. Water from these drains is diverted through plastic tubing where it can be collected in 5-gallon plastic bottles. *See* AmerGen Exh. B, Pt. 1, A.9, A.10; AmerGen Exh. 5; AmerGen Exh. 6, Schematic Drawing Showing Top View of the Ten Bays in the Sand Bed Region; AmerGen Exh. 7, Schematic Drawing Showing Detail of the Lower Drywell/Sand Bed Region.

On the exterior of the drywell shell, above the sand bed region and rising to the top of the shell, there is a gap of a few inches that separates the shell from the concrete shield wall. This small gap was filled during construction with a cement-composite product, which was subsequently compressed by heating, resulting in an air gap to allow expansion of the shell under design basis loads. *See* AmerGen Exh. B, Pt. 1, A.12; AmerGen Exhs. 4, 7.

The refueling cavity<sup>3</sup> is located above the drywell shell at the top of the reactor building concrete shield wall. This cavity — which ordinarily is empty — is filled

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<sup>2</sup>The torus is a toroidal-shaped steel pressure vessel that encircles the base of the drywell shell and is partially filled with water to provide pressure suppression in the event of a loss-of-coolant accident. The shell is connected to the torus through ten cylindrical vent headers that protrude from the lower, spherical section of the shell. *See* AmerGen Exh. B, Pt. 1, A.10, A.11.

<sup>3</sup>The refueling cavity is also known as the reactor cavity, but we will use the former name. *See* AmerGen Exh. B, Pt. 1, A.13.

with water only during refueling outages,<sup>4</sup> or in the rare event of an outage when the reactor vessel must be opened for a purpose other than refueling. The refueling cavity drainage system has a concrete trough located below the cavity to collect water that might leak from the cavity when it is filled with water. The trough has a 2-inch drain line designed to direct leakage to the reactor building drain tank and prevent water from entering the gap between the drywell shell exterior and the concrete shield wall. *See* AmerGen Exh. B, Pt. 1, A.14; AmerGen Exh. 8, Schematic Drawing Showing Detail of the Reactor Cavity Seal and Trough Drain.

The average normal operating temperature inside the drywell shell is 139 degrees Fahrenheit. During reactor operations, maximum expected temperature outside the shell in the sand bed region is about 109.5 degrees Fahrenheit. During outages, the sand bed region temperatures range up to about 90 degrees Fahrenheit. *See* AmerGen Exh. B, Pt. 1, A.18; Tr. at 790, 794 (Hosterman).

Radiation levels inside the drywell shell in the sand bed region are about 4.7 to 5.6 rads per hour,<sup>5</sup> and consist primarily of gamma radiation. Radiation levels on the outside of the shell in the sand bed region are slightly lower. *See* AmerGen Exh. B, Pt. 1, A.19.

#### **B. The Discovery in the 1980s of Corrosion of the Drywell Shell, and the Subsequent Corrective Actions**

Oyster Creek began operation in 1969. In the late 1980s, the then-licensee<sup>6</sup> discovered water had leaked onto the outer wall of the drywell shell, causing significant corrosion predominantly in the top of the sand bed region. After extensive investigations, the then-licensee determined that the source of water was leakage through small cracks in the refueling cavity liner. *See* AmerGen Exh. B, Pt. 1, A.20, A.21; NRC Staff Exh. B, A.5; Tr. at 324 (Hausler).

The leakage from the liner — which occurred when the refueling cavity was filled with water — should have been collected by the concrete trough and directed by the drain line to the reactor building drain tank. The amount of leaking water, however, was greater than the capacity of the trough and drain pipe. Moreover, due to defects in the trough lip and a blocked drain, the trough did not contain the leaking water, which overflowed into the expansion gap (i.e., the gap between the

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<sup>4</sup>Oyster Creek operates on a 2-year refueling cycle. During normal refueling outages, the refueling cavity is filled with water for less than 26 days once every 2 years. For instance, during the most recent refueling outage in 2006, the refueling cavity was filled with water for about 17 days. *See* AmerGen Exh. B, Pt. 1, A.13, A.16, A.17; Tr. at 689 (O'Rourke); Tr. at 692 (Ray).

<sup>5</sup>A “rad” is a measure of absorbed dose of ionizing radiation.

<sup>6</sup>In 2000, the NRC approved the transfer of the Oyster Creek license from the then-licensee, GPU Nuclear, Inc. and Jersey Central Power & Light Company, to AmerGen (65 Fed. Reg. 37,417 (June 14, 2000)).

exterior of the drywell shell and the concrete shield wall) and down into the sand bed region. *See* AmerGen Exh. B, Pt. 1, A.20; AmerGen Exhs. 7, 8; AmerGen Exh. 9, Schematic Drawing Showing Detail of the Reactor Cavity.

The water soaked into the sand, which kept moisture in direct and prolonged contact with the drywell shell, causing significant corrosion of the exterior shell before corrective actions were taken (AmerGen Exh. B, Pt. 1, A.20, A.21; Tr. at 323-24 (Hausler)). Also contributing to the prolonged corrosive condition were drywell shell drainage problems. Specifically, the sand bed drains were later discovered to be clogged, preventing proper drainage of water once it reached the bottom of the sand bed. Additionally, portions of the sand bed floor were not properly finished, hindering drainage toward the sand bed drains. *See* AmerGen Exh. B, Pt. 1, A.20, A.21.

The resulting corrosion in the sand bed region was unevenly distributed among or within the ten bays. However, in those bays where corrosion occurred, it was most significant near the top of the sand bed region where the sand retained moisture and the air/water interface existed. *See* AmerGen Exh. B, Pt. 1, A.22; Tr. at 324 (Hausler); Tr. at 344-45 (Gallagher). Additionally, corrosion generally was greatest in the vicinity of the torus vent headers, not between them. By way of reference, the design thickness of the drywell shell in the sand bed region is 1.154 inches. Although some bays exhibited almost no observable corrosion, some experienced considerable corrosion, with Bay 19 experiencing a maximum general average metal loss of about 0.35 inch over an area that is 6 inches by 6 inches. *See* AmerGen Exh. B, Pt. 1, A.22; Tr. at 472-73 (Tamburro).<sup>7</sup>

The then-licensee of Oyster Creek took multiple mitigating actions in the 1980s and early 1990s to address the corrosion problem. These actions included: (1) boring ten access holes through the concrete shield wall to access the ten bays to remove the sand from the sand bed region; (2) cleaning the exterior of the drywell shell; (3) applying a multilayer epoxy coating on the drywell shell exterior in the sand bed region; (4) repairing the concrete sand bed floor to promote drainage in those bays where the floor was not properly finished; (5) clearing the sand bed drains; (6) applying epoxy caulk at the drywell shell/sand bed floor junction; (7) repairing the leakage collection trough in the refueling cavity and clearing the trough drain; (8) applying stainless steel tape and a strippable coating to the refueling cavity during refueling outages to seal cracks in the cavity liner and reduce leakage;<sup>8</sup> and (9) taking periodic UT measurements from inside and

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<sup>7</sup>The NRC Staff testified that about 50% of the sand bed region was not significantly degraded (i.e., the wall thickness in four bays is over an inch thick and the bays show no sign of degradation), and 80% of the sand bed region is 800 to 900 mils thick (i.e., 0.80 to 0.90 inch thick). *See* Tr. at 633-35 (Tamburro).

<sup>8</sup>Tape and strippable coating were not applied during the 1994 and 1996 refueling outages. *See* AmerGen Exh. B, Pt. 1, A.23.

outside the shell to ensure it maintained an adequate safety margin and was not experiencing further corrosion.<sup>9</sup> *See* AmerGen Exh. B, Pt. 1, A.23, A.24.

AmerGen concluded that, as a result of the corrective actions, the corrosion of the exterior drywell shell had been arrested. *See* AmerGen Exh. B, Pt. 1, A.24.

### **C. AmerGen's Commitments To Manage Corrosion of the Drywell Shell During the Period of Extended Operation**

In support of its License Renewal Application, AmerGen made numerous commitments to the NRC Staff to demonstrate that its aging management program for the drywell shell provided reasonable assurance that the effects of aging (e.g., corrosion) will be adequately managed during the 20-year renewal period such that the shell will perform its intended functions (i.e., structural integrity and pressure containment) consistent with the current licensing basis.<sup>10</sup> AmerGen's commitments include performing a full scope sand bed region inspection during the 2008 refueling outage and thereafter at every other refueling outage throughout the renewal period (i.e., every 4 years). A full scope sand bed region inspection consists of: (1) taking UT measurements using the same internal grids AmerGen previously has used, as well as over 100 external locations that were measured during the 2006 outage;<sup>11</sup> (2) making visual inspections of the external shell epoxy coating in all ten bays; and (3) inspecting the seal at the junction between the sand bed region concrete and the embedded drywell shell. *See* AmerGen Exh. B, Pt. 1, A.27.

To address leakage from components inside the drywell, AmerGen committed to monitoring the two trenches inside the drywell shell (in Bays 5 and 17) for the

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<sup>9</sup>Two trenches were excavated in 1986 from the interior concrete floor in Bays 5 and 17 to permit UT measurements from inside the drywell shell. Bay 5 was selected because it was believed to have little external corrosion, and Bay 17 was selected because it was believed to have severe external corrosion. The Bay 17 trench has its base at a height of about 9 feet 3 inches, which is the lowest elevation from which AmerGen has UT grid data on severely corroded surfaces. The trench in Bay 5 is deeper than the trench in Bay 17, but Bay 5 has little corrosion. *See* AmerGen Exh. 40, AmerGen's Oyster Creek Generating Station License Renewal ACRS Presentation, at 53 (Jan. 18, 2007); Tr. at 343-44 (Gallagher); Tr. at 681-82 (Polaski).

<sup>10</sup>The "current licensing basis" is the "set of NRC requirements applicable to a specific plant and a licensee's written commitments . . . and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect" (10 C.F.R. § 54.3). The full definition is provided *infra* note 17.

<sup>11</sup>Any significant deviations of UT results will require corrective action prior to any restart. Such corrective action includes promptly notifying the NRC Staff, performing confirmatory UT measurements, performing an engineering evaluation to assess the extent of the condition and to determine whether additional inspections are required to assure drywell shell integrity, and performing an operability determination and justification for operation until the next inspection (AmerGen Exh. B, Pt. 1, A.27).

presence of water until no water is identified for two consecutive outages (NRC Staff Exh. B, A.12(a); NRC Staff Exh. 1, Excerpts from Safety Evaluation Report, at A-31 to A-32 (Apr. 2007)). To eliminate water on the drywell shell exterior, AmerGen committed to monitoring the sand bed region drain for water on a daily basis during outages when the refueling cavity is filled with water (AmerGen Exh. B, Pt. 4, A.4), as well as on a quarterly basis during the operating cycle when the cavity is not filled with water (*ibid.*), and to take corrective action if water is found (AmerGen Exh. B, Pt. 1, A.27).<sup>12</sup> AmerGen also committed to using a strippable coating on the refueling cavity wall during periods when the cavity is flooded, which has been shown to be effective in mitigating water intrusion into the gap between the exterior drywell shell and the concrete shield wall (*ibid.*).

Finally, AmerGen committed to inspecting the multilayer epoxy coating on the exterior wall of the shell in the sand bed region in accordance with American Society of Mechanical Engineers (“ASME”) Code Section XI, Subsection IWE, and to performing repairs, as necessary, to manage corrosion. This inspection commitment provides that: (1) the areas will be visually examined for evidence of flaking, blistering, peeling, discoloration, and other signs of distress; (2) areas that are suspect will be subjected to engineering evaluation or correction by repair or replacement in accordance with IWE-3122; and (3) supplemental examinations in IWE-3200 will be performed when specified as a result of the engineering evaluation. *See* AmerGen Exh. B, Pt. 1, A.27; NRC Staff Exh. B, A.15.

#### **D. The Litigative History of AmerGen’s License Renewal Application**

By letter dated July 22, 2005, AmerGen submitted an application to renew its operating license for Oyster Creek for a 20-year period pursuant to 10 C.F.R. Part 54. The current license will expire on April 9, 2009.

Citizens filed a petition for a hearing in response to the NRC’s publication of a notice of opportunity for hearing in the *Federal Register* (70 Fed. Reg. 54,585 (Sept. 15, 2005)). As relevant here, in LBP-06-7, 63 NRC 188, 194 (2006), this Board granted Citizens’ hearing request, concluding that Citizens had standing and had submitted an admissible contention. The admitted contention alleged that AmerGen’s License Renewal Application (“LRA”) was deficient due to the

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<sup>12</sup> At the evidentiary hearing, AmerGen also agreed — as a condition of the renewed license — to inspect the sand bed drains for blockage at intervals consistent with its existing internal procedures (Tr. at 793, 843-44) (Tamburro, Gallagher). We understand that the NRC Staff will coordinate with AmerGen to ensure the frequency of such inspections are adequate (Tr. at 800) (Ashar).

failure to include periodic UT measurements in the sand bed region of the drywell shell in the aging management program.<sup>13</sup>

In LBP-06-16, 63 NRC 737, 741-45 (2006), this Board ruled that Citizens' contention was rendered moot by AmerGen's April 4, 2006 docketed commitment to perform periodic UT measurements in the sand bed region of the drywell shell. However, we gave Citizens the opportunity to file a new contention challenging the new periodic UT program embodied in AmerGen's April 2006 commitment.

In LBP-06-22, 64 NRC 229, 255-56 (2006), this Board admitted the following contention that underlies the present proceeding:

[I]n light of the uncertain corrosive environment and the correlative uncertain corrosion rate in the sand bed region of the drywell shell, AmerGen's proposed [UT monitoring] plan . . . is insufficient to maintain an adequate safety margin.<sup>14</sup>

On September 20, 2007, this Board convened an evidentiary session to (1) determine whether the witnesses proffered by the parties were qualified to present testimony in their putative areas of expertise, and (2) receive into evidence their prefiled written direct, rebuttal, and surrebuttal testimony as exhibits (10

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<sup>13</sup> When Citizens submitted their petition, AmerGen's LRA contained no provision for future UT measurements in the sand bed region of the drywell shell based on its conclusion that corrosion in that region had been arrested and that the planned visual inspections of the multilayered epoxy coating in that region would be sufficient to manage any unexpected corrosion problems during the renewal period. During the pendency of the license renewal review process, AmerGen docketed several commitments that progressively enhanced its aging management program for the sand bed region of the drywell shell, resulting ultimately in the current commitment at issue in this proceeding, namely, the commitment to perform UT measurements every 4 years. See AmerGen Exh. 10, Letter from Michael P. Gallagher, AmerGen, to U.S. NRC (Feb. 15, 2007), Enclosing Additional Commitments Related to the Aging Management Program for the Oyster Creek Drywell Shell Associated with AmerGen's License Renewal Application, Commitment 27(1).

<sup>14</sup> During the course of this proceeding, this Board concluded that the following contentions proffered by Citizens were not admissible because they were nontimely, or failed to satisfy admissibility standards, or both: (1) Citizens' challenge to AmerGen's monitoring program for areas of the drywell shell below and above the sand bed region (LBP-06-11, 63 NRC 391, 396-400 (2006)); (2) Citizens' challenge asserting that AmerGen be directed to conduct a root cause analysis of the corrosion problem (*id.* at 400-01); (3) Citizens' challenge to AmerGen's modeling for deriving acceptance criteria (LBP-06-22, 64 NRC at 237-40; Licensing Board Memorandum and Order at 6-12 (Apr. 10, 2007) (unpublished)); (4) Citizens' challenge to AmerGen's monitoring program in the sand bed region for moisture and coating integrity (LBP-06-22, 64 NRC at 244-48); (5) Citizens' challenge to AmerGen's program for responding to wet conditions and coating failure in the sand bed region (*id.* at 248-49); (6) Citizens' challenge to the scope of AmerGen's UT monitoring program in the sand bed region (*id.* at 249-51; Licensing Board Memorandum and Order at 7-19 (Feb. 9, 2007) (unpublished)); (7) Citizens' challenge to AmerGen's quality assurance program for measurements in the sand bed region (LBP-06-22, 64 NRC at 251-53); and (8) Citizens' challenge to AmerGen's methods for analyzing UT results in the sand bed region (*id.* at 254-55). See Licensing Board Memorandum and Order at 2 n.4 (June 19, 2007) (unpublished).

C.F.R. § 2.1207(b)(2)), as well as the parties' other exhibits. *See* Tr. at 199-200 (AmerGen Exhs. A-D and 1-61); Tr. at 231-32 (Citizens Exhs. A-D and 1-62); Tr. at 247 (NRC Staff Exhs. A-D and 1-6). The Board found all the witnesses to be qualified to present testimony in the areas they addressed. *See* Tr. at 250, 255, 258.

AmerGen presented, and this Board accepted into evidence as exhibits, the prefiled written testimony of the following fifteen witnesses: (1) Julien D. Abramovici, Enercon Services, Inc.; (2) Jon R. Cavallo, Vice-President of Corrosion Control Consultants and Labs, Inc.; (3) Scott R. Erickson, NDE Level III Inspector; (4) Michael P. Gallagher, Vice President for License Renewal for Exelon; (5) Barry M. Gordon, Structural Integrity Associates, Inc.; (6) Dr. David G. Harlow, Professor of Mechanical Engineering and Mechanics, Lehigh University; (7) Jon C. Hawkins, NDE Level III Inspector; (8) Edwin W. Hosterman, Senior Staff Engineer, Corporate Engineering Programs Group, Exelon; (9) Martin McAllister, NDE Level III Inspector; (10) Dr. Hardayal S. Mehta, Chief Consulting Engineer, Mechanics GE-Hitachi Nuclear Energy Co.; (11) Ahmed M. Ouaou, contractor engineer for Exelon; (12) John F. O'Rourke, Senior Project Manager, License Renewal for Exelon; (13) Frederick W. Polaski, Manager of License Renewal for Exelon; (14) Francis H. Ray, Engineering Programs Director at OCNGS; and (15) Peter Tamburro, Senior Mechanical Engineer, OCNGS Engineering Department. *See* AmerGen Exh. D, Professional Qualifications of AmerGen Witnesses; AmerGen Exh. B, Pts. 1-7; AmerGen Exh. C, AmerGen's Pre-Filed Rebuttal Testimony Parts 1-6 (Aug. 17, 2007); AmerGen Exh. C.1, AmerGen's Pre-Filed Surrebuttal Testimony Parts 1-6 (Sept. 14, 2007).

The NRC Staff presented, and this Board accepted into evidence as exhibits, the prefiled written testimony of the following five witnesses: (1) Hansraj G. Ashar, Senior Structural Engineer, Division of Engineering, Office of Nuclear Reactor Regulation ('NRR'); (2) Dr. James A. Davis, Senior Materials Engineer, NRR Division of License Renewal; (3) Dr. Mark Hartzman, Senior Mechanical Engineer, NRR Division of Engineering; (4) Timothy L. O'Hara, Reactor Inspector, Division of Reactor Safety, NRC Region I Office; and (5) Arthur D. Salomon, Research (Mathematical) Statistician, Office of Nuclear Regulatory Research. *See* NRC Staff Exh. D, Professional Qualifications of NRC Staff Witnesses; NRC Staff Exh. B; NRC Staff Exh. C, NRC Staff Rebuttal Testimony and Answer to Board Questions (Aug. 17, 2007); NRC Staff Exh. C.1, NRC Staff Sur-Rebuttal Testimony (Sept. 14, 2007).<sup>15</sup>

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<sup>15</sup> NRC Staff Exhibit D also included the professional qualifications of two witnesses who neither submitted prefiled testimony nor testified during the hearing. Citizens argued that, because these individuals had not been identified as witnesses until very late in the proceeding — i.e., on September 18, 2007 (Tr. at 248) — and had not submitted prefiled testimony, they ought not be permitted to

*(Continued)*

Finally, Citizens presented, and this Board accepted into evidence as exhibits, the testimony of Dr. Rudolf H. Hausler, President, Corro-Consulta. *See* Citizens Exh. D, Professional Qualifications of Dr. Rudolf H. Hausler; Citizens Exh. B, Initial Pre-Filed Written Testimony of Dr. Rudolf H. Hausler (July 19, 2007); Citizens Exh. C, Pre-Filed Rebuttal Written Testimony of Dr. Rudolf H. Hausler (Aug. 16, 2007); Citizens Exh. C.1, Pre-Filed Sur-Rebuttal Written Testimony of Dr. Rudolf H. Hausler (Sept. 13, 2007).

Thereafter, on September 24 and 25, 2007, this Board held an evidentiary hearing in Toms River, New Jersey. *See* Notice of Hearing (Application for 20-Year License Renewal), 72 Fed. Reg. 48,694 (Aug. 24, 2007). In addition to accepting several additional exhibits into evidence and providing counsel with the opportunity to make opening and closing statements (Tr. at 291, 297, 853), we heard testimony by witness panels on the following six topics: (1) drywell physical structure, history, and commitments; (2) acceptance criteria; (3) available margin; (4) sources of water; (5) the epoxy coating system; and (6) future corrosion. All the parties' witnesses were present throughout the hearing to present live testimony. Consistent with the regulations governing our Subpart L hearings (10 C.F.R. § 2.1207(b)(6)), Board members asked the panels questions in those areas that, in the Board's judgment, required additional clarification. The Board was assisted in this endeavor by proposed written questions that the parties provided prior to, and during the course of, the hearing.<sup>16</sup>

At the end of the evidentiary hearing, the Board closed the record except for transcript corrections (Tr. at 878). On October 10, the parties submitted their proposed findings of fact and conclusions of law. By October 22, the parties submitted their motions for transcript corrections, and on October 29, the Board issued an order adopting transcript corrections and closing the record.

### III. LEGAL STANDARDS

The scope of license renewal proceedings is limited. Such proceedings are "not intended to 'duplicate the Commission's ongoing review of operating reactors'" (*Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and*

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testify at the evidentiary hearing unless Citizens were provided with a reasonable time thereafter to rebut such testimony (Tr. at 241-43, 258-60). Because these two witnesses did not testify at the hearing, Citizens' argument was rendered moot.

<sup>16</sup>Commission regulations establish that the parties' proposed questions "must be kept by the [Board] in confidence until they are either propounded by the [Board], or until issuance of the initial decision on the issue being litigated. The [Board] shall then provide all proposed questions to the Commission's Secretary for inclusion in the official record of the proceeding" (10 C.F.R. § 2.1207(a)(3)(iii)). In accordance with this regulation, this Board will provide the parties' proposed questions to the Commission's Secretary for inclusion in the record following issuance of this decision.

4), CLI-01-17, 54 NRC 3, 7 (2001) (quoting Final Rule: “Nuclear Power Plant License Renewal,” 56 Fed. Reg. 64,943, 64,946 (Dec. 13, 1991)). Rather, they focus on the “potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs” (*ibid.*). Accordingly, license renewal proceedings are “limited to a review of the plant structures and components that will require an aging management review for the period of extended operation and the plant’s systems, structures, and components that are subject to an evaluation of time-limited aging analyses” (*Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-01-20, 54 NRC 211, 212 (2001)). Renewal applicants must “demonstrate how their [aging management] programs will be effective in managing the effects of aging during the proposed period of extended operation” (*Turkey Point*, CLI-01-17, 54 NRC at 8) (citing 10 C.F.R. § 54.21(a)).

Sections 54.21 and 54.29 of 10 C.F.R. Part 54 contain the standards governing the renewal of AmerGen’s operating license for Oyster Creek. As relevant here, pursuant to 10 C.F.R. § 54.21, AmerGen must demonstrate that its UT monitoring program is adequate to manage the aging effects of corrosion in the sand bed region of Oyster Creek’s drywell shell so the intended functions of the shell (i.e., structural integrity and pressure containment) will be maintained during the renewal period consistent with the current licensing basis (“CLB”).<sup>17</sup>

Pursuant to 10 C.F.R. § 54.29(a), the NRC Staff — as a condition precedent to granting AmerGen’s license renewal request — must find “there is reasonable

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<sup>17</sup>Current licensing basis (“CLB”) is defined in 10 C.F.R. § 54.3 as:

[T]he set of NRC requirements applicable to a specific plant and a licensee’s written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR Parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. It also includes the plant-specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required by 10 CFR 50.71 and the licensee’s commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as license commitments documented in NRC safety evaluations or licensee event reports.

Citizens may not challenge Oyster Creek’s CLB in this proceeding, because the Commission has determined such issues: (1) are not germane to aging management concerns; (2) previously have been the subject of thorough review and analysis; and, accordingly (3) need not be revisited in a license renewal proceeding. See *Florida Power & Light Co.*, CLI-01-17, 54 NRC at 8-9. Whether Oyster Creek currently is in compliance with its CLB is likewise beyond the scope of this proceeding, because the Commission’s ongoing regulatory process — which includes inspection and enforcement activities — seeks to ensure a licensee’s current compliance with the CLB. See 10 C.F.R. § 54.30; 60 Fed. Reg. 22,461, 22,473 (May 8, 1995). Claims that challenge a licensee’s compliance with the CLB or with other operational requirements may be raised via a 10 C.F.R. § 2.206 petition.

assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB.” Read together, sections 54.21 and 54.29 require AmerGen to establish an aging management program that provides “reasonable assurance” that the Oyster Creek drywell shell will continue to perform its intended function consistent with the CLB during the period of extended operation (i.e., during the additional 20 years of the renewal period). In this proceeding, AmerGen must demonstrate that it satisfies the “reasonable assurance” standard by a preponderance of the evidence (*Commonwealth Edison Co.* (Zion Station, Units 1 and 2), ALAB-616, 12 NRC 419, 421 (1980)).

“Reasonable assurance,” in this context, is not susceptible to formalistic quantification or mechanistic application. Rather, whether the reasonable assurance standard is satisfied is based on sound technical judgment applied on a case-by-case basis. See *Union of Concerned Scientists v. NRC*, 880 F.2d 552, 558 (D.C. Cir. 1989); see also *North Anna Environmental Coalition v. NRC*, 533 F.2d 655, 667 (D.C. Cir. 1973). And a touchstone for determining whether the reasonable assurance standard is satisfied is compliance with Commission regulations. See *Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), ALAB-161, 6 AEC 1003, 1009 (1973).

Moreover, in the context of the instant license renewal proceeding, whether the reasonable assurance standard is satisfied is directly linked to an assessment of the adequacy of the aging management program — that is, whether the aging management program monitors the performance and condition of the sand bed region of the drywell shell in a manner that allows for timely identification and correction of degraded conditions (i.e., corrosion). See *Turkey Point*, CLI-01-17, 54 NRC at 8; 60 Fed. Reg. at 22,469; cf. *Turkey Point*, CLI-01-17, 54 NRC at 8 (“[a]dverse aging effects generally are gradual and thus can be detected by programs that ensure sufficient inspections and testing”).<sup>18</sup>

#### IV. FINDINGS OF FACT

##### Introduction

We begin this portion of our decision by underscoring the issues presented in this case. The central issue is whether AmerGen’s scheduled UT monitoring frequency in the sand bed region during the period of extended operation — which, after a UT inspection during the current licensing period in 2008, will consist of a UT inspection every other scheduled refueling outage (i.e., every

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<sup>18</sup> Citizens argued that satisfying the reasonable assurance standard in the context of drywell shell measurements requires using a 95% confidence interval where the interval is defined based on a statistical analysis of the thickness data (Tr. at 310-11) (Webster). Because this argument is not supported by Commission regulations or case law, we reject it.

4 years) — is sufficient to maintain an adequate safety margin. The resolution of this issue implicates several subsidiary questions: namely, (1) what is the acceptance criterion for the drywell shell thickness in the sand bed region (i.e., the minimum thickness needed for the drywell shell to perform its intended function), and what is the available margin before that acceptance criterion is violated; (2) whether there is a reasonable likelihood that corrosion will occur in the sand bed region during the renewal period; and (3) if corrosion occurs in the sand bed region during the renewal period, whether the frequency of AmerGen’s UT measurements provides reasonable assurance that the shell thickness will not fall below the acceptance criterion between inspections.

We address these questions in turn. First, in Part IV.A, we explain and identify the acceptance criterion for the drywell shell thickness in the sand bed region, and we find that the available margin before that criterion is violated is not less than 0.064 inch.

Second, in Part IV.B, we find there is no reasonable likelihood that corrosion will occur in the sand bed region during the renewal period because: (1) AmerGen has taken effective steps to eliminate a corrosive environment on the outer wall, and even if water were to leak onto that wall, the robust, triple-layered epoxy coating will protect the wall from corrosion; and (2) there is no evidence of measurable past corrosion on the inner wall, nor does its benign environment pose a significant risk of future corrosion.

Third, in Part IV.C, we find that, even assuming *arguendo* that corrosion were to occur in the sand bed region during the renewal period, AmerGen’s plan to take UT measurements every 4 years is sufficiently frequent to ensure an adequate safety margin will be maintained. To that end, we conclude that Oyster Creek would experience an annual corrosion rate, *at most*, of about 0.0035 inch per year, resulting in corrosion of about 0.014 inch during the 4-year interval between UT measurements, which does not even approach the minimum available margin of 0.064 inch.

Moreover, and as also explained in Part IV.C, the available margin of 0.064 inch is based on UT measurements at the *top* of the sand bed region, which is the most heavily corroded area due to the prior presence of sand that retained the moisture and kept it in direct contact with the shell at the air/water interface. Because the sand has been removed from the sand bed region, any future leakage will not be retained at the top of the region; rather, any leakage will drain to the bottom of the region where less corrosion has occurred and where the remaining available margin is at least 0.229 inch (i.e., 300% greater than at the top), thus increasing our confidence that the frequency of AmerGen’s UT measurements will be adequate.

Accordingly, we conclude that Citizens’ contention challenging the frequency of AmerGen’s UT monitoring program during the renewal period must be rejected.

**A. Acceptance Criteria for Drywell Shell Thickness in the Sand Bed Region, and the Available Margin in That Region Before the Bounding Acceptance Criterion Is Violated**

**1. *The Three Acceptance Criteria: General Buckling Criterion, Local Buckling Criterion, and Pressure Criterion***

Four expert witnesses for AmerGen (Mr. Gallagher, Dr. Mehta, Mr. Ouaou, and Mr. Tamburro) and five expert witnesses for the NRC Staff (Mr. Ashar, Dr. Davis, Dr. Hartzman, Mr. O’Hara, and Mr. Salomon) provided information supporting the following conclusions regarding the development and establishment of the acceptance criteria for the thickness of the drywell shell.<sup>19</sup> The drywell shell was designed with a sand bed on the shell exterior between about 8 feet 11 inches and 12 feet 3 inches — i.e., the sand bed region — to structurally support the shell as it transitions from being embedded in concrete on both sides below 8 feet 11 inches (AmerGen Exh. B, Pt. 2, A.8). After the presence of water and its attendant corrosion were identified in the sand bed region in the 1980s, the then-licensee retained General Electric (“GE”) to analyze whether the shell would maintain adequate structural integrity if the sand in that region were removed (*ibid.*; NRC Staff Exh. B, A.7).

The shell in the sand bed region has two modes of potential failure (AmerGen Exh. B, Pt. 2, A.9): (1) buckling failure, which is a structural failure caused by physical loads and stresses; and (2) pressure failure, which is caused by internal pressure. To prevent these types of failures, Oyster Creek has three acceptance criteria that are part of the CLB for its drywell shell in the sand bed region — two for buckling, and one for pressure (AmerGen Exh. B, Pt. 2, A.9, A.14, A.16; NRC Staff Exh. C.1, A.42).

The buckling criteria — which were derived from analyses performed by GE in the early 1990s and which have not changed over time (AmerGen Exh. B, Pt. 2, A.6, A.7, A.17; Tr. at 416 (Gallagher)) — are based on ensuring the drywell shell complies with the ASME Boiler and Pressure Vessel Code, which requires Oyster Creek to maintain a safety factor of 2.0 as part of its CLB. *See* AmerGen Exh. B, Pt. 2, A.8, A.10, A.12 to A.14; AmerGen Exh. C, Pt. 2, A.6; AmerGen Exh. 27, Oyster Creek Drywell Vessel Corrosion Mitigation — TDR No. 1108, at 17-19 (Apr. 29, 1993); NRC Staff Exh. B, A.8; NRC Staff Exh. C.1, A.52; NRC Staff Exh. 1, at 4-71; Tr. at 399 (Mehta); Tr. at 848 (Gallagher). Complying

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<sup>19</sup> Acceptance criteria for the drywell shell thickness in the sand bed region are part of the Oyster Creek CLB. *See, e.g.*, Tr. at 413 (Ashar); Tr. at 415 (Gallagher); Tr. at 448 (Hartzman). Accordingly, issues relating to the derivation and adequacy of the acceptance criteria are not within the scope of this proceeding (*supra* notes 14, 17). We nevertheless provide this discussion of the acceptance criteria as a backdrop against which our subsequent finding regarding current available margin may be understood.

with a minimum safety factor of 2.0 means that the actual stresses the shell would experience during a postulated accident scenario are only half of what would cause it to fail (AmerGen Exh. B, Pt. 2, A.11). In other words, complying with the acceptance criteria derived from the GE analyses provides reasonable assurance that the shell can, without failing, withstand twice the stresses it would experience during the postulated scenario (*ibid.*).<sup>20</sup>

The buckling and pressure acceptance criteria — that is to say, the minimum thickness the shell must maintain consistent with the ASME Code — are based on two limiting scenarios involving combinations of extreme conditions. The limiting buckling scenario occurs during a postulated accident when, simultaneously, the reactor is shut down and the refueling cavity is filled with water, an earthquake occurs, and the drywell shell is under a negative pressure of 2 psi, resulting in bounding compressive stresses on the shell (*ibid.*; AmerGen Exh. 3, Letter from Michael P. Gallagher to NRC, Enclosing AmerGen’s Submittal of Information to the Advisory Committee on Reactor Safeguards (“ACRS”), at 6-7 to 6-8 (Dec. 8,

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<sup>20</sup>The conclusion that the drywell shell currently has a safety factor greater than 2.0 is drawn from the GE analysis, which assumed the entire sand bed region to be uniformly thinned to a thickness of 0.736 inch, when, in fact, the shell measurements have shown that the thickness is on average substantially greater than 0.736 inch (AmerGen Exh. B, Pt. 2, A.10, A.11). Although the precise value of the safety factor cannot be determined without performing more extensive measurements and actual calculations (Tr. at 453-54) (Hartzman), compliance with the acceptance criteria — which incorporate several significant conservatisms (AmerGen Exh. C, Pt. 2, A.6; Tr. at 438-40 (Mehta)) — permits the conclusion that the safety factor is at least 2.0, especially given that the thickness of the shell is on average greater than 0.736 inch (Tr. at 399, 441 (Mehta); Tr. at 453-55 (Hartzman)). This conclusion is supported by an analysis of the drywell shell performed by Sandia National Laboratories, which yielded a safety factor of 2.15 using best estimate thicknesses for the drywell shell. *See* NRC Staff Exh. 6, Excerpts of the Structural Integrity Analysis of the Degraded Drywell Containment at OCNCS (The Sandia Report), at 72 (Jan. 2007).

Dr. Hartzman stated that the ASME Code provision that establishes the safety factor of 2.0 is a requirement for the drywell shell only at the “design” stage. The safety factor may be reduced, he averred, at the “as-built” stage when the “structure” and “loading conditions” are well known and, hence, the uncertainties that existed at the design stage are reduced (Tr. at 430-32). He further represented that if actual corrosion in the sand bed region revealed a true safety factor of 1.9, “the Staff believes that the sand bed shell . . . would not be susceptible to buckling” (NRC Staff Exh. C, A.28). Neither this representation, nor Dr. Hartzman’s other testimony regarding a reduced safety factor (e.g., NRC Staff Exh. C.1, A.54; Tr. at 760), alters our conclusion that Oyster Creek’s CLB *presently* requires it to maintain a safety factor of 2.0 (e.g., AmerGen Exh. B, Pt. 2, A.10; AmerGen Exh. C, Pt. 2, A.6; NRC Staff Exh. B, A.8; NRC Staff Exh. C.1, A.52; NRC Staff Exh. 1, at 4-71; Tr. at 399 (Mehta); Tr. at 848 (Gallagher)). As AmerGen correctly acknowledges (AmerGen Exh. C, Pt. 2, A.8), if it wishes to adopt different acceptance criteria based on a different analysis, or if it otherwise wishes to alter Oyster Creek’s CLB by, for example, seeking to reduce the shell safety factor to a value less than 2.0, it would be required to submit its analysis for NRC review and approval. *Accord* Tr. at 848 (Gallagher); NRC Staff Exh. C, A.12(e). The instant record provides no support for the conclusion that AmerGen requested to reduce the drywell shell safety factor to a value less than 2.0, much less that the NRC Staff reviewed such a request and approved it.

2006); AmerGen Exh. 40; NRC Staff Exh. C, A.28). The limiting pressure scenario is based on a scenario involving a postulated loss-of-coolant accident while the reactor is at full power, resulting in bounding tensile stresses on the shell (AmerGen Exh. B, Pt. 2, A.9).

The first buckling acceptance criterion — the “general buckling criterion” — requires that the shell maintain an *average* thickness across the entire sand bed region of 0.736 inch (AmerGen Exh. B, Pt. 2, A.14). However, an average thickness less than 0.736 inch remains adequate (i.e., it satisfies the CLB) if it meets the second buckling acceptance criterion, which relates to permissible localized thinning (*ibid.*; NRC Staff Exh. B, A.7, A.9).

The second buckling acceptance criterion — the “local buckling criterion” — assesses the acceptability of localized areas that have an average thickness less than 0.736 inch, and it assumes the remaining thickness of the drywell shell in the sand bed region is 0.736 inch (AmerGen Exh. B, Pt. 2, A.14). This criterion was developed from a computation employing a geometrical configuration that resembles a 3-foot by 3-foot “tray,” as is illustrated in AmerGen Exhibit 11. The center of the tray covers a 1-square-foot area that is 0.536 inch thick, which transitions to a surrounding shell thickness of 0.736 inch over a linear distance of 1 foot in each direction, resulting in a localized area of 9 square feet that has an average thickness of less than 0.736 inch. *See* AmerGen Exh. 11, Drawings of the 0.536 Inch Local Buckling Acceptance Criterion “Tray” (front and isometric views); AmerGen Exh. B, Pt. 2, A.14; NRC Staff Exh. B, A.7, A.9.<sup>21</sup>

Finally, the third acceptance criterion for the sand bed region — the “pressure criterion” — is a localized thinning to 0.490 inch that is not more than 2.5 inches in diameter (AmerGen Exh. B, Pt. 2, A.14; NRC Staff Exh. B, A.9). A very small hole in the shell would exceed the pressure criterion because it would allow internal pressure to escape, even though it would have no effect on buckling (AmerGen Exh. B, Pt. 2, A.12).

We conclude that the above acceptance criteria are part of Oyster Creek’s CLB in that they are “plant-specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required

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<sup>21</sup> AmerGen points out that both buckling criteria are volumetric criteria — a concept that may be understood by considering the local buckling criterion. The 3 feet by 3 feet “tray” represents a total contiguous area of 9 square feet that has a thickness below 0.736 inch, and the total volume of this tray that is missing (with respect to a uniform thickness of 0.736 inch) is 124.8 cubic inches (AmerGen Exh. B, Pt. 2, A.14, A.15). Thus, the local buckling criterion is not violated when localized corrosion removes dozens, or even scores, of cubic inches from the tray (AmerGen Exh. B, Pt. 2, A.15).

by 10 C.F.R. 50.71'' (10 C.F.R. § 54.3) and, accordingly, they properly guide our analysis in this proceeding. *See* Tr. at 420-23 (Ashar, Gallagher).<sup>22</sup>

**2. *The Shell in the Sand Bed Region Has an Available Margin of 0.064 Inch Before the Bounding Acceptance Criterion Is Violated***

**a. *Internal UT Measurements Demonstrate the Acceptance Criteria Are Satisfied and Reveal an Available Margin of 0.064 Inch***

Five expert witnesses for AmerGen (Mr. Abramovici, Dr. Harlow, Mr. Gallagher, Mr. Polaski, Mr. McAllister, and Mr. Tamburro) and four expert witnesses for the NRC Staff (Mr. Ashar, Dr. Davis, Mr. O'Hara, and Mr. Salomon) provided testimony supporting the conclusion that the shell in the sand bed region has an available margin of 0.064 inch before the bounding acceptance criterion is exceeded. Citizens' expert, Dr. Hausler, opined that the shell does not have 0.064 inch of available margin and, moreover, it may already violate the acceptance criteria. As discussed below, we conclude that AmerGen demonstrated by a preponderance of the evidence that the sand bed region satisfies the acceptance criteria, and that there will be an available margin of at least 0.064 inch when Oyster Creek enters the renewal period.

The condition of the drywell shell in the sand bed region (i.e., the region between 8 feet 11 inches and 12 feet 3 inches) was determined by taking UT thickness measurements in that region from the interior of the drywell shell during the 1992, 1994, 1996, and 2006 refueling outages (AmerGen Exh. B, Pt. 3, A.9). These internal UT measurements were taken on fixed grids, rather than as single

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<sup>22</sup> Citizens' expert, Dr. Hausler, argued in passing that the local buckling criterion "tray" represented in AmerGen Exhibit 11 consisted of an area of only 4.5 square feet, not 9 square feet (Citizens Exh. C, A.6). He is incorrect. As AmerGen and the NRC Staff explained, Dr. Hausler's argument is based on a misunderstanding of the exhibit. Because of symmetry, the 6 inch by 12 inch and 1.5 feet by 3 feet areas modeled by GE and represented in the exhibit actually analyze 12 inch by 12 inch and 3 feet by 3 feet areas, respectively. *See* AmerGen Exh. 39, Letter from Dr. Mehta to Dr. Tuminelli, Sand Bed Local Thinning and Raising the Fixity Height Analyses, Fig. 1a (Dec. 11, 1992); NRC Staff Exh. C.1, A.48; NRC Staff Exh. 6 at 47-50, 67; Tr. at 403, 411-12 (Mehta); Tr. at 410-11 (Gallagher). Dr. Hausler's failure to understand the exhibit may be attributable to his conceded lack of structural engineering experience. *See* Tr. at 353-54, 446, 479 (Hausler).

Citizens also asserted that the local buckling criterion discussed above is not part of Oyster Creek's CLB, arguing that AmerGen has used more conservative (i.e., thicker) local buckling criteria in the past (Citizens Exh. B, A.24). This assertion lacks merit. Although AmerGen conceded that on occasion, it assessed locally thin areas using more conservative "administrative limits" (AmerGen Exh. B, Pt. 2, A.18 to A.20), it correctly stated that its discretionary use of "administrative limits" did not transform these limits into part of the CLB (AmerGen Exh. B, Pt. 2, A.19, A.20; Tr. at 425 (Tamburro)). A contrary conclusion would be wholly at odds with the regulatory definition of CLB (*supra* note 17). *See also* NRC Staff Exh. B, A.9 (Staff testifies that AmerGen's administrative limits are not part of the licensing basis, nor were they relied on during review of the renewal application).

points, which enables calculations of the average thickness of an area (AmerGen Exh. B, Pt. 3, A.10, A.11). Using metal template grids, measurements were taken at nineteen locations, with at least one grid in each of the ten bays (AmerGen Exh. B, Pt. 3, A.12).<sup>23</sup>

The locations for the nineteen grids were selected by taking over 1000 UT measurements to identify the thinnest areas in each bay (Tr. at 601) (Tamburro). Permanent marks were placed on the shell's interior so the metal template could be placed at the same location each time a measurement is taken (AmerGen Exh. B, Pt. 3, A.13). The grid locations all are in the upper portion of the sand bed region centered on or near a shell elevation of 11 feet 3 inches, where the observed corrosion was concentrated (AmerGen Exh. B, Pt. 3, A.12; Tr. at 324 (Hausler); Tr. at 344-45 (Gallagher)). The internal concrete curb at elevation 11 feet prevents placing the grids at a lower elevation, except in the two trenches that were excavated in the concrete in the 1980s in Bays 5 and 17 (AmerGen Exh. B, Pt. 3, A.12).<sup>24</sup>

The metal template grids are in two sizes. Twelve templates are squares that are 6 inches by 6 inches, each collecting a total of forty-nine UT measurement points (AmerGen Exh. B, Pt. 3, A.12). The remaining seven grids are rectangular, 1 inch by 7 inches, and each of these collects seven UT measurement points (*ibid.*).

The table on the next page contains the measurement data that were averaged over each grid to produce average thicknesses (AmerGen Exh. B, Pt. 3, A.38).

As discussed *supra* Part IV.A.1, the three acceptance criteria are: (1) the general buckling criterion, which requires a minimum uniform average thickness for the sand bed region of 0.736 inch; (2) the local buckling criterion, which requires a local area with an average thickness less than 0.736 inch to maintain a thickness no less than a tray configuration that has a center thickness of 0.536 inch covering a 1 foot by 1 foot area that, in turn, transitions over a linear distance of 1 foot to a surrounding shell thickness of 0.736 inch; and (3) the pressure criterion, which requires a thickness no less than 0.490 inch over an area of no more than 2.5 inches in diameter.

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<sup>23</sup> The grid measurements are taken from the shell's interior because UT measurements require a flat surface, and the shell's interior surface is essentially flat, unlike the shell's corroded — and consequently uneven — exterior surface (AmerGen Exh. B, Pt. 3, A.11).

<sup>24</sup> In 2006, AmerGen excavated an additional 6 inches from the trench in Bay 5 (AmerGen Exh. 40, at 51, 111-12, 128), which allowed AmerGen to examine the shell "a little bit below the sand bed floor" (Tr. at 344) (Gallagher).

<b>Grid Location by Bay</b>	<b>Split Grids</b>	<b>1992</b>	<b>1994</b>	<b>1996</b>	<b>2006</b>
1D			1.101	1.151	1.122
3D			1.184	1.175	1.180
5D			1.168	1.173	1.185
7D			1.136	1.138	1.133
9A			1.157	1.155	1.154
9D		1.004	0.992	1.008	0.993
11A		0.825	0.820	0.830	0.822
11C	Bottom	0.859	0.850	0.883	0.855
	Top	0.970	0.982	1.042	0.958
13A		0.858	0.837	0.853	0.846
13D	Bottom	0.906	0.895	0.933	0.904
	Top	1.055	1.037	1.059	1.047
13C		1.149	1.140	1.154	1.142
15A			1.114	1.127	1.121
15D		1.058	1.053	1.066	1.053
17A	Bottom	0.941	0.934	0.997	1.935
	Top	1.125	1.129	1.144	1.122
17D		0.817	0.810	0.848	0.818
17/19	Top	0.976	0.963	0.967	1.964
	Bottom	0.989	0.975	0.991	0.972
19A		0.800	0.806	0.815	0.807
19B		0.840	0.824	0.837	0.848
19C		0.819	0.820	0.854	0.824

Regarding the pressure criterion, because all of the individual UT measurements in the grids were substantially greater than 0.490 inch (AmerGen Exh. B, Pt. 3, A.5, A.29; NRC Staff Exh. 1, at 3-120), this criterion plainly is satisfied. See AmerGen Exh. B, Pt. 3, A.5 (“[t]he thinnest single UT measurement obtained at any time between 1992 and the present is 0.602 [inch]”); *infra* note 31.

Regarding the buckling criteria, because the thinnest average measurement recorded in the past 14 years from the internal grids was 0.800 inch in 1992 from grid 19A which measured a portion of Bay 19, and because that value is greater than the general buckling criterion of 0.736 inch, the general buckling criterion is

satisfied.<sup>25</sup> Because the general buckling criterion is satisfied, there is no need to compare the grid measurements to the local buckling criterion, which is likewise satisfied (AmerGen Exh. B, Pt. 3, A.5, A.15).<sup>26</sup>

Subtracting the general buckling criterion of 0.736 inch from the thinnest average measurement recorded in the sand bed region (0.800 inch in Bay 19) results in a margin of 0.064 inch, which we conclude — based on the record evidence, including the fact that the average thicknesses in the sand bed region remained virtually unchanged between 1992 and 2006 — will be the available margin when Oyster Creek enters the renewal period.<sup>27</sup>

*b. External UT Measurements Support the Conclusion That the Acceptance Criteria Are Satisfied*

Over 100 UT measurements were taken in the sand bed region from the exterior of the drywell shell during the 1992 and 2006 refueling outages. Unlike the internal UT measurements, the external measurements were taken and evaluated as single points, not as averaged grids. This is so because the single UT measurement points were selected in 1992 based on a determination that they were among the thinnest (i.e., the most corroded) locations in the sand bed region.

Two important requirements for a UT probe to provide an accurate measurement are that (1) the surface area must be smooth over an area at least as large as the circular area of the probe, and (2) the probe needs to sit perpendicular to the surface of the metal. To ensure these two requirements were met, the metal at the individual points located throughout all ten drywell bays was ground to be flat — removing about 0.10 to 0.20 inch of additional metal (Tr. at 604-05) (Polaski, Tamburro) — over an area of about 2 inches in diameter to allow the

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<sup>25</sup> The thinnest average measurement of 0.800 inch existed over an area 6 inches by 6 inches square. The AmerGen witness who performed the structural analysis attested — and Citizens' witness did not dispute (Tr. at 479) (Hausler) — that properties varying over a region of characteristic length less than 18 inches would not affect the structural analyses for this shell (Tr. at 476) (Mehta). Thus, for the 0.800 inch measurement to be a valid measure of the remaining margin, it would have to extend over an area not less than approximately 18 inches by 18 inches. No data have been presented to this Board indicating that such a large area in the sand bed region is degraded to 0.800 inch on the average. Accordingly, when AmerGen and the NRC Staff base their estimates of remaining margin on the assumed thickness of 0.800 inch, they are making a very conservative assumption.

<sup>26</sup> Because the UT measurements show that the buckling criteria are satisfied, the requirement that the drywell shell maintain a safety factor of 2.0 is satisfied (*supra* text accompanying note 20).

<sup>27</sup> Our conclusion that the sand bed region has an available margin of 0.064 inch is based on the assumption that the entire sand bed region has a uniform thickness of 0.800 inch. Because all the other average grid measurements were greater than 0.800 inch, it may be seen that our conclusion is based on a significantly conservative assumption. See AmerGen Exh. B, Pt. 3, A.31.

UT probe to sit on a smooth surface perpendicular to the shell.<sup>28</sup> To perform UT measurements on a grid on the external wall would have required grinding much larger areas (6 inches by 6 inches or larger), which would have resulted in unnecessarily reducing the thickness of the drywell shell in areas that had already been determined to be among the thinnest. *See* AmerGen Exh. B, Pt. 3, A.16 to A.18.

In 1992 Oyster Creek took over 120 single point UT measurements, and in 2006 it took single point UT measurements from 106 of the previously measured locations (AmerGen Exh. B, Pt. 3, A.20).<sup>29</sup> These individual points were compared to, and satisfied, the pressure criterion. *See* AmerGen Exh. B, Pt. 3, A.21, A.29.<sup>30</sup>

Specifically, with regard to the pressure criterion, the thinnest external single point measurement is 0.602 inch in Bay 13, which is 0.112 inch thicker than required by the pressure criterion of 0.490 inch.<sup>31</sup> Because the available margin

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<sup>28</sup>This grinding occurred prior to coating the external wall of the sand bed region with epoxy (AmerGen Exh. B, Pt. 3, A.18).

<sup>29</sup>Fewer measurements were taken in 2006 because some of the 1992 measurement points included two readings from the same location, and some of the locations of the 1992 single point measurements could not be relocated (AmerGen Exh. B, Pt. 3, A.20). To preclude this problem in the future, AmerGen in 2006 enhanced its techniques for identifying the measurement locations (AmerGen Exh. B, Pt. 3, A.19).

<sup>30</sup>These single UT measurements taken on the exterior of the shell were not averaged and compared to the general buckling criterion, because each point was selected based on its thinness. Moreover, these points had to be ground flat to allow proper placement of the UT probe and, consequently, they were made even thinner by about 100 to 200 mils, or 0.10 to 0.20 inch (Tr. at 604-05) (Polaski, Tamburro). These points are thus not representative of the overall shell thickness and do not provide a basis for determining available buckling margin. Rather, they are representative of the most severely corroded areas, which were then thinned even further by the grinding process (Tr. at 603-04) (Polaski). An average of these measurements would reflect this bias, resulting in a skewed and unrealistic assessment of the shell. *See* AmerGen Exh. B, Pt. 3, A.22, A.23. Accordingly, these points are used to provide individual snapshot indicators of whether the shell complies with the pressure acceptance criterion, not to calculate available margin until the general buckling criterion is violated (AmerGen Exh. B, Pt. 3, A.30).

Citizens endeavored to rely on contour plots of the drywell shell's sand bed region — which were generated by Dr. Hausler based on exterior UT measurements — to support their argument that the available margin is less than 0.064 inch (Citizens Exh. C.1, Attachment 1; Citizens Exh. B, A.14). This they may not do, because relying on these contour plots to determine Oyster Creek's acceptance criteria is effectively an attack on the derivation of Oyster Creek's CLB and, thus, beyond the scope of this proceeding (*supra* note 19). In any event, we find that the contour plots are not reliable representations of the condition of the drywell shell, because they are based on the exterior UT measurements, which are significantly biased in the thin direction (*see* AmerGen Exh. C, Pt. 2, A.7; AmerGen Exh. C, Pt. 3, A.10, A.40; NRC Staff Exh. C, A.26, A.27, A.12(d)).

<sup>31</sup>Because the area in which this 0.602 inch measurement was taken had been ground thinner by about 0.10 to 0.20 inch to allow for accurate UT measurements (*supra* note 30), it becomes clear that this "thinnest" external single point measurement is conservative in the extreme. Taking the grinding

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of 0.112 inch for the pressure criterion (which is based on the thinnest external single point measurement) is greater than the available margin of 0.064 inch for the general buckling criterion (which is based on the thinnest interior average grid measurement in Bay 19 (*supra* Part IV.A.2.a)), the external single point measurements support the conclusions that (1) the acceptance criteria are satisfied, and (2) the bounding margin for purposes of this proceeding is the general buckling criterion margin of 0.064 inch (AmerGen Exh. B, Pt. 3, A.32; *accord* NRC Staff Exh. 1, at 4-57 to 4-60).

**B. AmerGen’s UT Program Provides Reasonable Assurance That the Sand Bed Region Will Not Violate the Acceptance Criteria During the Renewal Period, Because the Record Shows That Corrosion Has Effectively Been Arrested**

Citizens assert that the exterior and interior walls of the drywell shell in the sand bed region will likely experience significant corrosion during the renewal period due to the existence of a continuing corrosive environment.

We agree with AmerGen and the NRC Staff that Citizens’ argument is insubstantial. Based on the exhibits and testimony, we find there is reasonable assurance that the *exterior* wall in the sand bed region will not experience any significant corrosion during the renewal period because: (1) the refueling cavity liner is the only known source of water onto the exterior wall in the sand bed region, and AmerGen’s corrective actions have adequately mitigated that leakage; and (2) even if water entered the exterior wall in the sand bed region, the drywell shell will be adequately protected by the shell’s robust epoxy coating. We also find that the *interior* wall in the sand bed region will not experience significant corrosion during the renewal period, because there is no evidence of measurable past corrosion there, and the record reveals that the environment is benign and will not pose a serious threat of future corrosion.<sup>32</sup>

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into account, the actual thickness of that point is somewhere in the range of 0.702 to 0.802 inch, which means that the margin to the pressure criterion is in the range of 0.212 to 0.312 inch.

<sup>32</sup> Testimony regarding the potential for future corrosion was presented over the course of two panels: Panel 4 (Sources of Water) and Panel 5 (The Epoxy Coating). Citizens presented one witness, Dr. Rudolf H. Hausler. AmerGen presented eleven witnesses: (1) Mr. Jon R. Cavallo; (2) Mr. Scott R. Erickson; (3) Mr. Michael P. Gallagher; (4) Mr. Barry Gordon; (5) Mr. Jon C. Hawkins; (6) Mr. Edwin Hosterman; (7) Mr. Martin E. McCallister; (8) Mr. John F. O’Rourke; (9) Mr. Ahmed Ouau; (10) Mr. Francis H. Ray; and (11) Mr. Peter Tamburro. The NRC Staff presented five witnesses: (1) Mr. Hansraj G. Ashar; (2) Dr. James A. Davis; (3) Dr. Mark Hartzman; (4) Mr. Timothy L. O’Hara; and (5) Mr. Arthur D. Salomon.

***1. It Is Highly Unlikely There Will Be Future Corrosion on the Exterior Wall in the Sand Bed Region***

Citizens argue that future corrosion will likely occur on the exterior wall of the drywell shell in the sand bed region because (Citizens' Response to AmerGen and NRC Staff Initial Testimony at 18-23 (Aug. 17, 2007)): (1) there are potential sources of water other than the refueling cavity liner, and AmerGen has been unable to stem water leakage from the refueling cavity liner in any event; and (2) the epoxy coating likely contains defects that could allow corrosion to develop, or that could cause the coating to rapidly deteriorate during the period of extended operation. We disagree.

***a. AmerGen Has Taken Effective Steps To Eliminate Corrosion-Causing Moisture on the Exterior Wall of the Sand Bed Region***

Citizens dispute whether the refueling cavity liner — which is filled with water during refueling outages and other rare outages in which the reactor vessel must be opened — has been established as the only source of water on the exterior portion of the drywell shell in the sand bed region. According to Citizens, documentation from AmerGen establishes that the Oyster Creek equipment pool has leaked and “fuel pool water that did not originate from the refueling cavity has been found in the sand bed region” (Citizens Exh. 37, Overview of the Relevant Facts Regarding Corrosion of the Drywell Shell at the Oyster Creek Nuclear Generating Station at 17 (initially submitted as Citizens Exh. B, Attach. 5 (July 20, 2007)). Citizens' witness, Dr. Hausler, observed that “a number of potential sources of water . . . have been identified by the reactor operator, including the refueling cavity [and] the equipment pool” (Citizens Exh. B, A.17). In addition, Dr. Hausler, in his written testimony, asserted there is a potential for condensation to form on the exterior wall of the sand bed region due to AmerGen's “use of drywell chillers, which are used during refueling and other outages when access to the drywell is needed” (Citizens Exh. C, A.20) (citing AmerGen Exh. B, Pt. 4, A.15). This is “apparently confirmed,” he added, “by an analysis of water that had drained from the exterior of the sand bed region before March 2006, which showed no activity” (*ibid.*) (citing Citizens Exh. 23, AmerGen Drywell Inspection Leakage Plan); *see also* Citizens Exh. B, A.17; Citizens Exh. 12, Memorandum from Dr. Rudolf H. Hausler to Richard Webster, Esq. at 8 (Apr. 25, 2007). Because of this alleged uncertainty as to “where the water may be coming from,” Dr. Hausler stated that “one can safely assume that water could be present at some time in the future and at least during each outage” (Citizens Exh. 12, at 8). Dr. Hausler's arguments are refuted by the record.

During the late 1980s and early 1990s, the then-licensee of Oyster Creek conducted “[e]xtensive investigations of a large number of other plant components

. . . [to] provide reasonable assurance that these components are not sources of water in the sand bed region” (AmerGen Exh. B, Pt. 4, A.13). Specifically, the following components were eliminated as potential sources of water in the sand bed region: “the bellows seal at the bottom of the refueling cavity, . . . the refueling cavity drain line, the refueling cavity metal trough and its associated gasket, . . . the concrete trough located below the metal trough, the refueling cavity steps, the equipment pool and refueling cavity skimmer systems, the equipment pool liner, drain, and support pad, the spent fuel pool liner, and piping buried in concrete” (*ibid.*) (citations omitted); *see also* Citizens Exh. 21, Letter from J.C. DeVine, Jr., GPU Nuclear, to U.S. NRC (Dec. 5, 1990), Attach. III, GPUN Detailed Summary Addressing Water Intrusion and Leakage Effects Related to the Oyster Creek Drywell. When the Board questioned Dr. Hausler during the hearing, he indicated that he had no evidence of a source other than the refueling cavity as causing water to be present on the external shell. *See* Tr. at 698.<sup>33</sup> Because Citizens failed to present any probative evidence supporting their assertion about an alternate source of water leaking onto the sand bed region, we find that the only source of water leaking onto the sand bed region is the refueling cavity liner. *See* Tr. at 384-85, 799.<sup>34</sup>

With respect to the potential for condensation to occur on the exterior sand bed region, condensation occurs only when the drywell shell is cooler than the surrounding air. Because the “reactor pressure vessel and other equipment located inside the drywell generate a significant amount of heat,” the drywell shell is heated to temperatures “significantly above the Reactor Building ambient temperature. This temperature differential will prevent condensation from forming on the exterior of the drywell shell in the sand bed region” (AmerGen Exh. B, Pt.

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<sup>33</sup> Notably, at the hearing, Dr. Hausler conceded that the only historical source of water that caused a corrosive environment in the drywell shell was leakage from the refueling cavity (Tr. at 687). Although Dr. Hausler’s concession renders nugatory Citizens’ arguments about other potential sources of water, we nevertheless address those arguments and reject them as meritless.

<sup>34</sup> We reject Citizens’ allegation (Citizens Exh. 37, at 17) that Citizens Exhibit 21 demonstrates there has been leakage from the equipment pool onto the external wall of the drywell shell in the sand bed region. Rather, we find that the record supports the conclusion that the leakage described in Citizens Exhibit 21 “is isolated from the drywell shell and, based on the physical configuration of [Oyster Creek], there is no credible leakage path from the underside of the equipment pool to the drywell shell” (AmerGen Exh. C, Pt. 4, A.9). We likewise reject Citizens’ claim (Citizens Exh. 37, at 17) that fuel pool water that did not originate from the refueling cavity has been found in the sand bed region. The author of Citizens Exh. 22, Technical Data Report (“TDR”) 964, Drywell Sand Bed Drain Leakage (Mar. 3, 1989), upon which Citizens rely, “proposes that the water discovered might have been ‘old’ fuel pool water, i.e., water left over from a previous refueling outage, when the refueling cavity was filled with water” (AmerGen Exh. C, Pt. 4, A.13). Although analysis of water samples collected from each bay drain proved inconclusive, following the TDR, the then-licensee conducted extensive investigations that “ultimately found no source of leakage other than the refueling cavity liner” (*ibid.*).

4, A.14). Although it is possible for condensation to occur during an outage due to the use of drywell chillers — which are used during outages when extended access to the drywell is required (AmerGen Exh. B, Pt. 4, A.15) — “such postulated condensation would only last until restart, when the drywell shell temperature would rise and any water would evaporate” (AmerGen Exh. B, Pt. 4, A.15). During the 2006 outage, AmerGen reported no evidence of condensation on the exterior of the drywell shell in the sand bed region (AmerGen Exh. B, Pt. 4, A.16). Significantly, Dr. Hausler testified at the hearing that he did not believe that “condensation on the [exterior of the drywell shell] is really a source of water that we might have to worry about” (Tr. at 687). We agree. The evidence shows that condensation cannot occur during normal operations, and during outages, any condensation that could form due to the use of drywell chillers would evaporate before posing a corrosion risk. *See* AmerGen Exh. B, Pt. 4, A.14 to A.17.<sup>35</sup>

Citizens also argue that the corrective actions AmerGen has taken to ensure the refueling cavity will not leak into the sand bed region — i.e., repair and monitoring of the collection trough and application of stainless steel tape and strippable coating during outages — are ineffective (Citizens Exh. C.1, A.25). This argument cannot be reconciled with the record.

After corrosion was discovered on the exterior of the drywell shell in the sand bed region, the then-licensee of Oyster Creek took multiple corrective actions, including (AmerGen Exh. B, Pt. 1, A.23): (1) clearing the sand bed drains; (2) repairing the leakage collection trough “to minimize the possibility of water escaping the trough and entering the area between the concrete shield wall and exterior drywell shell” (AmerGen Exh. B, Pt. 4, A.8); (3) clearing the trough drain; and (4) applying stainless steel tape and a strippable coating to the refueling cavity during refueling outages. AmerGen witnesses testified that during the 2006 refueling outage, “[n]o water was observed on the exterior of the drywell shell in the sand bed region, or in [or from] the sand bed drains” (AmerGen Exh. B,

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<sup>35</sup> Although Dr. Hausler’s written rebuttal testimony disputed the evaporation rate of condensation in the sand bed region presented by AmerGen’s expert, Mr. Gordon, we view Dr. Hausler’s subsequent testimony at the hearing (Tr. at 687) as negating, and withdrawing, Citizens’ argument that condensation on the exterior of the drywell shell is a potential source of corrosion. Even if we were to consider Dr. Hausler’s written rebuttal testimony, however, we would give no weight to his unsupported assertion that Mr. Gordon did not “use[ ] a reasonable approach to estimate the time in which any water on the exterior of the shell would evaporate” (Citizens Exh. C, A.22). Dr. Hausler failed to provide any probative evidence in support of his bare assertion that the sand bed region has a limited air exchange, which would cause any water in the sand bed region to become fully saturated during the outage. *See, e.g.*, Citizens Exh. 39, Memorandum from Dr. Rudolf Hausler, to Richard Wester, Esq., at 19 (Aug. 16, 2007) (speculating that “the former sand bed area . . . is a totally stagnant space”); *cf.* AmerGen Exh. C.1, Pt. 6, A.8 (“[t]he gaps between the vent headers and the concrete provide substantial area for air flow, as do many piping penetrations from the drywell”); *accord* Tr. at 771-72 (Gallagher).

Pt. 4, A.10). Messrs. Hawkins and Erickson confirmed they personally entered the sand bed regions in nine of the bays during the 2006 outage “and did not see water either on the exterior of the drywell shell, or on the concrete floor of the sand bed region” (AmerGen Exh. B, Pt. 4, A.11).

AmerGen has committed to apply the measures utilized during the 2006 outage at every outage during the renewal period when the refueling cavity is flooded. First, AmerGen will apply stainless steel tape and a strippable coating to the refueling cavity liner prior to flooding the refueling cavity. *See* AmerGen Exh. 10, Commitment 27(2); AmerGen Exh. B, Pt. 1, A.14; Tr. at 696-97.<sup>36</sup> Second, AmerGen will verify that the “refueling cavity concrete trough drain [is] . . . clear from blockage once per refueling cycle[, and a]ny identified issues will be addressed via the corrective action process” (AmerGen Exh. 10, Commitment 27(13)). Third, AmerGen will monitor the refueling cavity seal leakage trough drains and the drywell sand bed region drains for leakage. The sand bed region drains will be monitored daily during refueling outages and quarterly during the operating cycle. “If leakage is detected, procedures will be in place to determine the source of leakage and investigate and address the impact of leakage on the drywell shell,” and appropriate corrective actions will be taken (AmerGen Exh. 10, Commitment 27(3)); *see also* NRC Staff Exh. B, A.12(b). Additionally, at the hearing, AmerGen represented it would expand this commitment to include periodic inspections of the sand bed drains for blockage. *See* Tr. at 843-44; *supra* note 12.

Citizens raise two challenges to the above mitigation measures. First, Dr. Hausler asserts the leakage collection trough “was damaged. . . . and was seen to be far from ideal in the most recent outage” (Citizens Exh. C, A.20). If the trough degraded further, he states, water could enter the drywell again and create a corrosive environment (*ibid.*). We reject Dr. Hausler’s conjectural concern. He fails to cite any evidence demonstrating defects in the trough as of the 2006 refueling outage; rather, the exhibits on which he relies are from 1986 and 1996. *See ibid.* (citing Citizens Exhs. 48, 49). Nor does he provide evidentiary support for his speculation that the trough could degrade further or that undetected clogging of any drains could recur. *See ibid.*; Citizens Exh. B, A.18. AmerGen has committed to verify that the “refueling cavity concrete trough drain [is] . . . clear from blockage once per refueling cycle,” and to monitor the refueling cavity seal leakage trough drains for leakage (AmerGen Exh. 10, Commitment 27(3),

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<sup>36</sup>During the evidentiary hearing, AmerGen attested (Tr. at 696-97) (O’Rourke), and the NRC Staff agreed (Tr. at 697) (Ashar), that AmerGen’s commitment consisted of applying stainless steel tape and a strippable coating to the refueling cavity liner during every outage — scheduled and unscheduled alike — when the refueling cavity is flooded. Given this unequivocal commitment, we summarily reject Citizens’ assertion that AmerGen may flood the refueling cavity without applying leakage mitigation measures during a forced outage (Citizens Exh. C, A.20).

(13)). And AmerGen also has committed to verify periodically that the sand bed drains are unclogged and exhibit no evidence of leakage (*id.*, Commitment 27(3)). “Any identified issues will be addressed via the corrective action process” (*id.*, Commitment 27(13); *see also id.*, Commitment 27(3)), thereby providing reasonable assurance there will be no corrosive environment on the exterior wall in the sand bed region.

Second, Citizens assert that the “metal tape and strippable coating is not always effective in preventing significant leaks” (Citizens Exh. C.1, A.25). Citizens do not allege the tape and coating were ineffective during the 2006 outage; rather, they rely on a February 1, 1993 memorandum that addressed leakage from the refueling cavity liner onto the sand bed region during the 1992 refueling outage. Although Citizens are correct that there was leakage from the refueling cavity liner during the 1992 outage notwithstanding the use of the tape and coating, they ignore that this outage was *prior to* the then-licensee’s repair of the leakage collection trough and the concrete trough drain. *See* Citizens Exh. 50, Internal GPU Nuclear Memorandum, Re: 14R Reactor Cavity Leak Detection Effort, at 2 (Feb. 1, 1993) (“[s]everal areas considered having the highest potential for being a leak were repaired or are scheduled for repair prior to the next cavity flood up”). Since the 1992 outage, the troughs have been repaired, and AmerGen’s use of the tape and coating during the 2006 outage not only “reduced the amount of [refueling] cavity liner leakage,” it eliminated leakage on the external wall in the sand bed region (AmerGen Exh. B, Pt. 4, A.9). The fact that no water was discovered in the sand bed region during the 2006 outage when the tape and coating were used defeats Citizens’ assertion that these leakage-mitigation measures are ineffective.

Further, although Citizens correctly observe that the leakage from the refueling cavity liner during the 2006 outage — approximately 1 gallon per minute (AmerGen Exh. B, Pt. 4, A.9) — demonstrates that AmerGen “has not yet devised a means of preventing the reactor fueling cavity from leaking” (Citizens Exh. 37, at 17), this fact is not critical to our resolution of the contention presented. Rather, the salient question is whether water will leak from the refueling cavity liner at a sufficient rate to overwhelm the trough and drains and enter onto the exterior wall in the sand bed region, thereby creating a corrosive environment. The record requires that we answer that question in the negative. As AmerGen explained, “[l]eakage from the [refueling] cavity is not relevant unless it exceeds the capacity of the trough drain” (AmerGen Exh. C, Pt. 4, A.14). The 1 gallon per minute leakage observed during the 2006 outage “is well within the capacity of the refueling cavity trough drain system, which is estimated using standard hydraulic principles to be approximately 50 gallons per minute” (AmerGen Exh. B, Pt. 4, A.9). The trough drain system directed the leakage into the controlled

drainage collection system, thus preventing it from reaching the drywell shell, much less the sand bed region.<sup>37</sup>

The Board therefore finds that: (1) AmerGen has demonstrated that the refueling cavity liner is the only source of corrosive-causing water on the external wall of the drywell shell in the sand bed region; (2) AmerGen's commitments effectively eliminate the potential for water leakage from the refueling cavity liner into that area; and (3) in the absence of such water, there will be no further corrosion in that area. Absent further corrosion, the thickness of the shell in the sand bed region will not violate the acceptance criteria during the renewal period, and Citizens' challenge to the frequency of AmerGen's UT program must be rejected.<sup>38</sup>

*b. Even If Water Entered the Exterior Wall of the Drywell Shell, the Sand Bed Region Is Protected from Further Corrosion by a Robust, Triple-Layered Epoxy Coating*

During the 1992 refueling outage, the then-licensee of Oyster Creek applied to the drywell shell in the sand bed region a 100% solid, three-layer epoxy coating system — consisting of one pre-prime and two additional coats — to prevent corrosion from forming on the metal surface of the drywell shell in the event water were to reach the sand bed region. *See* AmerGen Exh. B, Pt. 5, A.6; NRC Staff Exh. B, A.14. AmerGen has committed to visually inspect the epoxy coating in all ten drywell bays prior to the period of extended operation and every other refueling outage thereafter (AmerGen Exh. 10, Commitment 27(4)), employing a Protective Coating Monitoring and Maintenance Program that “incorporate[s] coated surfaces inspection requirements specified in ASME Code Section XI, Subsection IWE” (NRC Staff Exh. B, A.15).

Specifically, AmerGen's epoxy coating program requires it to: (1) examine the inspected areas “for evidence of flaking, blistering, peeling, discoloration,

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<sup>37</sup> Citizens correctly observe that in 2006, AmerGen discovered the following indications that water had been present in the sand bed region: (1) white discoloration was seen on the concrete floor, which appeared to be residue left behind by water; and (2) water was found in three of the five plastic bottles that collect water from the sand bed drains. Based on the totality of the evidence, we accept AmerGen's explanation that these were hoary indicators of long-past leakage, “because the plastic drain lines from the sand bed drains were dry and there was no water on the Torus Room floor” (AmerGen Exh. B, Pt. 4, A.12; Citizens Exh. 37, at 17).

<sup>38</sup> This conclusion takes into account our subsequent finding (*infra* Part IV.B.2) that there will likewise be no measurable corrosion on the interior wall of the drywell shell in the sand bed region during the renewal period.

and other signs of distress’’,<sup>39</sup> (2) resolve by engineering evaluation, or correct by repair or replacement, any suspect areas in accordance with IWE-3122; and (3) perform, when specified as a result of engineering evaluation, supplemental examinations in accordance with IWE-3200 (NRC Staff Exh. 1, at 3-120; *see also* NRC Staff Exh. B, A.15). If the epoxy coating is damaged and corrosion is observed, AmerGen must conduct UT measurements of the affected area and evaluate the results per its existing program. *See* NRC Staff Exh. B, A.15 (citing AmerGen Exh. 10, Commitment 27(1)). The NRC Staff concluded that AmerGen’s commitments will ‘‘provide[ ] assurance that effects of aging will be adequately managed so that intended functions will be maintained throughout the renewal period’’ (*ibid.*) (citing NRC Staff Exh. 1, at 3-114 to 3-143, 3-163 to 3-167).

Citizens nevertheless assert that if any water is present on the exterior sand bed region during the period of extended operation, the epoxy coating system will not adequately protect against corrosion, because: (1) inaccessible areas of the drywell shell in the sand bed region were not coated (Citizens Exh. C, A.21; Tr. at 707); (2) water could penetrate through defects in the epoxy that likely formed when the coating was applied (Citizens Exh. B, A.21; Tr. at 721); (3) visual observation may not be sufficient to detect the early stages of coating failure (Citizens Exh. B, A.21; Tr. at 739); and (4) the epoxy coating might rapidly deteriorate between scheduled inspections (Citizens Exh. B, A.21; Tr. at 730, 733-35). None of these arguments has merit.

First, contrary to Citizens’ argument, we conclude that ample record evidence shows that the entire sand bed region is coated with the protective three-layer epoxy coating. AmerGen witness Mr. Cavallo attested that ‘‘workers who inspected the external coating in all ten bays during the 2006 refueling outage confirmed that all of the areas were coated’’ (AmerGen Exh. C.1, Pt. 5, A.6). *See also* Tr. at 706 (Hawkins) (AmerGen witness testifies that the entire sand bed region, ‘‘from 8 foot 11 [inches] to 12 foot 3 inches . . . is completely coated’’ with the epoxy). Likewise, NRC Staff witness Mr. O’Hara testified that, based on his first-hand knowledge from inspecting two bays during the 2006 outage, ‘‘[a]ll the regions on the outside of the drywell were coated’’ (Tr. at 718). We find that this evidence, which includes convincing eyewitness testimony, negates Citizens’ bare assertion that a portion of the sand bed region is not protected by epoxy.<sup>40</sup>

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<sup>39</sup> ASME Section XI, Subsection IWE criteria require direct visual inspection of the entire exterior surface, from the base of the sand bed floor (approximately elevation 8’11”) to the top where the drywell shell rises into the 3” gap with the concrete (approximately elevation 12’3”) (*see* AmerGen Exh. B, Pt. 5, A.22).

<sup>40</sup> In his prefiled rebuttal testimony, Dr. Hausler stated that ‘‘documents [he has] received from  
(Continued)

Second, we reject Citizens' assertion that the epoxy likely contains defects — i.e., pinholes or holidays — that formed when the coating was applied and through which water could penetrate. A pinhole or holiday is a microscopic, localized defect in the epoxy coating that is created “by the chemistry of the coating (e.g., solvent entrapment)” or due to a problem in the original application of the coating, “such as failure to properly cure the coating”; they are not defects caused by degradation of the coating over time (AmerGen Exh. B, Pt. 5, A.13). Dr. Hausler opines that pinholes may have been present in the coating when it was applied. *See* Citizens Exh. B, A.21. As a consequence of these defects, he asserts, “any water in the sand bed can penetrate the coating . . . [which] would then reach [the] steel interface beneath the coating and cause further corrosion” (Citizens Exh. B, A.21).

Citizens' argument fails to recognize that the nature of the epoxy coating at Oyster Creek minimizes the likelihood of pinholes and the infiltration of water for two reasons. First, the formation of pinholes “has to do with solvent migration leaving very small holes in the coating,” but the epoxy coating at Oyster Creek has “no solvents in any one of the three coats” (Tr. at 724) (Cavallo). *See also* AmerGen Exh. 35, Application Guide for DEVOE Coatings Pre-Prime 167 and Devran-184 (indicating both the pre-prime and top coats are 100% solids).<sup>41</sup> Second, because the epoxy coating is a three-layer system, “[i]f a pinhole or holiday exists in the primer coat, it would likely be covered up by the second coat. The likelihood that a pinhole or holiday would extend through both coats is

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AmerGen indicate that areas of the shell in the sand bed region were not coated with epoxy because they are inaccessible” (Citizens Exh. C, A.21). But the documents relied upon by Dr. Hausler — Citizens Exhibits 40 and 41 — fail to support his allegations. *See* Citizens Exh. 40, E-mail from John G. Hufnagel, Jr., to Ahmed Ouaou and Donald B. Warfel, Sr., Re: Challenge Board #1 additional comment (Nov. 30, 2006, 10:41); Citizens Exh. 41, Technical Functions Safety/Environmental Determination and 50.59 Review (EP-016), Clean and Coat Drywell Ext. in Sand Bed (Jan. 5, 1993). Neither Exhibit 40 nor 41 indicates that actual areas of the sand bed region were left uncovered (AmerGen Exh. C.1, Pt. 5, A.6). Citizens Exhibit 40 “is based entirely on a historical document that pre-dated the cleaning and coating of the exterior shell” (*ibid.*), and Citizens Exhibit 41, which was written in December 1992, merely conjectures that “patches of the drywell exterior may be left uncleaned and/or uncoated” (*ibid.*) (quoting Citizens Exh. 41, at OCLR00022257). We find these speculative documents to be unconvincing, and we credit, instead, the testimony of AmerGen and NRC Staff witnesses who averred, based on first-hand knowledge, that the drywell shell in the sand bed region is completely coated with the three-layer epoxy coating.

<sup>41</sup> Citizens' witness, Dr. Hausler, conceded that he was unaware that the epoxy coatings contained no solvents (Tr. at 748). Although Dr. Hausler speculated that the viscous composition of solvent-free epoxy makes it more difficult for air bubbles to escape (*ibid.*), he provided no information that would lead the Board to question the persuasive testimony of the AmerGen and NRC Staff witnesses regarding the robust nature of the coating. Mr. Cavallo also testified that — contrary to Dr. Hausler's assertion (Tr. at 721) — dust in the atmosphere at the application stage is not a material causative factor of pinholes in this type of epoxy coating (Tr. at 724).

quite small [and t]he likelihood that a pinhole or holiday would extend through all three coats . . . is even smaller” (AmerGen Exh. B, Pt. 5, A.14); *see also* NRC Staff Exh. B, A.14.<sup>42</sup>

Beyond preventing the formation of pinholes and the infiltration of water in the first instance, the epoxy coating system applied to the Oyster Creek drywell shell also allows for easy detection of signs of deterioration through the use of contrasting pigments in the top two layers. *See* AmerGen Exh. B, Pt. 5, A.6. Because the early indications of epoxy coating failure include pinpoint rusting and rust staining (AmerGen Exh. C, Pt. 5, A.7), the “grayish white” top coat of the epoxy will provide “a very good visual contrast to . . . [the] iron oxide or red rust, . . . [which] would be very visible to, particularly, trained [Visual Testing (“VT”)]-1 inspectors” (Tr. at 725) (Cavallo).<sup>43</sup> *See also id.* at 722-23 (Cavallo); AmerGen Exh. B, Pt. 5, A.16; NRC Staff Exh. C, A.36 (“early stages of coating failure would be apparent during a VT-1 inspection,” because the resulting “film will be rust colored and will be obvious against the grey colored epoxy coating”); NRC Staff Exh. B, A.15. Had there been any pinholes in the coating, the corrosion that would have resulted from water that was present in the sand bed region during the 1994 and 1996 refueling outages — when the strippable coating was not used in the refueling cavity liner — “would be visible today due to the volume of corrosion products (iron oxides) and surface rust staining caused by the corrosion process” (AmerGen Exh. B, Pt. 5, A.14).

In addition to surface discoloration, because iron oxide corrosion products occupy a volume “between approximately seven and ten times greater than the metal being corroded,” if corrosion were occurring under the epoxy coating, the metal surface would become very uneven (AmerGen Exh. B, Pt. 6, A.8; *see also* Tr. at 726 (Cavallo); NRC Staff Exh. B, A.15). Specifically, the corrosion would generate “an irregularly shaped fairly circular rough surfaced deformation of the coating . . . centered on the area of the pinhole,” known as a “carbuncle” (Tr. at 726-27 (Cavallo); *see also* AmerGen Exh. B, Pt. 5, A.15). However, in a benign environment, such as the Oyster Creek drywell, if there were pinholes in each of the three layers of epoxy coating, and if all three pinholes were aligned, AmerGen testified that it would “[not] expect to see carbuncles[, rather it] . . . would expect

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<sup>42</sup>Notably, in Dr. Hausler’s prefiled written submission, he conceded that “pinholes are rare when two coats of . . . [epoxy coating] have been applied” (Citizens Exh. 39, at 17). Moreover, when questioned by the Board, Dr. Hausler acknowledged he knows of no evidence in the record that would suggest the existence of any pinholes in the Oyster Creek epoxy coating (Tr. at 722).

<sup>43</sup>VT-1 inspectors are trained and qualified in accordance with ASME Section XI, Subsection IWE to “inspect surfaces such as the drywell shell for evidence of flaking, blistering, peeling, discoloration, and other signs of degradation that would be early signs of potential coating failure” (AmerGen Exh. B, Pt. 5, A.12).

to see [only staining] over a period of three or four years, which is the frequency of inspection” (Tr. at 727) (Cavallo).

Significantly, AmerGen’s visual inspection of the epoxy coating on the drywell shell in the sand bed region during the 2006 refueling outage confirmed that neither of the key indicators of corrosion was present. Messrs. Erickson and Hawkins — both of whom are certified VT-1 inspectors (AmerGen Exh. B, Pt. 4, A.3; *supra* note 43) — testified that during the 2006 outage they collectively inspected nine of the ten bays (AmerGen Exh. B, Pt. 4, A.18, A.19), and they found no evidence of “any flaking, chipping, blistering, peeling, pinpoint rusting, cracking, chalking or discoloration, or any evidence of corrosion or corrosion products from the exterior drywell shell in the sand bed region. . . . There was a visible shine indicative of a coating in pristine condition” (AmerGen Exh. B, Pt. 4, A.23; *see also* Tr. at 723 (Hawkins, Erickson); AmerGen Exh. 24, ASME IWE (Class MC) Containment Visual Examination Record (Oct. 22, 2006)). Likewise, NRC Staff witness Mr. O’Hara testified that during the 2006 refueling outage he physically inspected the external epoxy coating on the outside of the drywell shell in two of the bays, and the coating “appeared to be in excellent condition with no visible evidence of cracking, peeling, or blistering” (NRC Staff Exh. B, A.20). After reviewing video tapes of all the other bays along with the data sheets for each bay, Mr. O’Hara testified the tapes “showed the same general condition in all bays and showed that the epoxy coating had not been visibly disturbed since the original application” (*ibid.*; *see also* Tr. at 723 (Cavallo) (testifying that there are no “visual indications of pinholes, . . . [which] allows me to state unequivocally we do not have pin holes in the coatings applied to the drywell in 1992”)).

In short, we find that overwhelming record evidence supports the conclusion that — contrary to Citizens’ assertion — there are no pinholes in the protective epoxy coatings, much less pinholes in each of the three layers that are aligned and through which water has penetrated, or will likely penetrate.

Nor do we accept Citizens’ argument that visual inspections may not reliably detect the early stages of coating failure. Dr. Hausler contends that “[o]nce a defect . . . provides access for water to the steel surface underneath, corrosion begins slowly,” and although “hardly noticeable from the surface . . . as corrosion progresses the coating will start to crack, opening up a larger defect” (Citizens Exh. 12, at 9; *see also* Citizens Exh. 39, at 19-20). Dr. Hausler thus criticizes AmerGen’s proposed 4-year inspection cycle as inadequate, because “damage might occur between inspections” (Citizens Exh. 12, at 8). Dr. Hausler’s unsupported allegations are not credible.<sup>44</sup>

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<sup>44</sup> Because Dr. Hausler is not familiar with the specific composition of epoxy in use at Oyster Creek (Tr. at 734-35) (Hausler)), and because his expertise in oil field applications (Tr. at 667 (Hausler))

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The “use of visual inspections to detect coating failures . . . is based . . . on established industry practice” (AmerGen Exh. C, Pt. 5, A.6), and has been endorsed by the NRC in the Generic Aging Lessons Learned (“GALL”) Report, NUREG-1801, Vol. 2, Section XI.S1 (NRC Staff Exh. B, A.15). In addition, NRC Regulatory Guide 1.54, Rev. 1, Service Level I, II, and III Protective Coatings Applied to Nuclear Power Plants “recommend[s] visual inspection of coatings for evidence of degradation before conducting additional tests” (*ibid.*; *see also* LBP-06-22, 64 NRC at 245).<sup>45</sup> AmerGen’s Protective Coating Monitoring and Maintenance Program follows the NRC Staff guidance set forth in the GALL Report, and satisfies the requirements of ASME Code Section XI, Subsection IWE, which is mandated by 10 C.F.R. § 50.55a. *See* AmerGen Exh. C, Pt. 5, A.6; NRC Staff Exh. B, A.13, A.15; LBP-06-22, 64 NRC at 247; *see generally* NRC Staff Exh. 2, Subsection IWE Requirements for Class MC and Metallic Liners of Class CC Components of Light-Water Cooled Plants (1992).<sup>46</sup>

We therefore reject Citizens’ assertion that visual inspections may not be sufficient to detect the early stages of coating failure. The record shows that “early indications of epoxy coating failure . . . include pinpoint rusting and rust staining, long before widespread coating failure in the form of cracking and delamination” (AmerGen Exh. C, Pt. 5, A.7). Because these early indications of coating failure would develop at a “very slow rate” in the “benign nonimmersion environment” of the sand bed region (*ibid.*), we find that AmerGen’s commitment to conduct visual inspections of the epoxy coating every 4 years provides reasonable assurance that early stages of coating failure will be detected. *See* NRC Staff Exh. B, A.15; *see also* AmerGen Exh. C, Pt. 5, A.7 (“Dr. Hausler’s speculation about the inability of visual inspections to ‘detect the early stages of coating failure’ is simply not technically credible”).

Finally, Citizens argue that the epoxy coating may suffer rapid deterioration between scheduled inspections, thereby allowing significant corrosion. This argument is based principally on Citizens’ understanding that the lifetime of the coating is unknown — “estimated at anything from ten to twenty years” (Citizens

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— which “generally involve continuous immersion service with highly corrosive pressurized fluids, corrosive gases and continuous fluid flow” (AmerGen Exh. C, Pt. 5, A.5) — is inapplicable to the benign operating environment at Oyster Creek, we accord diminished weight to his assertions attacking the reliability of AmerGen’s coating inspection program.

<sup>45</sup> According to Mr. Cavallo, a recent Electric Power Research Institute study on which he served as a principal investigator “confirms that visual inspections would detect the early signs of coating system failure” (AmerGen Exh. C, Pt. 5, A.6).

<sup>46</sup> To the extent Dr. Hausler suggests that AmerGen should use alternative means for monitoring the epoxy coating — e.g., “electric and sponge type surface examinations” (Tr. at 739) (Hausler) — he is introducing concerns beyond the scope of this proceeding. *See* Tr. at 739-40 (Chairman Hawkens); LBP-06-22, 64 NRC at 244-48 (rejecting Citizens’ challenge to AmerGen’s monitoring of the coating in the sand bed region).

Exh. B, A.21). Because the coating already is 15 years old, Citizens assert that it will likely experience a precipitous failure during the renewal period (Citizens Exh. C.1, A.31). Assuming such a failure, Citizens argue that AmerGen's proposal to inspect the coating every 4 years is inadequate (Citizens Exh. 39, at 17). This argument is insubstantial.

AmerGen's expert witness, Mr. Cavallo, testified that, in his experience, a properly applied coating, such as Oyster Creek's, will not deteriorate rapidly due to age (Tr. at 732; *see also* AmerGen Exh. B, Pt. 5, A.8). Mr. Cavallo's opinion was shared by AmerGen witness, Mr. Ouaou (Tr. at 732), and NRC Staff witness, Dr. Davis (Tr. at 732-33). Underlying their opinions is the fact that the epoxy coating is designed to withstand conditions far more severe than those it will experience here. For example, it is designed for constant immersion, but here it is not used in a submerged environment; it is rated for up to 250 degrees Fahrenheit, but here the normal operating temperature in the drywell is only 139 degrees Fahrenheit; and it can withstand radiation up to  $1 \times 10^9$  rads, but here the expected radiation will only be  $1.8 \times 10^6$  rads. *See* AmerGen Exh. B, Pt. 1, A.18; AmerGen Exh. B, Pt. 5, A.7. The coating is thus exposed to a comparatively benign environment relative to its design capability, which provides "an extra order of confidence to the [coating's] performance" (Tr. at 741) (Cavallo).<sup>47</sup>

Additionally, Dr. Davis testified that improperly applied coatings usually fail within the first few years, and once the coating gets beyond the first few years, rapid failure is not likely (Tr. at 732-33; *accord* AmerGen Exh. B, Pt. 5, A.9). Here, because visual inspections indicate the epoxy coating is in good condition after 15 years, it is evident that the coating was properly applied and that rapid failure is unlikely. *See* NRC Staff Exh. C, A.35; NRC Staff Exh. C.1, A.56, A.57; *see also* AmerGen Exh. B, Pt. 5, A.11 (Mr. Cavallo testifies that, based on his review of the records from the 2006 visual inspections of the epoxy coating, he has "very high confidence that the epoxy coating system is still in excellent condition"); AmerGen Exh. B, Pt. 5, A.23 (Mr. Cavallo, Mr. McAllister, Mr. Erickson, and Mr. Hawkins testify that, based on their inspections or review of inspection records from the 2006 visual inspections, the "coating system is in excellent condition").

Finally, it bears noting that the record shows that this type of coating has been successfully used for decades in U.S. nuclear power plants with no signs of end-of-life deterioration (AmerGen Exh. B, Pt. 5, A.7). As Mr. Cavallo testified (AmerGen Exh. B, Pt. 5, A.9):

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<sup>47</sup> Two principal causes of deterioration for this type of coating are ultraviolet light and mechanical damage, such as abrasion or gouging (AmerGen Exh. B, Pt. 5, A.7). Here, the coating is not susceptible to either type of damage, because it is not exposed to ultraviolet light, and it is isolated from moving parts (*ibid.*). During plant operation, the coated area is completely inaccessible (*ibid.*).

The purpose of AmerGen's inspection program is to identify the early signs of deterioration, long before widespread coating failure could take place. In the U.S. nuclear industry there have been similar coating systems that have been in service for approximately 30 years that still do not exhibit such end of life deterioration.

*See also* AmerGen Exh. B, Pt. 5, A.7 (Mr. Cavallo testifies that “to the best of [his] knowledge, not a single epoxy coating in an atmospheric environment applied at a nuclear power plant has reached its end-of-life”); AmerGen Exh. B, Pt. 5, A.9 (citing as examples two nuclear facilities where coatings have been “used for decades with no significant degradation,” Mr. Cavallo states that “industry experience with epoxy coating systems of this type indicates that short life-span estimates . . . are overly conservative”).

Based on the persuasive testimony provided by the exceedingly knowledgeable and experienced witnesses on behalf of AmerGen and the NRC Staff, we reject Citizens' assertion that the epoxy coating may suffer rapid deterioration between scheduled inspections, thereby allowing significant corrosion that would not be detected in time by the periodic UT measurements.<sup>48</sup>

In sum, we conclude that even if water were to leak onto the exterior wall of the drywell shell in the sand bed region during the period of extended operation, the epoxy coating system will adequately protect that region against corrosion. Absent further corrosion (*see supra* note 38), the thickness of the shell in the sand bed region will not violate the acceptance criteria during the renewal period, and Citizens' challenge to the frequency of AmerGen's UT program must be rejected.

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<sup>48</sup> In support of Citizens' argument that the epoxy coating may experience rapid failure, Dr. Hausler observed that the 2006 inspection revealed that “the coating on the [sand bed] floor was cracked in some bays along with the concrete of the former sand bed floor” (Citizens Exh. 12, at 8; *see also* Citizens Exh. 39, at 17). What Dr. Hausler failed to recognize, however, is that the coating system on the concrete sand bed floor is materially different than the coating system on the steel drywell shell. The floor coating — unlike the shell coating — was not designed to prevent moisture penetration; rather, it was designed to correct irregularities in the concrete floor and alter the contours to guide any leakage toward the sand bed drains (Tr. at 744-45) (Cavallo, Ouaou). Because the floor coating is not intended to serve as a moisture barrier, it was not preprimed with a penetrating epoxy sealer and is therefore more susceptible to delaminating (Tr. at 744) (Cavallo). Moreover, because the floor coating was not designed to serve as a moisture barrier, there was no need to adhere to application procedures recommended by the manufacturer (*see* Tr. at 744-45) (Cavallo, Ouaou). For example, although the manufacturer recommends limiting the coating thickness to a quarter of an inch (Tr. at 744) (Cavallo), in some cases, it was applied on the floor to a thickness of 8 inches (Tr. at 745) (Ouaou). For these reasons, Dr. Hausler's ill-conceived attempt to compare the shell coating to the floor coating is unavailing. Significantly, the floor defects discovered in 2006 — which have been repaired (AmerGen Exh. 3, at 7-3) — would not have prevented the flow of any leakage toward the sand bed drains (*ibid.*; AmerGen Exh. C, Pt. 4, A.18).

## **2. *There Is No Likelihood of Future Corrosion on the Interior Wall of the Sand Bed Region***

Although Citizens' arguments focus principally on the potential for further corrosion on the *exterior* wall in the sand bed region, they also assert that, based on UT measurements in Bays 5 and 17, a corrosive environment exists on the *interior* wall in the sand bed region that caused the wall to lose a thickness of about 0.038 inch between 1986 and 2006 (Citizens Exh. C, A.19; NRC Staff Exh. B, A.11), which — at that rate — would result in a further loss of about 0.038 inch during the renewal period. We find that Citizens' premise regarding *internal* corrosion lacks evidentiary support. Rather, the record supports the conclusion that the interior wall of the sand bed region has not experienced measurable corrosion in the past, and will not experience measurable corrosion during the renewal period.<sup>49</sup>

Notably, AmerGen does not dispute that UT measurements in Bays 5 and 17 between 1986 and 2006 indicate a loss in thickness of about 0.038 inch. But AmerGen vigorously disputes Citizens' assertion that this loss occurred on the *interior* of the shell (AmerGen Exh. C, Pt. 6, A.9 to A.12). AmerGen witnesses Mr. Gordon, Mr. Gallagher, and Mr. Tamburro testified that in 2006 AmerGen removed concrete from a portion of the internal side of the drywell shell in the sand bed region (AmerGen Exh. C, Pt. 6, A.10). The surface of the newly exposed portion of the shell — which had been embedded in concrete since construction of the Oyster Creek facility — revealed “no measurable corrosion” (*ibid.*). They attested that the absence of corrosion “demonstrates that the conditions inside the drywell will not lead to significant corrosion during the period of extended operation because interior drywell conditions over the next 22 years are expected to be the same as over the past 38 years” (*ibid.*). We agree.<sup>50</sup>

By way of background, AmerGen assumes that water has impregnated the internal concrete floor and will normally be in contact with the internal wall of the drywell shell (AmerGen Exh. 3, at 8-2 to 8-4). Nevertheless, for the following reasons, the conditions inside the drywell shell are such that “[a]ny corrosion [during the renewal period] would be vanishingly small and of no engineering

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<sup>49</sup> As explained *supra* Part II.A, the sand bed region begins at a shell height of 8 feet 11 inches (the level of the exterior concrete floor) and extends to 12 feet 3 inches. The interior wall of the shell remains embedded in concrete up to a height of about 11 feet (beneath the torus vent headers) and 12 feet 3 inches (between the torus vent headers).

<sup>50</sup> The NRC Staff agrees with AmerGen that, contrary to Citizens' assertion, the thickness reduction of about 0.038 inch was caused by corrosion on the *exterior* wall of the drywell shell (NRC Staff Exh. C.1, A.45). Further, the NRC Staff convincingly explains (*ibid.*), and AmerGen agrees (AmerGen Exh. 3, at 8-2), that “[i]t is reasonable to assume that most of the exterior corrosion took place between 1986 and 1992, when the exterior surface of the drywell shell in the sand bed region had wet sand present and was not protected by the three-layer epoxy coating” (*ibid.*).

concern’’ (AmerGen Exh. C, Pt. 6, A.9). First, because the water in contact with the interior wall of the shell has migrated through the alkaline-rich concrete floor, it has a high pH level that inhibits corrosion (AmerGen Exh. 3, at 8-3; AmerGen Exh. C, Pt. 6, A.10; NRC Staff Exh. B, A.17).<sup>51</sup> Second, any new water that enters the drywell interior (e.g., reactor coolant) and enters the concrete-to-shell interface will also have an increased pH due to its migration through the concrete, resulting in a nonaggressive, alkaline environment (AmerGen Exh. 3, at 8-3; AmerGen Exh. C, Pt. 6, A.10). Third, during operations, the nonaggressive, alkaline environment is rendered even more benign because the drywell is inerted with nitrogen, thus reducing any corrosive-promoting oxygen (AmerGen Exh. 3, at 8-3; AmerGen Exh. C, A.10 to A.12; NRC Staff Exh. B, A.12(a)).<sup>52</sup>

Finally, the record shows that during the 2006 outage, a structural engineer performed a comprehensive evaluation of the integrity of the inner drywell shell embedded in the concrete, and this evaluation was reviewed by an industry corrosion expert and an independent third-party expert on the continued integrity of the shell (AmerGen Exh. 3, at 8-3). The evaluation concluded that the “protective passive film established during concrete installation at the embedded steel/concrete interface is still intact and significant corrosion of the interior embedded drywell shell would not be expected as long as this benign environment [inside the shell] is maintained’’ (*ibid.*). Indeed, the industry corrosion expert concluded that, given the innocuous environment, “water could remain in contact with the interior drywell shell indefinitely without adverse impacts’’ (*ibid.*).

In our judgment, the evidence mandates the conclusion that the interior wall of the drywell shell in the sand bed region will not experience measurable corrosion during the renewal period. Absent further corrosion, the thickness of the shell in the sand bed region will not violate the acceptance criteria during the renewal period, and Citizens’ contention challenging the frequency of AmerGen’s UT program must be rejected.

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<sup>51</sup> As AmerGen expert Mr. Gordon explained, the high-pH water in contact with the shell “produces a protective film on the steel, and the corrosion rate is essentially negligible’’ (Tr. at 772). The record also shows that the levels of impurities in the high-pH water are significantly below the EPRI embedded steel guidelines action level recommendations (AmerGen Exh. 3, at 8-3; AmerGen Exh. C, A.10).

<sup>52</sup> The NRC Staff acknowledged that leakage from components inside the drywell may cause a corrosive environment during outages (when ambient air replaces the nitrogen) if the trenches in Bays 5 and 17 fill with water (NRC Staff Exh. B, A.12(a)). AmerGen has committed to monitoring the trenches for the presence of water, however, to preclude the creation of such an environment (*ibid.*) (citing NRC Staff Exh. 1, at A-31 to A-32).

**C. Even If Corrosion Were To Occur in the Sand Bed Region, AmerGen's Plan To Take UT Measurements Every 4 Years Provides Reasonable Assurance That the Shell Will Not Violate the Acceptance Criteria**

Even if we were to accept Citizens' assertion that the sand bed region will experience significantly measurable corrosion during the renewal period (which we do not), we would nevertheless reject their attack on AmerGen's plan to take UT measurements every 4 years, because — as we explain below — we find that Oyster Creek would experience an annual corrosion rate, *at most*, of about 0.0035 inch per year. At that rate, during the 4-year interval between UT measurements, the sand bed region would experience corrosion of about 0.014 inch, which is far less than the minimum available margin of 0.064 inch. This negates Citizens' assertion that, if further corrosion occurs, AmerGen's UT measurements are not sufficiently frequent to prevent the shell from exceeding the acceptance criteria.

To determine the maximum expected annual rate of corrosion on the exterior wall, we start by accepting Citizens' invitation (Citizens Exh. B, A.16) to use the highest historical corrosion rate ever measured in the Oyster Creek sand bed region, which was about 0.039 inch per year (AmerGen Exh. C, Pt. 6, A.14; Tr. at 765, 768 (Gordon)).<sup>53</sup> We divide the corrosion rate of 0.039 inch per year by 365 days, to get a daily corrosion rate of 0.0001069 inch (AmerGen Exh. C, Pt. 6, A.15). We then multiply the corrosion rate of 0.0001069 inch per day by 30 days to compute the corrosion expected during a month-long refueling outage, which gives a corrosion value of 0.003 inch.<sup>54</sup> Finally, because Oyster Creek refueling

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<sup>53</sup>We agree with AmerGen and the NRC Staff, who believe that an assumed annual corrosion rate of 0.039 inch during the renewal period is not realistic because the pre-1992 environment in which it occurred consisted of water-saturated sand in direct contact with an uncoated drywell, which contrasts sharply with the current environment, where the water-retaining and ion-containing sand has been removed, the ingress of water has been mitigated, and the drywell shell has been covered with a protective epoxy (AmerGen Exh. C.1, Pt. 6, A.6). The NRC Staff states that a more realistic, but appropriately conservative, corrosion rate would be about 0.002 inch per year (NRC Staff Exh. C.1, A.45), and AmerGen states that a more realistic, but appropriately conservative, corrosion rate would be about 0.0014 inch every refueling outage, which equates to 0.0007 inch per year (AmerGen Exh. B, Pt. 6, A.15). Although we acknowledge that an assumed annual corrosion rate of 0.039 inch is enormously conservative, we choose to use it in the present circumstance to show that — even accepting the corrosion rate advocated by Citizens (Citizens Exh. B, A.16) — Citizens' challenge to AmerGen's UT program lacks merit.

<sup>54</sup>As discussed *supra* Part II.A, the refueling cavity is filled with water only during refueling outages that are scheduled to occur every 2 years, or in the rare event of a nonrefueling outage when the reactor vessel must be opened, which has not occurred at Oyster Creek since 1990 (AmerGen Exh. B, Pt. 1, A.17). Because the record establishes that the refueling cavity, when filled, is the only source of water that could cause corrosion in the sand bed region (*supra* Part IV.B.1.a), the potential for a corrosive

(Continued)

outages are scheduled to occur every 2 years, we divide 0.003 inch by 2 years, resulting in an annual corrosion rate of about 0.0015 inch (*ibid.*). Assuming a corrosion rate of 0.0015 inch per year on the external wall of the drywell shell in the sand bed region, the total amount of corrosion that would occur on the external wall during the 4-year interval between UT measurements is 0.006 inch.

To this value of external corrosion that allegedly could occur in a 4-year period, we add the corrosion that allegedly could occur on the internal wall of the shell in the sand bed region. For purposes of estimating the internal corrosion, we will again accept the corrosion rate suggested by Citizens and assume that “corrosion from the interior could add 0.002 inch per year” onto the corrosion rate for the exterior (Citizens Exh. B, A.16), which means that 0.008 inch of corrosion allegedly could occur on the internal wall in the sand bed region during the 4-year interval between UT measurements.

Adding the external corrosion (0.006 inch) and the internal corrosion (0.008 inch) that allegedly could occur between UT measurements yields a total corrosion value of 0.014 inch every 4 years, which means that — contrary to Citizens’ assertion — AmerGen’s plan to take UT measurements at 4-year intervals will ensure that corrosion of the drywell shell in the sand bed region will not exceed the minimum available margin of 0.064 inch between measurements.<sup>55</sup>

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environment in the sand bed region may fairly be limited to refueling outages when the refueling cavity is filled (AmerGen Exh. B, Pt. 6, A.18; AmerGen Exh. C, Pt. 6, A.15). Notably, the assumption that the cavity is filled with water for a full month during a refueling outage is conservative. *See supra* note 4 (refueling cavity filled with water for 17 days during 2006 refueling outage).

<sup>55</sup>Of course, if AmerGen’s UT measurements revealed this level of corrosion on the drywell shell, or if it discovered *any* significant corrosion there, it would be required — in addition to notifying the NRC Staff — to take immediate corrective action, consistent with its CLB, to ensure Oyster Creek presents no undue risk of harm to public health and safety (*see, e.g.*, 10 C.F.R. §§ 50.9(b), 50.72(b)(3)(ii)(A) & (B); AmerGen Exh. 10, Commitment 27(1)).

We note that AmerGen’s commitments include completing the following 3-D structural analysis of its drywell shell prior to the period of extended operation (NRC Staff Exh. 1, at A-30 to A-31):

AmerGen will perform a 3-D finite element structural analysis of the primary containment drywell shell using modern methods and current drywell shell thickness data to better quantify the margin that exists above the Code required minimum for buckling. The analysis will include sensitivity studies to determine the degree to which uncertainties in the size of thinned areas affect Code margins. If the analysis determines that the drywell shell does not meet required thickness values, the NRC will be notified in accordance with 10 C.F.R. 50 requirements.

As explained by the NRC Staff and AmerGen (Tr. at 848-49, 851), compliance with this commitment is not a condition to granting the license renewal; rather, compliance is a license condition that must be completed prior to the period of extended operation. AmerGen represented, however, that if the results of this structural analysis were to reveal a “safety factor less than 2, . . . we would take corrective actions, one of which would be enhancing our inspection program [and] the locations of inspection . . . [S]ince we [would notify] the [NRC Staff,] they would be involved in any outcomes

(Continued)

Our conclusion that AmerGen's plan to take UT measurements at 4-year intervals is sufficient to ensure an adequate safety margin is fortified by Citizens' statement that any future corrosion of the drywell shell will occur predominantly toward the bottom of the sand bed region, not the top (Tr. at 325) (Hausler). Citizens' expert observed that because the sand has been removed from the sand bed region, it will no longer act as a medium to retain leaking water and to keep it in contact with the drywell shell at the top of the sand bed region; rather, any water will now drain toward the bottom of the region, causing the most severe corrosion to occur there (Tr. at 324-25) (Hausler). This observation — which we find reasonable — means that future corrosion will not be significant in the thinnest, most corroded area at the top of the sand bed region (Tr. at 323-24) (Hausler). Instead, any significant future corrosion will occur toward the bottom of the sand bed region, which experienced less historical corrosion and, accordingly, has "more metal" (Tr. at 344-45) (Gallagher). The record shows that the remaining available margin toward the bottom of the sand bed region is 0.229 inch (Tr. at 680-82) (Polaski), which is more than 300% greater than the 0.064 inch of available margin based on measurements taken at the top. In short, because there is more metal toward the bottom of the sand bed region where future corrosion is most likely to occur, there can be even greater confidence that the frequency of AmerGen's UT measurements during the renewal period will be adequate to ensure that the drywell shell in the sand bed region will not violate the acceptance criteria.

## V. PENDING MOTIONS

Pending before us are four motions that were submitted after the close of the evidentiary hearing. We address these motions in turn.

First, by motion dated October 22, 2007, AmerGen asked that we strike portions of Citizens' proposed findings of fact and conclusions of law on the ground that they allegedly contained facts that were outside the record and arguments that were outside the scope of this proceeding (Motion To Strike Portions of Citizens' Findings of Fact (Oct. 22, 2007)). Citizens opposed the motion as lacking in merit (Citizens' Answer to AmerGen Motion To Strike (Nov. 1, 2007)), and the NRC Staff, although it agreed with AmerGen's objections, viewed the motion

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we come up with" (Tr. at 848) (Gallagher); *accord* Tr. at 810-11 (Gallagher). *See also* AmerGen Exh. C, Pt. 2, A.8 (AmerGen would be required to obtain NRC approval if it wished to alter Oyster Creek's CLB by seeking to reduce the shell safety factor to a value of less than 2.0); NRC Staff Exh C, A.12(e) ("if AmerGen wants to revise its acceptance criteria for values that are not encompassed by the GE analyses (e.g., less stringent drywell shell thickness criteria) based on the results of the [3-D analysis], AmerGen would have to submit that analysis for NRC review and approval").

as unnecessary (NRC Staff Answer to AmerGen's Motion To Strike Portions of Citizens' Proposed Findings of Fact and Conclusions of Law (Oct. 31, 2007)). We agree with the NRC Staff that AmerGen's motion to strike was unnecessary, because the instant decision is based solely on factual material that is a matter of record, and the rationale for our conclusions do not rely on arguments that are outside the scope of this proceeding. We therefore dismiss AmerGen's motion to strike, and the responses thereto, as moot.

Second, by pleading dated October 22, 2007, AmerGen submitted what it characterized as an answer opposing Citizen's alleged demand to hold the proceeding open (AmerGen's Answer Opposing Citizens' Demand to Hold the Proceeding Open (Oct. 22, 2007)). In its pleading (at 1-2), AmerGen asserted that Citizens' proposed findings of fact and conclusions of law included a request to hold this proceeding open to allow Citizens to litigate further the drywell contention if the Board's decision conditions issuance of a renewed license on the outcome of the future drywell shell thickness computer modeling (*see supra* note 55) (discussing 3-D analysis that AmerGen must complete prior to period of extended operation). AmerGen stated that it interpreted Citizens' request as a motion to hold this proceeding open, which allegedly justified AmerGen's submission of an opposing answer. Citizens moved to strike AmerGen's answer as unauthorized (Citizens' Motion To Strike AmerGen's Unauthorized Answer (Nov. 1, 2007)),<sup>56</sup> and the NRC Staff declined to take a position (Letter from Mary C. Baty, Counsel for the NRC Staff, to Oyster Creek Licensing Board (Nov. 7, 2007)).<sup>57</sup> Although we do not view Citizens' suggestion to hold this proceeding open to be in the nature of a motion, we nevertheless need not rule on the merits of these competing pleadings, because our decision does not contemplate holding this proceeding open. We therefore dismiss these pleadings as moot.

Third, by motion dated October 26, 2007, Citizens asked this Board to strike allegedly erroneous testimony from the record (Motion To Strike Erroneous Testimony (Oct. 26, 2007)). According to Citizens' motion (at 1-3), new information based on recent experience at the Oconee Nuclear Power Plant showed that critical testimony in this case regarding the potential for end-of-life epoxy coating failure was incorrect and incomplete. AmerGen and the NRC Staff argued that Citizens' motion lacked merit (AmerGen's Answer Opposing Citizens' October 26, 2007

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<sup>56</sup> AmerGen opposed Citizens' motion to strike (AmerGen's Answer Opposing Citizens' November 1, 2007 Motion To Strike (Nov. 9, 2007)).

<sup>57</sup> Counsel for the NRC Staff explained that she would not take a position on this or future procedural motions submitted by the Applicant or the Intervenors "unless the motion challenges the integrity of the Staff or the integrity of the process" (Letter from Mary C. Baty, Counsel for the NRC Staff, to Oyster Creek Licensing Board (Nov. 7, 2007)). We commend counsel for her restraint, believing that the NRC Staff — in the interest of adjudicative efficiency and economy — might profitably consider applying this, or a similar, standard to procedural motions in future proceedings.

Motion To Strike (Nov. 5, 2007); NRC Staff Answer to Citizens' Motion To Strike Erroneous Testimony (Nov. 5, 2007)). We agree with AmerGen and the NRC Staff that Citizens' motion is substantively baseless. As explained in the answers submitted by AmerGen (at 4-5) (citing the attached Affidavit of Jon R. Cavallo (Nov. 2, 2007), and the NRC Staff (at 2-5) (citing the attached Affidavit of James A. Davis, Ph.D. (Nov. 5, 2007)), the experience at Oconee is not relevant to this proceeding, because the epoxy used there is produced by a different manufacturer, and it has different specifications for surface preparation, application, and curing. Critically, unlike Oyster Creek, Oconee neglected to comply with the manufacturer's specifications for surface preparation, application, and curing. The coating failure at Oconee thus was not an end-of-life failure but, rather, occurred due to an improper application and curing of the primer, the presence of air in the top coat, and exposure of the system to high humidity during replacement of steam generators and the reactor vessel head. Accordingly, Citizens' reliance on Oconee is misplaced, and their assertion that the experience at Oconee undercuts critical testimony in this case regarding the potential for end-of-life epoxy coating failure is incorrect. We therefore deny their motion to strike.

Finally, by motion dated December 10, 2007, Citizens moved for an extension of time to file an appeal with the Commission.<sup>58</sup> In their motion (at 1-2), Citizens explained that if a decision were issued on or around December 20, and if the decision were adverse to Citizens, their petition for review would be due on or around January 4, 2008, pursuant to 10 C.F.R. § 2.341(b). Because their lead counsel will be out of the country from December 22 through December 30, 2007, they argued that — given the complexity of this case and the voluminous record — they satisfy the “good cause” standard for being granted a modest extension of time (10 C.F.R. § 2.307(a)). We agree that Citizens satisfy the “good cause” standard. However, governing case law bars us from granting the relief they request, because “requests for extension of time to file exceptions are to be determined by the [relevant appellate body]” (*Consolidated Edison Co. of New York* (Indian Point, Unit 3), ALAB-281, 2 NRC 6, 7 n.2 (1975)). Accordingly, Citizens' request for an extension of time to file a petition of review must be directed to the Commission.<sup>59</sup>

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<sup>58</sup> AmerGen and the NRC Staff opposed Citizens' extension request, asserting that the request (1) should be directed to the Commission, (2) is premature, and (3) fails to satisfy the “good cause” standard. See AmerGen's Answer Opposing Citizens' Motion for Extension of Time To File Any Appeal at 1-2 (Dec. 17, 2007); NRC Staff Answer to Citizens' Motion for an Extension of Time To File Any Appeal at 1-3 (Dec. 17, 2007).

<sup>59</sup> It could reasonably be argued that the broad grant of authority in 10 C.F.R. § 2.307(a) was intended to empower licensing boards to grant the type of relief requested by Citizens. Cf. Fed. R. App. P.

(Continued)

## VI. CONCLUSIONS OF LAW

For the foregoing reasons, we conclude that AmerGen has demonstrated by a preponderance of the evidence that the acceptance criteria, which currently are satisfied, will also be satisfied at the beginning of the renewal period (*supra* Part IV.A.2).

We further conclude that AmerGen has demonstrated by a preponderance of the evidence that the acceptance criteria will be satisfied throughout the renewal period, because there is no likelihood that the sand bed region of the drywell shell will experience significant corrosion during that period (*supra* Part IV.B). More precisely, we conclude that the *external* wall of the drywell shell in the sand bed region will not experience significant corrosion, because AmerGen's corrective and mitigating actions, coupled with the commitments in its aging management program, provide reasonable assurance that (1) water will not leak into that region (*supra* Part IV.B.1.a), and (2) even if water were to leak into that region, it will not penetrate the robust, three-layer epoxy coating (*supra* Part IV.B.1.b). Nor will the *internal* wall of the drywell shell in the sand bed region experience significant corrosion given its noncorrosive environment and the absence of any measurable corrosion in the past (*supra* Part IV.B.2).

Finally, even if we assumed — contrary to our express findings — that the sand bed region would experience measurable corrosion during the renewal period, we conclude that AmerGen has demonstrated by a preponderance of the evidence that its plan to take UT measurements every 4 years, coupled with the other commitments in its aging management program, is sufficient to ensure the bounding available margin of 0.064 inch is not violated (*supra* Part IV.C). This is so because the evidence shows that Oyster Creek will experience an annual corrosion rate, *at most*, of about 0.0035 inch per year, resulting in corrosion of about 0.014 inch during the 4-year interval between UT measurements, which does not begin to approach the available margin of 0.064 inch. Moreover, the available margin of 0.064 inch is based on UT measurements at the *top* of the sand bed region, which is the most heavily corroded area due to the prior presence of sand that retained the moisture in that area and kept it in direct contact with the shell. Because the sand has been removed from the sand bed region, any future leakage will drain to the bottom of the region, which has corroded less than the top and which has a remaining available margin of 0.229 inch (i.e., 300% greater

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4(a)(5) (authorizing district court to extend time to file a notice of appeal). However, because the regulations applied by the Appeal Board in *Indian Point* contained a provision (10 C.F.R. § 2.711(a) (1975)) that was substantially identical to section 2.307(a), we are constrained to conclude — absent intervening precedent directing otherwise — that section 2.307(a) does not authorize us to extend the time for filing a petition for review.

than at the top), thus increasing our confidence that the frequency of AmerGen's UT measurements will be adequate.<sup>60</sup>

## VII. ORDER

For the foregoing reasons, Citizens' contention is resolved in favor of AmerGen. Pursuant to 10 C.F.R. § 2.1210(a), 40 days after issuance of this decision, it will constitute final agency action on Citizens' contention unless: (1) a party files a petition for Commission review within 15 days after service of this decision (10 C.F.R. §§ 2.341(b)(1), 2.1212), or a party files a petition for Commission review within any extended period of time granted by the Commission for "good cause" shown (*id.* § 2.307(a); *supra* note 59 and accompanying text); or (2) the Commission, in its discretion, determines that review is warranted (*id.* § 2.1210(a)(3)). Unless otherwise authorized by law, a party who wishes to seek judicial review of this decision must first seek Commission review (*id.* § 2.1212).

It is so ORDERED.

THE ATOMIC SAFETY AND  
LICENSING BOARD<sup>61</sup>

E. Roy Hawkens, Chairman  
ADMINISTRATIVE JUDGE

Dr. Paul B. Abramson  
ADMINISTRATIVE JUDGE

Dr. Anthony J. Baratta\*  
ADMINISTRATIVE JUDGE

Rockville, Maryland  
December 18, 2007

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<sup>60</sup> All issues or arguments presented by the parties and not addressed herein have been found to be lacking in merit or unnecessary to this decision.

<sup>61</sup> Copies of this Memorandum and Order were sent this date by Internet e-mail to counsel for: (1) AmerGen; (2) Citizens; (3) the NRC Staff; and (4) New Jersey.

\*Judge Baratta has filed an Additional Statement that immediately follows this Initial Decision.

### **Additional Statement of Administrative Judge Anthony J. Baratta, Ph.D.**

Although I join with my colleagues in the previous decision in the main, I differ on one point, regarding whether the Licensee has fully shown that there is reasonable assurance that the factor of safety required by the regulations will be met throughout the period of extended operation assuming a 4-year (every other refueling) inspection cycle.

The design and function of the drywell is governed by 10 C.F.R. Part 50, Appendix A, General Design Criteria (GDC), Design Bases for Protection Against Natural Phenomena and Environmental and Dynamic Effects Design Bases, specifically GDC 16, Containment Design, and GDC 50, Containment Design Basis. AmerGen complies with these GDC by meeting the applicable ASME<sup>1</sup> Boiler and Pressure Vessel Code standards and specifications (AmerGen Exh. B, Pt. 2, A.8). The relevant ASME Code requirements include a safety factor of 2 for the ASME Code allowable stresses for the refueling case, which is the limiting load combination. The safety factor of 2 requires that the actual stresses on the drywell shell be one-half of the stress which would cause the shell to physically buckle under the postulated refueling accident conditions.

In the 1980s, the Oyster Creek Nuclear Generating Station (OCNGS) identified that water from the reactor cavity had penetrated into the sand used to provide additional support for the drywell. This sand, located in the sand bed region, acted to keep the water in direct contact with the uncoated drywell shell. The presence of water, coupled with improper sand bed drainage, resulted in the corrosion of the exterior of the drywell shell. General Electric (GE) was then retained to analyze the structural integrity of the drywell shell in this region if the sand were removed from the sand bed (AmerGen Exh. B, Pt. 2, A.8, A.10, A.11).

The analyses made by GE considered two cases, one in which the sand remained in the sand bed region and the other in which the sand was removed from the sand bed region. Each analysis is comprised of a stress analysis and stability analysis. Two finite element models, one axisymmetric,<sup>2</sup> and another, a 36 degree pie slice model, were used for a stress analysis. The ANSYS<sup>3</sup> computer program was used to perform the analyses (AmerGen Exh. 37, NRC Safety Evaluation: Drywell Structural Integrity, OCNGS, at 3 (Apr. 24, 1992)).

The axisymmetric model was used to determine the stresses for the seismic and the thermal gradient loads. The pie slice model was used for deadweight and pressure loads. The pie slice model includes the vent pipe and the reinforcing ring and was also used for buckling analysis. The same models were used for the

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<sup>1</sup> American Society of Mechanical Engineers.

<sup>2</sup> The thickness is assumed uniform throughout the 360 degrees of the sand bed region in such a model. *See* Tr. at 399 (Mehta).

<sup>3</sup> ANSYS — Structural analysis tool developed by ANSYS, Inc.

cases with and without sand, except that in the former, the stiffness of the sand in contact with the steel shell was considered. The shell thickness in the sand region was assumed to be 0.700 inch for the with-sand case and to be 0.736 inch for the without-sand case. The 0.700 inch was, as claimed by the Licensee, used for conservatism and the 0.736 inch is the projected thickness at the start of fuel cycle 14R. The same thickness of the shell above the sand region was used for both cases (*ibid.*). The thickness of 0.736 inch was an input the plant owner provided for GE (Tr. at 395) (Mehta).

For buckling, the GE analyses determined that the relevant ASME Code requirements (that include an ASME Code safety factor of 2 for the allowable stresses) would continue to be met even if the shell in the sand bed region had a uniform thickness of 0.736 inch. In other words, the entire shell in the sand bed region could have been manufactured and erected with a uniform thickness of 0.736 inch and it would have met ASME Code allowable stresses (AmerGen Exh. B, Pt. 2, A.10).

In the early 1990s, GE also performed sensitivity analyses on their original buckling analysis. These analyses sequentially evaluated locally thinned areas using 1-square-foot areas of 0.636 inch (0.100 inch less than 0.736 inch) and 0.536 inch (0.200 inch less than 0.736 inch), each with a 1-foot transition to the surrounding shell to a uniform thickness of 0.736 inch. This configuration is shown in AmerGen Exhibit 11. In addition to using a uniform thickness for the rest of the drywell shell of 0.736 inch, GE's analyses placed the locally thinned areas in the location of the bay with the largest stresses, which is midway between the torus downcomer penetrations that divide each bay (AmerGen Exh. B, Pt. 2, A.13).

AmerGen stated that there are several sources of conservatism built into the original properties used for the elements in the analysis. One is the use of the conservative value of 0.736 inch because it was known from UT thickness measurements that the shell was on average significantly thicker than 0.736 inch (AmerGen Exh. C, Pt. 2, A.6).

Other sources of conservatisms for the modeling on the whole include the following:

First, the Torus vent pipes that are present in each Bay and the reinforcing plates for their penetrations stiffen the shell. This results in a stress reduction of the shell in their influence zone which would allow uniform and local shell thickness to be below the values modeled by GE and still satisfy ASME requirements. The areas of most significant corrosion are beneath or near the torus vent pipes (*ibid.*).

A second conservatism is that the local buckling criterion assumes that the rest of the drywell shell in the sand bed region has a uniform thickness of 0.736 inch. This is because the local buckling criterion was derived through sensitivity analyses using the 0.736 inch uniform thickness modeling. Thus, an area could

thin to 0.536, as shown in AmerGen Exhibit 11, and still meet the ASME code so long as the *remainder of the shell was uniformly thicker than 0.736 inch (ibid.)*.

It is this latter point that my colleagues fail to appreciate, namely that the analysis did not show the shell was acceptable with both a thinning to 0.736 inch and localized regions that satisfy the local buckling criteria. Rather, the GE analysis said that if the shell is thicker than 0.736 inch, then such regions are acceptable. To date, however, no analysis of the *actual* condition of the drywell has been done. While I concur with my colleagues that further corrosion of the drywell is unlikely, it cannot be ruled out. Thus I consider it essential to have a conservative best estimate analysis of the drywell shell before entering the period of extended operation.

The current analysis by AmerGen uses a thickness of 0.736 inch. AmerGen stated that this value came from the UT data from the internal grids, and that “[p]rior to the sand removal from the sand bed region, the internal grids were inspected at every outage of opportunity” (Tr. at 396) (Tamburro). Curve fits were performed by the owner using a regression analysis on the average data and then statistical testing of the curve fits were performed to ensure that they best represented the corrosion. Based on this regression analysis of the lower 95% confidence interval of the average points, the projected thickness in the sand bed was determined at the time of the outage where repairs to the drywell were to be performed. That thickness so determined was 0.736 inch for the most limiting of the internal grids (Tr. at 396-98) (Tamburro).

Thus, the 0.736 inch does not represent the actual condition of the drywell. We do not know what the actual safety factor is. It is thought that the current state of the drywell suggests that the factor of safety is about 2 or greater. This conclusion is drawn from the GE analysis that assumed the entire sand bed region of the drywell to be uniformly thinned to a thickness of 0.736 inch. The shell measurements have shown that the thickness is on average greater than 0.736 inch. Thus, when all things are taken into account, including the actual thickness, the safety factor is likely to be greater than 2, which I concur with. *See* Tr. at 441 (Mehta). Without doing a calculation, however, one cannot determine the actual value (Tr. at 453-54) (Hartzman). This conclusion is supported by the results of an analysis of the OCNGS drywell performed by Sandia National Laboratories and reported in NRC Staff Exhibit 6. The results of the Sandia analysis for the limiting refueling condition yield a safety factor of 2.15 using what Sandia considered to be the best estimate of thicknesses for the drywell shell. *See* NRC Staff Exh. 6, at 72.

While the Sandia results are encouraging, they are based on a very limited knowledge of the actual thicknesses of the shell. The measurements used in developing the Sandia model come from the limited set of ultrasonic test measurements taken over time by AmerGen (NRC Staff Exh. 6, at 15, 49). Citizens note that these measurements encompass only a small area of the drywell

as depicted in the exhibit. *See* Citizens Exh. C, A.2, A.11. Thus, there are large areas of the drywell in the sand bed region that do not have recent measurements or any measurements at all.

Because of the lack of complete UT of the drywell, Citizens have suggested that a much thinner point than 0.49 inch might have been observed had additional measurements been made. Their statement is based on the use of an extreme value statistics analysis of the data that predict such values. *See* Citizens Exh. C, A.16, A.17. Citizens conclude that there is a small but finite probability that such areas do exist. *See* Tr. at 822 (Hausler). While I do not agree with the approach used by Citizens in deriving this value I do concur that there is a lack of knowledge about the actual thickness of the drywell shell and that this lack of knowledge must be taken into account in any analysis.

The Staff recognized the need for additional analysis and required it as a license condition. Specifically, the seventh license condition requires the Applicant to perform a 3-dimensional (3-D) finite element analysis of the drywell shell prior to entering the period of extended operation (NRC Staff Exh. 1, at 1-18). AmerGen has stated that for the 3-D analysis, the inputs are the already measured thicknesses, which will be retaken in 2008 and will be used to create the 3-D model. The model will use the actual geometries and is a full 360 degree model. Thus, no axisymmetric assumptions are needed allowing the drywell to be modeled exactly. The model will also employ a finer mesh than the previous GE model (Tr. at 659-60) (Gallagher).

To account for the very limited data set of thickness measurements, I would impose an additional requirement on the 3-D analysis to be performed by the Applicant. Specifically, the Applicant should be required to perform a series of sensitivity analyses, at least one of which includes the use of an extrapolation scheme to determine the thicknesses between the measured locations. The technique might be similar to the one suggested by Citizens' expert, Dr. Hausler, that uses contour plots generated from known thicknesses both interior and exterior.

Thus, while I concur with the majority with their findings of fact, I do not concur that we at this point have a complete understanding of the drywell shell state until a conservative best estimate analysis of the actual drywell shell is performed. This analysis should as a minimum include an approach such as the one outlined above.

## CASE NAME INDEX

AMERGEN ENERGY COMPANY, LLC  
LICENSE RENEWAL; INITIAL DECISION (Rejecting Citizens' Challenge to AmerGen's Application To Renew Its Operating License for the Oyster Creek Nuclear Generating Station); Docket No. 50-0219-LR (ASLBP No. 06-844-01-LR); LBP-07-17, 66 NRC 327 (2007)

CAROLINA POWER & LIGHT COMPANY  
LICENSE RENEWAL; MEMORANDUM AND ORDER (Ruling on Standing and Contentions of Petitioners North Carolina Waste Awareness and Reduction Network and Nuclear Information and Resource Service); Docket No. 50-400-LR (ASLBP No. 07-855-02-LR-BD01); LBP-07-11, 66 NRC 41 (2007)

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- Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 103 (1993)
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- Alabama Power Co.* (Joseph M. Farley Nuclear Plant, Units 1 and 2), CLI-81-27, 14 NRC 795, 797 (1981)
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- boards are not to consider whether enforcement orders need strengthening; LBP-07-16, 66 NRC 306 (2007)
  - to the extent that petitioner's request for release of information seeks to enhance the enforcement measures already outlined by the Staff in the confirmatory order, this is also outside the scope of the proceeding; LBP-07-16, 66 NRC 293, 303, 311, 326 n.339 (2007)
- Alaska Department of Transportation and Public Facilities*, CLI-04-26, 60 NRC 399, 405 (2004)
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- an individual simply is not adversely affected by a confirmatory order that improves the safety situation over what it was in the absence of the order; LBP-07-16, 66 NRC 302 (2007)
- boards are not to consider whether enforcement orders need strengthening; LBP-07-16, 66 NRC 293 (2007)
- in a case involving an enforcement order, the relevant points of comparison are the individual's positions with and without the Staff's order, not whether the individual's position would be improved by some hypothetical substitute order; LBP-07-16, 66 NRC 302, 317 (2007)
- in addition to the distance of the individual from the facility, a link between the confirmatory order and the alleged harm to the individual is necessary to establish standing; LBP-07-16, 66 NRC 294, 311, 324 (2007)
- petitioner is required to show that his or her request is within the scope of the proceeding by demonstrating that he or she will be adversely affected by the actual terms of the enforcement order as they exist, rather than as a consequence of the order lacking certain provisions the petitioner claims are necessary; LBP-07-16, 66 NRC 285, 293-94, 306, 310, 311, 316, 317-18, 323, 324 (2007)
- Alaska Department of Transportation and Public Facilities*, CLI-04-26, 60 NRC 399, 406 n.28 (2004)
- it is unlikely that petitioners will often obtain hearings on confirmatory enforcement orders; LBP-07-16, 66 NRC 285 (2007)
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- the Commission defers to a board's rulings on admissibility of contentions unless the appeal points to an error of law or abuse of discretion; CLI-07-25, 66 NRC 104 (2007)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 128-29 (2007), *aff'g* LBP-06-7, 63 NRC 188 (2006)
- the Commission follows the *Mothers for Peace* decision only in those cases arising in the geographical area where it is binding, but continues to adhere to prior precedent in all other cases; LBP-07-14, 66 NRC 185 (2007)
- the Commission upheld a licensing board decision rejecting a contention challenging an applicant's failure to consider an aircraft attack scenario in its environmental report's SAMA analysis; LBP-07-11, 66 NRC 83 (2007)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 128-29 & n.14 (2007)
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- NEPA does not require the NRC to consider the environmental consequences of hypothetical terrorist attacks on NRC-licensed facilities; LBP-07-14, 66 NRC 194 (2007)
- prior NRC precedent is consistent with Supreme Court NEPA doctrine, which requires a reasonably close causal relationship between federal agency action and environmental consequences before NEPA is triggered, a relationship similar to that of proximate cause in tort law; LBP-07-14, 66 NRC 186 (2007)
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- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 129-30 (2007)
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- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 130 n.25 (2007), *aff'g* LBP-06-7, 63 NRC 188 (2006)  
a license renewal application does not involve new construction, and so there is no change to the physical plant and thus no creation of a new terrorist target; LBP-07-11, 66 NRC 84 (2007)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 130-34 (2007)  
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- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 131 (2007), *aff'g* LBP-06-7, 63 NRC 188 (2006)  
there is no basis for admitting a NEPA-terrorism contention in a license renewal proceeding because the GEIS has already performed a discretionary analysis of terrorist acts in connection with license renewal and concluded that the core damage and radiological release from such acts would be no worse than the damage and release to be expected from internally initiated events; LBP-07-11, 66 NRC 84 (2007)
- AmerGen Energy Co. LLC* (Oyster Creek Nuclear Generating Station), LBP-06-11, 63 NRC 391, 395-96 & n.3 (2006)  
when new contentions are based on breaking developments or information, they are to be treated as new or amended, not as nontimely; LBP-07-14, 66 NRC 210 n.95 (2007)
- AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-06-16, 63 NRC 737, 744-45 (2006)  
the first step in assessing the admissibility of a new contention once an adjudicatory proceeding has been initiated is to determine if it is timely; LBP-07-15, 66 NRC 266 (2007)
- American Manufacturers Mutual Insurance Co. v. American Broadcasting — Paramount Theaters, Inc.*, 388 F.2d 272, 280 (2d Cir. 1967)  
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- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)  
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when petitioner has allegedly failed to dispute facts that might affect the outcome of the suit under the governing law, its remaining irrelevant or unnecessary claims should not be counted in ruling on applicant's motion for summary disposition; LBP-07-12, 66 NRC 118 (2007); LBP-07-13, 66 NRC 140 (2007)
- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986)  
if evidence is not significantly probative, summary judgment may be granted; LBP-07-13, 66 NRC 140 n.8 (2007)
- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 250 (1986)  
a judge must grant summary disposition if, under the governing law, there can be but one reasonable conclusion as to the verdict; LBP-07-13, 66 NRC 140 n.8 (2007)
- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 252 (1986)  
in ruling on summary disposition motions, a judge must ask himself whether a fair-minded jury could return a verdict for the nonmovant on the evidence presented; LBP-07-13, 66 NRC 140 n.8 (2007)
- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 253 (1986)  
if there is no evidence upon which a reasonable mind might fairly conclude for the nonmovant, a summary disposition motion must be granted; LBP-07-13, 66 NRC 140 n.8 (2007)

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- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 254 (1986)  
there is no genuine issue if the evidence presented in the opposing affidavits is of insufficient caliber or quantity to allow a rational finder of fact to find for opponent of summary disposition;  
LBP-07-13, 66 NRC 141 n.9 (2007)
- Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986)  
summary judgment is not appropriate if it would require a judge to engage in the making of credibility determinations, the weighing of the evidence, or the drawing of legitimate inferences from the facts; LBP-07-12, 66 NRC 126 (2007)
- Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991)  
although a board may appropriately view petitioner's support for its contention in a light that is favorable to the petitioner, the petitioner must provide some support for his or her contention, in the form of either facts or expert testimony; LBP-07-16, 66 NRC 288 (2007)  
if petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions of fact that favor the petitioner, nor may the board supply information that is lacking; LBP-07-10, 66 NRC 23 (2007)  
while a board may appropriately view a petitioner's supporting information in a light favorable to the petitioner, failure to provide such information regarding a proffered contention requires the contention be rejected; LBP-07-10, 66 NRC 23 (2007); LBP-07-16, 66 NRC 287 (2007)
- Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991)  
failure to comply with any of the contention pleading requirements is grounds for dismissing a contention; LBP-07-10, 66 NRC 22 (2007); LBP-07-16, 66 NRC 286 (2007)  
information in support of a contention must include references to the specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute; LBP-07-11, 66 NRC 56 (2007)
- Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 156 (1991)  
if petitioner believes that applicant failed to address a relevant issue, then petitioner is to explain why the application is deficient; LBP-07-11, 66 NRC 58 (2007)
- Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 NRC 397, 410, *aff'd in part and rev'd in part on other grounds*, CLI-91-12, 34 NRC 149 (1991)  
contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking are inadmissible;  
LBP-07-10, 66 NRC 22-23 (2007)
- Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 NRC 397, 412 (1991), *rev'd in part on other grounds*, CLI-91-12, 34 NRC 149 (1991)  
a contention must allege facts sufficient to establish that it falls directly within the scope of a proceeding; LBP-07-11, 66 NRC 57 (2007)
- B.F. Goodrich Co. v. U.S. Filter Corp.*, 245 F.3d 587, 593 n.3 (6th Cir. 2001)  
a procedure that amounts to a trial of the action and technically is not a disposition by summary judgment is appropriate only if it is clear that there is nothing else to be offered by the parties and there is no prejudice in proceeding in this fashion; LBP-07-12, 66 NRC 127 n.71 (2007)
- Babcock & Wilcox Co.* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 81, *appeal dismissed*, CLI-93-9, 37 NRC 190 (1993)  
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- Babcock & Wilcox Co.* (Apollo, Pennsylvania Fuel Fabrication Facility), LBP-93-4, 37 NRC 72, 84 (1993)  
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- Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 NRC 39, 41, *motion to vacate denied*, CLI-98-15, 48 NRC 45 (1998)  
applicant argues that petitioners have not asserted that an alleged noncompliance with fire protection regulations described in a 2.206 petition (and rejected by the acting director) constitutes a genuine dispute of fact in regard to whether a license should be renewed; LBP-07-11, 66 NRC 71 (2007)  
the Commission interprets the provisions of Parts 51 and 54 as they apply to license renewal proceedings; LBP-07-11, 66 NRC 59 (2007)
- Banks v. District of Columbia*, 377 F. Supp. 2d 85, 89 (D.D.C. 2005)  
although wholly conclusory statements for which no supporting evidence is offered need not be taken as true for summary judgment purposes, a court may not make credibility determinations or weigh the evidence at the summary judgment stage; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131 (2007)
- Boston Edison Co.* (Pilgrim Nuclear Power Station), CLI-82-16, 16 NRC 44, 45-46 (1982), *aff'd*, *Bellotti v. NRC*, 725 F.2d 1380 (D.C. Cir. 1983)  
the scope of the hearing on an enforcement matter is limited to the issue of whether the confirmatory order should be sustained; LBP-07-16, 66 NRC 283 (2007)
- Business and Professional People for the Public Interest v. AEC*, 502 F.2d 424, 428 (D.C. Cir. 1974)  
the purpose of the contention rule is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-07-16, 66 NRC 285 (2007)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), ALAB-852, 24 NRC 532, 544-45 (1986)  
applicant's failure to comply with a guidance document does not demonstrate failure to comply with the relevant regulations; LBP-07-14, 66 NRC 197 (2007)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), CLI-01-11, 53 NRC 370, 384 (2001)  
summary disposition may be a useful device to eliminate the need for the time and cost of a hearing if the truth on a contested issue is clear and there is no genuine issue on any material fact; LBP-07-12, 66 NRC 127 (2007)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-99-25, 50 NRC 25 (1999)  
the proximity presumption was accorded to an interested county whose border was 17 miles from a facility that wanted to increase its spent fuel storage capacity; LBP-07-14, 66 NRC 183 (2007)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-99-25, 50 NRC 25, 29-31 (1999)  
as a foundation for establishing standing, licensing board precedents support the application of a similar proximity radius in cases involving large amounts of spent nuclear fuel; LBP-07-14, 66 NRC 187 (2007)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-99-25, 50 NRC 25, 31 (1999)  
intervention petitioners are not required to demonstrate their asserted injury with certainty, or to provide extensive technical studies in support of their standing argument; LBP-07-14, 66 NRC 188 (2007)
- Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516 (1980)  
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- Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir.), *cert. denied*, 502 U.S. 994 (1991)  
acceptance of applicant's undue narrowing of site options in order to predetermine the outcome of the alternative site review would render the NEPA alternative analysis a foreordained formality; CLI-07-27, 66 NRC 227 (2007)
- Citizens Awareness Network, Inc. v. NRC*, 391 F.3d 338, 343, 351, 355 (1st Cir. 2004)  
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- City of Carmel-by-the-Sea v. Department of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997)  
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- City of New York v. Department of Transportation*, 715 F.2d 732, 743 (2d Cir. 1983)  
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- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993)  
a petitioner must demonstrate a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-07-14, 66 NRC 182 (2007)
- Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-92-4, 35 NRC 114, 125-26 (1992), *rev'd on other grounds*, CLI-93-21, 38 NRC 87 (1993)  
it is better practice for petitioners to present a fully developed argument for standing in each proceeding in which they seek to intervene, especially given that a board in one proceeding is not bound to follow the ruling of another board absent explicit affirmation by the Commission; LBP-07-10, 66 NRC 19 n.9 (2007); LBP-07-14, 66 NRC 189 n.57 (2007)
- Commonwealth Edison Co.* (Braidwood Nuclear Power Station, Units 1 and 2), CLI-86-8, 23 NRC 241, 244 (1986)  
the most important of the late-filing criteria is good cause, if any, for the failure to file on time; LBP-07-14, 66 NRC 191 n.64 (2007)
- Commonwealth Edison Co.* (Carroll County Site), ALAB-601, 12 NRC 18, 24 (1980)  
a contention is not cognizable unless it is material to matters that fall within the scope of the proceeding for which the licensing board has been delegated jurisdiction; LBP-07-11, 66 NRC 57 (2007)
- Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), ALAB-616, 12 NRC 419, 421 (1980)  
in a license renewal proceeding, licensee must demonstrate that it satisfies the "reasonable assurance" standard by a preponderance of the evidence; LBP-07-17, 66 NRC 340 (2007)
- Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), ALAB-616, 12 NRC 419, 426-27 (1980)  
a contention is not cognizable unless it is material to matters that fall within the scope of the proceeding for which the licensing board has been delegated jurisdiction; LBP-07-11, 66 NRC 57 (2007)
- Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 188, 191 (1999)  
the benefits of the proximity presumption are not limited to those who reside within the area in which the presumption applies, but can be extended to those who conduct everyday activities or visit within that area; LBP-07-10, 66 NRC 17 (2007)
- Commonwealth Edison Co.* (Zion Nuclear Power Station, Units 1 and 2), CLI-99-4, 49 NRC 185, 188, 191-92 (1999)  
in the absence of a showing that the proposed license amendment obviously entails an increased potential for offsite consequences, petitioners must base their standing upon more than residence or activities within a particular proximity of the plant by making a showing of a plausible chain of events that would result in offsite radiological consequences posing a distinct new harm or threat to the participant; LBP-07-10, 66 NRC 15 (2007)  
to establish standing in operating license amendment cases, petitioners must assert an injury-in-fact associated with the challenged license amendment, not simply a general objection to the facility; LBP-07-10, 66 NRC 15 (2007)
- Consolidated Edison Co. of New York* (Indian Point, Unit 2), ALAB-188, 7 AEC 323 (1974)  
traditionally, a crucial issue at the operating license stage was whether the facility had indeed been constructed in accordance with the permit; LBP-07-14, 66 NRC 203 (2007)
- Consolidated Edison Co. of New York* (Indian Point, Unit 3), ALAB-281, 2 NRC 6, 7 n.2 (1975)  
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- Consumers Energy Co.* (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-19, 65 NRC 423, 426 (2007)  
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- Consumers Energy Co.* (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-19, 65 NRC 423, 426-27 (2007)  
with respect to a license transfer for an independent spent fuel storage installation, the proximity presumption was rejected for a petitioner living within 50 miles of the plant; LBP-07-14, 66 NRC 183 (2007)
- Consumers Energy Co.* (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-21, 65 NRC 519, 522-23 (2007)  
the difference in potential risk between an independent spent fuel storage installation and an operating reactor justifies treating ISFSI and license transfer cases differently in terms of potential proximity presumption; LBP-07-10, 66 NRC 15, 18 (2007)
- Consumers Energy Co.* (Big Rock Point Independent Spent Fuel Storage Installation), CLI-07-21, 65 NRC 519, 523-24 (2007)  
the benefits of the proximity presumption are not limited to those who reside within the area in which the presumption applies, but can be extended to those who conduct everyday activities or visit within that area; LBP-07-10, 66 NRC 17 (2007)  
the board must make its finding on standing based on the factual circumstances presented by the information before the board regarding petitioner's activities, which may include consideration of the proximity, timing, and duration of those activities; LBP-07-10, 66 NRC 19 (2007)
- County of Suffolk v. Secretary of the Interior*, 562 F.2d 1368, 1372 (2d Cir. 1977)  
agencies are permitted to defer certain issues in an environmental impact statement for a multistage project when detailed useful information on a given topic is not meaningfully possible to obtain, and the unavailable information is not essential to determination at the earlier stage; CLI-07-27, 66 NRC 235 (2007)
- Curators of the University of Missouri* (TRUMP-S Project), CLI-95-1, 41 NRC 71, 98, 100 (1995)  
applicant's failure to comply with a guidance document does not demonstrate failure to comply with the relevant regulations; LBP-07-14, 66 NRC 197 (2007)
- Curators of the University of Missouri* (TRUMP-S Project), CLI-95-8, 41 NRC 386, 400 (1995)  
the Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses or NRC regulations; LBP-07-14, 66 NRC 209 n.94 (2007)
- Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-90 (1993)  
for purposes of summary disposition, mere allegations, including speculative or bare conclusory statements by an expert, are insufficient; LBP-07-13, 66 NRC 144 (2007)
- Dellums v. NRC*, 863 F.2d 968, 971 (D.C. Cir. 1988)  
a petitioner must demonstrate a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-07-14, 66 NRC 182 (2007)
- Department of Transportation v. Public Citizen*, 541 U.S. 752, 767 (2004)  
prior NRC precedent is consistent with Supreme Court NEPA doctrine, which requires a reasonably close causal relationship between federal agency action and environmental consequences before NEPA is triggered, a relationship similar to that of proximate cause in tort law; LBP-07-14, 66 NRC 186 (2007)  
where the preparation of an environmental impact statement would serve no purpose in light of NEPA's regulatory scheme as a whole, no rule of reason worthy of that title would require an agency to prepare an EIS; CLI-07-27, 66 NRC 237 n.123 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003)  
with limited exceptions, no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-07-16, 66 NRC 289 (2007)

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- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-02-27, 56 NRC 367 (2002)  
NRC has no obligation under NEPA to consider intentional malevolent acts, such as those directed against the United States on September 11, 2001, in conjunction with licensing of a fuel fabrication facility; LBP-07-14, 66 NRC 195 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001), *reconsideration denied*, CLI-02-1, 55 NRC 1 (2002)  
petitioner must read the pertinent portions of the license application, including the safety analysis report and the environmental report, state the applicant's position and the petitioner's opposing view, and explain why it disagrees with the applicant; LBP-07-11, 66 NRC 58 (2007)  
the contention rule is strict by design, having been toughened in 1989 because in prior years licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation; LBP-07-11, 66 NRC 56 (2007); LBP-07-16, 66 NRC 286 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 359-60 (2001)  
intervention petitioners must point to specific portions of an application that are either deficient or do not comply with the Commission's regulations; LBP-07-11, 66 NRC 71 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631 (2004)  
although issues relating to fire protection at a plant cannot be addressed by petitioners in a license renewal proceeding, a possible license amendment application might also trigger another opportunity to petition to intervene, if appropriate and adequate contentions are timely and properly submitted under relevant requirements; LBP-07-11, 66 NRC 75 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 637 (2004)  
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the Commission defers to a board's rulings on admissibility of contentions unless the appeal points to an error of law or abuse of discretion; CLI-07-25, 66 NRC 104 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 639 (2004)  
neither petitioners nor the board may rely on a potential future GAO Report, the content of which is unknown, in support of a contention; LBP-07-11, 66 NRC 70 (2007)  
promises to provide factual material at a later date in support of a proffered contention do not support the contention's admissibility; LBP-07-11, 66 NRC 93 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 NRC 631, 640 (2004)  
emergency planning issues already are the focus of ongoing regulatory processes and thus do not come within NRC safety review at the license renewal stage; LBP-07-11, 66 NRC 92 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551 (2005)  
although issues relating to fire protection at a plant cannot be addressed by petitioners in a license renewal proceeding, a possible license amendment application might also trigger another opportunity to petition to intervene, if appropriate and adequate contentions are timely and properly submitted under relevant requirements; LBP-07-11, 66 NRC 75 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 560-61 (2005)  
it makes no sense to spend the parties' and board's valuable resources litigating allegations of current deficiencies in a proceeding that is directed to future-oriented issues of aging; LBP-07-11, 66 NRC 92 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 562-63 (2005)  
although emergency planning issues are not admissible in a license renewal proceeding, NRC regulations provide two other procedural mechanisms by which petitioners may pursue their concerns about the adequacy of the applicants' current emergency plan; LBP-07-11, 66 NRC 94 (2007)

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- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 567 (2005)  
emergency planning issues are not within the scope of a license renewal proceeding as a safety issue; LBP-07-11, 66 NRC 94 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-06-4, 63 NRC 32, 37 (2006)  
the purpose aging management programs is not to prevent the radioactive contamination of the soil or groundwater, which is an everyday operational issue, but to manage the aging effects of critical plant functions that prevent and mitigate design basis accidents or other functions of principal importance to plant safety; LBP-07-12, 66 NRC 117 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81 (2004)  
although issues relating to fire protection at a plant cannot be addressed by petitioners in a license renewal proceeding, a possible license amendment application might also trigger another opportunity to petition to intervene, if appropriate and adequate contentions are timely and properly submitted under relevant requirements; LBP-07-11, 66 NRC 75 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81, 90, *aff'd*, CLI-04-36, 60 NRC 631 (2004)  
the Commission interprets the provisions of Parts 51 and 54 as they apply to license renewal proceedings; LBP-07-11, 66 NRC 59 (2007)
- Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-05-16, 62 NRC 56 (2005)  
although issues relating to fire protection at a plant cannot be addressed by petitioners in a license renewal proceeding, a possible license amendment application might also trigger another opportunity to petition to intervene, if appropriate and adequate contentions are timely and properly submitted under relevant requirements; LBP-07-11, 66 NRC 75 (2007)
- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-01-13, 53 NRC 478, 481 (2001)  
if new environmental information arises at a later phase of proceedings, existing rules provide for the possibility of supplements to the EIS and for late-filed hearing contentions; LBP-07-14, 66 NRC 191 (2007)
- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-7, 55 NRC 205, 220-21 (2002)  
all environmental effects of both constructing and operating the mixed oxide fuel fabrication facility are encompassed in the first proceeding; LBP-07-14, 66 NRC 184 (2007)
- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-24, 56 NRC 335 (2002)  
terrorist attacks are not to be considered part of the NEPA analysis required for licensing actions; LBP-07-14, 66 NRC 185 (2007)
- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), CLI-02-24, 56 NRC 335, 338 (2002)  
there is no obligation under NEPA for the NRC to consider terrorism or malevolent acts in the MOX fuel fabrication facility licensing proceeding; LBP-07-14, 66 NRC 194 (2007)
- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 422 (2001), *rev'd in part on other grounds*, CLI-02-24, 56 NRC 335 (2002)  
if a petitioner neglects to provide the requisite support for its contentions, the board should not make assumptions of fact that favor the petitioner, or supply information that is lacking; LBP-07-10, 66 NRC 23 (2007); LBP-07-16, 66 NRC 288 (2007)
- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 79 (2005)  
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- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 80 (2005)  
for purposes of summary disposition, mere allegations, including speculative or bare conclusory statements by an expert, are insufficient; LBP-07-13, 66 NRC 144 (2007)  
it is inappropriate at the summary disposition stage for a board to attempt to untangle the expert affidavits and decide which experts are more correct; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131 (2007)
- Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-05-4, 61 NRC 71, 81 (2005)  
bare assertions and general denials are insufficient to defend against a properly supported motion for summary disposition; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131 (2007)
- Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-05-14, 61 NRC 359, 361 n.2 (2005)  
Staff's significant hazards consideration determination is final, subject only to the Commission's discretion, on its own initiative, to review the determination; LBP-07-10, 66 NRC 32 n.22 (2007)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-01-20, 54 NRC 211, 212 (2001)  
license renewal proceedings are limited to a review of the plant structures and components that will require an aging management review for the period of extended operation and the plant's systems, structures, and components that are subject to an evaluation of time-limited aging analyses; LBP-07-17, 66 NRC 229 (2007)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-14, 55 NRC 278, 291 (2002)  
the vehicle by which a petitioner may seek to raise issues that would otherwise be beyond the scope of a license renewal proceeding is discussed; LBP-07-11, 66 NRC 79 n.163 (2007)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 363 (2002)  
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- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 363-65 (2002)  
the Commission interprets the provisions of Parts 51 and 54 as they apply to license renewal proceedings; LBP-07-11, 66 NRC 59 (2007)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 365 (2002)  
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- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 379 (2002)  
the brief explanation of the basis for the contention helps define the scope of a contention; LBP-07-16, 66 NRC 286 (2007)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-28, 56 NRC 373, 382-83 (2002)  
when facility proponents bring forward a solution that allegedly cures the deficiency alleged in a contention and then move to dismiss the contention, this triggers a period during which petitioners can amend the original contention to challenge the solution's substance; LBP-07-14, 66 NRC 206 (2007)
- Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), LBP-02-4, 55 NRC 49, 80 (2002)  
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- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2 and 3), CLI-98-17, 48 NRC 123, 125 (1998)  
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- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)  
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the strict contention rule serves multiple interests; LBP-07-11, 66 NRC 56 (2007)
- Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), LBP-98-33, 48 NRC 381, 385 n.1 (1998), *aff'd*, CLI-99-11, 49 NRC 328 (1999)  
the fifty-mile proximity presumption should apply to life extension cases because reactor operation over the additional period is subject to the same equipment failure and personnel errors; LBP-07-10, 66 NRC 18 (2007)
- Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-825, 22 NRC 785, 790-91 (1985)  
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all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-07-10, 66 NRC 23 (2007); LBP-07-16, 66 NRC 286 (2007)
- Duke Power Co.* (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-128, 6 AEC 399, 401 (1973)  
a contention that merely seeks to advance generalizations regarding a petitioner's particular view of what applicable policies ought to be is not admissible; CLI-07-25, 66 NRC 106 (2007)
- Duncan v. Walker*, 533 U.S. 167, 174 (2001)  
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- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 272-74 (2006), *aff'd*, CLI-07-3, 65 NRC 13, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007)  
to intervene in an NRC proceeding, a petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. § 2.309(f)(1); LBP-07-11, 66 NRC 55 n.37 (2007)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 288, 294-300 (2006), *aff'd*, CLI-07-3, 65 NRC 13, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007)  
new and significant information that would normally fall within a Category 1 issue is not a proper subject for a contention, absent a waiver of the rule that Category 1 issues need not be addressed in a license renewal; LBP-07-11, 66 NRC 64 n.83 (2007)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 300 (2006), *aff'd*, CLI-07-3, 65 NRC 13, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007)  
as a general matter, NEPA imposes no legal duty on the NRC to consider intentional malevolent acts in conjunction with commercial power reactor license renewal applications; LBP-07-11, 66 NRC 84 (2007)
- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 338-41 (2006), *aff'd*, CLI-07-3, 65 NRC 13, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007)  
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- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 351-59 (2006), *aff'd*, CLI-07-3, 65 NRC 13, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007)  
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- Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), LBP-06-23, 64 NRC 257, 272-74, 351-59 (2006)  
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- Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-06-26, 64 NRC 225, 226 (2006)  
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- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-06-8, 63 NRC 235, 237 n.4 (2006)  
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- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 20, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007)  
in the hearing process, petitioners with new information showing that a generic rule would not serve its purpose at a particular plant may seek a waiver of the rule; LBP-07-11, 66 NRC 84 (2007)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-07-13, 65 NRC 211, 214-15 (2007)  
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- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-28, 60 NRC 548, 553-54 (2004)  
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- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-31, 60 NRC 686, 704-06 (2004)  
there is no mandatory or automatic default to Subpart L procedures for contentions in license renewal proceedings; LBP-07-15, 66 NRC 272 (2007)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-04-31, 60 NRC 686, 705 (2004)  
the board determines the specific hearing procedures to be used on a contention-by-contention basis, selecting the hearing procedure most appropriate for the specific contentions before it; LBP-07-15, 66 NRC 272 (2007)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-05-32, 62 NRC 813, 821 & n.21 (2005)  
when new contentions are based on breaking developments or information, they are to be treated as new or amended, not as nontimely; LBP-07-14, 66 NRC 210 n.95 (2007)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 121 (2006)  
summary disposition is not a tool for trying to convince a licensing board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing; LBP-07-12, 66 NRC 126 (2007)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 121-22 (2006)  
summary disposition is not a tool for trying to convince a licensing board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing; LBP-07-13, 66 NRC 131 (2007)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-5, 63 NRC 116, 122 (2006)  
a summary disposition movant fails to meet its burden when the filings demonstrate the existence of a genuine material fact, when the evidence introduced does not show that the nonmovant's position is a sham, when the matters presented fail to foreclose the possibility of a factual dispute, or when there is an issue as to the credibility of the moving party's evidentiary material; LBP-07-12, 66 NRC 125 (2007)  
if a summary disposition proponent meets its burden, an opponent must set forth specific facts showing that there is a genuine issue, and may not rely on mere allegations or denials; LBP-07-12, 66 NRC 125 (2007); LBP-07-13, 66 NRC 131 (2007)  
summary judgment is not appropriate if it would require a judge to assess the correctness of facts and conclusions that are embodied in the competing, well-founded opinions of the parties' experts; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131 (2007)

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- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-14, 63 NRC 568, 572 (2006)  
the first step in assessing the admissibility of a new contention once an adjudicatory proceeding has been initiated is to determine if it is timely; LBP-07-15, 66 NRC 266 (2007)
- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 147-51 (2006)  
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- Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), LBP-06-20, 64 NRC 131, 155-59 (2006), *aff'd*, CLI-07-3, 65 NRC 13, *reconsideration denied*, CLI-07-13, 65 NRC 211 (2007)  
new and significant information that would normally fall within a Category 1 issue is not a proper subject for a contention, absent a waiver of the rule that Category 1 issues need not be addressed in a license renewal; LBP-07-11, 66 NRC 64 n.83 (2007)
- Environmental Law and Policy Center v. NRC*, 470 F.3d 676, 683 (7th Cir. 2006)  
a narrower collection of alternative sites was approved because the applicant was in no position to implement the additional alternatives; CLI-07-27, 66 NRC 227 (2007)  
agencies are permitted to defer certain issues in an environmental impact statement for a multistage project when detailed useful information on a given topic is not meaningfully possible to obtain, and the unavailable information is not essential to determination at the earlier stage; CLI-07-27, 66 NRC 235 (2007)
- Excel Communications, Inc. v. AT&T Corp.*, 528 U.S. 946 (1999)  
denial of *certiorari* carries with it no implication whatever regarding the Court's views on the merits of a case which it has declined to review; LBP-07-11, 66 NRC 87 n.206 (2007)
- Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 33 n.32 (2005)  
in the mandatory early site permit hearing, the NRC must address whether issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public; CLI-07-27, 66 NRC 221 (2007)  
in the mandatory early site permit hearing, the NRC must address whether, taking into consideration the site criteria contained in 10 C.F.R. Part 100, a reactor, or reactors, having the characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public; CLI-07-27, 66 NRC 221 (2007)
- Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-17, 62 NRC 5, 48 (2005)  
for early site permits, boards must merely weigh and compare alternative sites, not other types of alternatives such as alternative energy sources; CLI-07-27, 66 NRC 237 (2007)
- Exelon Generation Co., LLC* (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-05-26, 62 NRC 577, 580 (2005)  
proximity standing rests on the presumption that an accident associated with the nuclear facility could adversely affect the health and safety of people working or living offsite but within a certain distance of that facility; LBP-07-14, 66 NRC 182 (2007)  
the Commission has accepted a proximity presumption granting standing to residents within 50 miles of a reactor, but has not accepted any such presumption in nonreactor cases; LBP-07-14, 66 NRC 178 (2007)
- Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-07-12, 65 NRC 203, 209 (2007)  
if certain safety issues cannot be meaningfully assessed at the ESP stage, the Staff's decision to defer consideration of those effects until a time when they can be accurately assessed is consistent with NEPA's requirements; CLI-07-27, 66 NRC 236 n.116 (2007)
- Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003)  
for purposes of summary disposition, mere allegations, including speculative or bare conclusory statements by an expert, are insufficient; LBP-07-13, 66 NRC 144 (2007)  
petitioner's issue will be ruled inadmissible if petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-07-10, 66 NRC 23 (2007); LBP-07-16, 66 NRC 288 (2007)

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- Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 204-05 (2003)  
simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support admission of the contention; LBP-07-10, 66 NRC 23 (2007)
- Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 205 (2003)  
providing any material or document as a basis for a contention, without setting forth an explanation of its significance, is inadequate to support the admission of the contention; LBP-07-16, 66 NRC 288 (2007)
- Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989)  
all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-07-10, 66 NRC 23 (2007)  
although the Commission has accepted a proximity presumption granting standing to residents within 50 miles of a reactor, it has not accepted any such presumption in nonreactor cases; LBP-07-14, 66 NRC 178 (2007)  
in cases involving the possible construction or operation of a nuclear power reactor, the Commission has created a presumption that residing or regularly conducting activities within a 50-mile proximity of the proposed facility is considered sufficient to establish the requisite injury, causation, and redressability elements for standing; LBP-07-10, 66 NRC 14-15 (2007); LBP-07-11, 66 NRC 52 (2007)  
the Commission interprets the provisions of Parts 51 and 54 as they apply to license renewal proceedings; LBP-07-11, 66 NRC 59 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 6-13 (2001)  
the Commission interprets the provisions of Parts 51 and 54 as they apply to license renewal proceedings; LBP-07-11, 66 NRC 59 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 7 (2001)  
in developing Part 54, the Commission sought to develop a process that would be both efficient, avoiding duplicative assessments where possible, and effective, allowing the NRC Staff to focus its resources on the most significant safety concerns at issue during the renewal term; LBP-07-11, 66 NRC 60 (2007)  
issues and concerns involved in an extended 20 years of operation are not identical to the issues reviewed when a reactor facility is first built and licensed; LBP-07-11, 66 NRC 60 (2007)  
license renewal safety review is focused on those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs; LBP-07-11, 66 NRC 61 (2007)  
requiring a full reassessment of safety issues that were thoroughly reviewed when the facility was first licensed and continue to be routinely monitored and assessed by ongoing agency oversight and agency-mandated licensee programs would be both unnecessary and wasteful; LBP-07-11, 66 NRC 60 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 7-8 (2001)  
any safety-related opposition to license renewal can be based only on matters stemming from the aging of the facility; LBP-07-14, 66 NRC 207 n.89 (2007)  
contentions not related to the potential effects of aging are beyond the scope of a license renewal proceeding; LBP-07-11, 66 NRC 70 (2007)  
some of the detrimental effects of aging and related time-limited issues are described; LBP-07-11, 66 NRC 61 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8 (2001)  
adverse aging effects generally are gradual and thus can be detected by programs that ensure sufficient inspections and testing; LBP-07-17, 66 NRC 340 (2007)

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- in the context of a license renewal proceeding, whether the reasonable assurance standard is satisfied is directly linked to an assessment of the adequacy of the aging management program; LBP-07-17, 66 NRC 340 (2007)
- renewal applicants must demonstrate how their programs will be effective in managing the effects of aging during the proposed period of extended operation, at a detailed component and structure level, rather than at a more generalized system level; LBP-07-11, 66 NRC 60 (2007); LBP-07-17, 66 NRC 339 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8-9 (2001)
- petitioners may not challenge licensee's current licensing basis in a license renewal proceeding because such issues are not germane to aging management concerns, previously have been the subject of thorough review and analysis, and, accordingly, need not be revisited; LBP-07-17, 66 NRC 339 n.17 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9 (2001)
- emergency plans are periodically reviewed to ensure they are adequate throughout the life of any plant even in the face of changing demographics and other site-related factors; LBP-07-11, 66 NRC 94 (2007)
- it is unnecessary and inappropriate to throw open the full gamut of provisions in a plant's current licensing basis to reanalysis during the license renewal review; LBP-07-11, 66 NRC 60 (2007)
- the current licensing basis is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-07-11, 66 NRC 61 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9-10 (2001)
- a plant's current licensing basis is effectively addressed and maintained by ongoing agency oversight, review, and enforcement, and issues that already are the focus of ongoing regulatory processes do not come within the NRC's safety review at the license renewal stage; LBP-07-11, 66 NRC 74 (2007)
- emergency planning issues already are the focus of ongoing regulatory processes and thus do not come within NRC safety review at the license renewal stage; LBP-07-11, 66 NRC 92 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 10 (2001)
- a contention challenging the input data for certain parameters related to emergency planning issues in a severe accident mitigation alternatives analysis was admitted in a license renewal proceeding as an environmental issue; LBP-07-11, 66 NRC 94 (2007)
- a contention that fails to show that current compliance with fire protection requirements is material to the findings NRC must make for granting or denying license renewal is asserted to be outside the scope of a license renewal proceeding because it does not raise any aspect of the applicants' aging management review; LBP-07-11, 66 NRC 71 (2007)
- adjudicatory hearings in individual license renewal proceedings will share the same scope of issues as NRC Staff review, because the hearing process, like Staff's review, necessarily examines only the questions that the safety rules make pertinent; LBP-07-11, 66 NRC 62, 77 n.154 (2007)
- the focus of license renewal review is on plant systems, structures, and components for which current regulatory activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation; LBP-07-11, 66 NRC 62 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 10 n.2 (2001)
- an issue can be related to plant aging and still not warrant review at the time of a license renewal application, if the issue is adequately dealt with by regulatory processes on an ongoing basis; LBP-07-11, 66 NRC 62 (2007)
- if a structure or component is already required to be replaced at mandated, specified time periods, it would fall outside the scope of license renewal review; LBP-07-11, 66 NRC 62 (2007)

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- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 11 (2001)  
Category 2, or plant-specific, issues are characterized by the Commission as involving environmental impact severity levels that might differ significantly from one plant to another, or impacts for which additional plant-specific mitigation measures should be considered; LBP-07-11, 66 NRC 64 (2007)  
generic issues involve environmental effects that are essentially similar for all plants, and thus they need not be assessed repeatedly on a site-specific basis, plant-by-plant; LBP-07-11, 66 NRC 64 (2007)  
in their environmental report, applicants must address environmental issues for which the Commission was not able to make generic environmental findings; LBP-07-11, 66 NRC 64 (2007)  
issuance of the 1996 generic environmental impact statement is part of an amendment of the requirements of Part 51 undertaken by the Commission to establish environmental review requirements for license renewals that are both efficient and more effectively focused; LBP-07-11, 66 NRC 63 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 12 (2001)  
in the hearing process, petitioners with new information showing that a generic rule would not serve its purpose at a particular plant may seek a waiver of the rule; LBP-07-11, 66 NRC 84 (2007)  
new and significant information that would normally fall within a Category 1 issue is not a proper subject for a contention, absent a waiver of the rule that Category 1 issues need not be addressed in a license renewal; LBP-07-11, 66 NRC 64 n.83 (2007)  
Staff's supplemental environmental impact statement for license renewal is specific to the particular site involved and provides the Staff's independent assessment of the applicant's environmental report; LBP-07-11, 66 NRC 65 (2007)  
the impact of extended operation on endangered or threatened species varies from one location to another and is thus included within Category 2 issues; LBP-07-11, 66 NRC 64 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 NRC 509, 521 & n.12 (1990)  
an allegation that some aspect of a license application is inadequate or unacceptable does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect; LBP-07-11, 66 NRC 58 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 146-50 (2001)  
close proximity to a facility has always been deemed to be enough, standing alone, to establish the requisite interest to confer standing; LBP-07-11, 66 NRC 52 (2007)
- Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 159, *aff'd*, CLI-01-17, 54 NRC 3 (2001)  
contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking are inadmissible; LBP-07-10, 66 NRC 22 (2007)
- General Electric Co.* (GE Morris Operation Spent Fuel Storage Facility), LBP-82-14, 15 NRC 530, 532 (1982)  
if there is doubt as to whether the parties should be required to proceed further, a motion for summary disposition should be denied; LBP-07-12, 66 NRC 127-28 (2007)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 113-17 (1995)  
although a research reactor is much smaller than a power reactor, it is not a stretch of the imagination to presume some offsite injury due to the release of noble gases; LBP-07-14, 66 NRC 183 (2007)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 115 (1995)  
in evaluating and ruling on a petitioner's standing to intervene in an NRC adjudicatory proceeding, boards are to construe the petition in favor of the petitioner; LBP-07-10, 66 NRC 15 (2007); LBP-07-11, 66 NRC 53 (2007); LBP-07-14, 66 NRC 188 (2007)

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- petitioner must demonstrate a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-07-14, 66 NRC 182 (2007)
- when determining whether a petitioner has established the necessary interest, licensing boards are to look to judicial concepts of standing for guidance; LBP-07-11, 66 NRC 52 (2007); LBP-07-14, 66 NRC 182 (2007)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116 (1995)
- a facility that will handle large amounts of fissile and fissionable material presents an obvious potential for offsite consequences over the area in which its affiants reside; LBP-07-14, 66 NRC 186 (2007)
- even in those nonreactor construction permit/operating license cases involving an increased potential for offsite consequences in which proximity can be the primary basis for establishing standing, the distance at which a petitioner can be presumed to be affected must take into account the nature of the proposed action and the significance of the radioactive source; LBP-07-10, 66 NRC 15 (2007)
- in nonreactor licensing cases, the proximity presumption extends only to those offsite areas where the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences; LBP-07-14, 66 NRC 183 (2007)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 116-17 (1995)
- the appropriate distance for proximity standing is decided on a case-by-case basis taking into account the nature of the proposed action and the significance of the radioactive source; LBP-07-14, 66 NRC 183 (2007)
- the Commission has accepted a proximity presumption granting standing to residents within 50 miles of a reactor, but has not accepted any such presumption in nonreactor cases; LBP-07-14, 66 NRC 178 (2007)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 117 (1995)
- daily commute taking petitioner in front of a nuclear power plant entrance is sufficient to establish injury-in-fact; LBP-07-10, 66 NRC 21 n.14 (2007)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 NRC 281, 305, vacated in part and remanded on other grounds, CLI-95-10, 42 NRC 1, and *aff'd in part*, CLI-95-12, 42 NRC 111 (1995)
- contentions that fail to meet the pleading requirements are subject to dismissal; LBP-07-11, 66 NRC 70 (2007)
- if petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions of fact that favor the petitioner, nor may the board supply information that is lacking; LBP-07-10, 66 NRC 23 (2007); LBP-07-16, 66 NRC 288 (2007)
- it is petitioner's obligation to present factual information and/or expert opinion necessary to support its contention; LBP-07-10, 66 NRC 23 (2007); LBP-07-16, 66 NRC 287 (2007)
- Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-23, 42 NRC 215, 217 (1995)
- a petitioner's showing establishing standing in one proceeding need not be repeated to establish standing in another proceeding regarding that same facility; LBP-07-10, 66 NRC 19 n.9 (2007); LBP-07-14, 66 NRC 189 (2007)
- Georgia Power Co.* (Vogtle Electric Generating Plant, Units 1 and 2), CLI-93-16, 38 NRC 25, 35 (1993)
- regular but intermittent residence 1 week a month in a house 35 miles from a nuclear power plant is sufficient to establish standing; LBP-07-10, 66 NRC 17 (2007)
- GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 202 (2000)
- to establish representational standing, an organization must show that at least one of its members may be affected by the licensing action and, accordingly, would have standing to sue in his or her own right, identify that member by name and address, and show that the organization is authorized to request a hearing on behalf of that member; LBP-07-11, 66 NRC 52 (2007)

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- GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 207 (2000)  
absent evidence to the contrary, it is assumed NRC licensees will not contravene agency regulations;  
LBP-07-10, 66 NRC 28 n.20 (2007); LBP-07-14, 66 NRC 209 n.94 (2007)
- GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)  
petitioner's issue will be ruled inadmissible if petitioner has offered no tangible information, no  
experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-07-16, 66  
NRC 288 (2007)
- Gulf States Utilities Co.* (River Bend Station, Units 1 and 2), ALAB-183, 7 AEC 222, 226 (1974)  
the benefits of the proximity presumption are not limited to those who reside within the area in which  
the presumption applies, but can be extended to those who conduct everyday activities or visit  
within that area; LBP-07-10, 66 NRC 17 (2007)
- Houston North Hospital Properties v. Telco Leasing, Inc.*, 680 F.2d 19, 22 (5th Cir. 1982)  
in a case heard by a judge without a jury, a judge may be warranted in drawing inferences without  
resort to the expense of trial and may grant summary judgment if trial would not enhance its ability  
to draw inferences and conclusions, if there are no issues of witness credibility and a trial on the  
merits would reveal no additional data; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131  
(2007)
- Hunt v. Cromartie*, 526 U.S. 541, 553 (1999)  
even if the basic facts are uncontroverted, summary disposition would be inappropriate when the  
evidence is susceptible of different interpretations or inferences; LBP-07-12, 66 NRC 126 (2007)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119,  
121-22 (1998)  
absent some need for resolution to meet the agency's statutory responsibilities, the agency's  
adjudicatory process is not a forum for litigating matters that are primarily the responsibility of other  
federal or state/local regulatory agencies; CLI-07-25, 66 NRC 105, 106 (2007); LBP-07-10, 66 NRC  
27 (2007)
- Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-99-22, 50 NRC 3, 14  
(1999)  
an environmental impact statement is not to be supplemented any time that any new information  
becomes available, but only when the new information presents a seriously different picture of the  
environmental impact of the proposed project from what was previously envisioned; LBP-07-14, 66  
NRC 192 (2007)
- Hydro Resources, Inc.* (P.O. Box 15910, Rio Rancho, NM 87174), CLI-01-4, 53 NRC 31, 64-71 (2001)  
one can always flyspeck a final environmental impact statement's discussion to come up with more  
specifics and more areas of discussion that conceivably could have been included, but there is no  
standard formula for how environmental justice issues should be identified or addressed; CLI-07-27,  
66 NRC 242 (2007)  
treatment of environmental justice issues is described; CLI-07-27, 66 NRC 238 (2007)
- Improvement Co. v. Munson*, 14 Wall. 442, 448, 20 L. Ed. 867 (1872)  
on summary disposition motions, the judge must determine whether there is any evidence upon which  
a jury could properly proceed to find a verdict for the nonmovant; LBP-07-13, 66 NRC 141 n.8  
(2007)
- In re Shieldalloy Metallurgical Corp. and NUREG-1757*, 2007 NRC LEXIS 11 at 3-4 (Jan. 12, 2007)  
only if one has been admitted as a "party" to a proceeding, through showing standing and submitting  
an admissible contention, can one have a request for stay considered by a presiding officer;  
LBP-07-11, 66 NRC 97 (2007)
- Kelley v. Selin*, 42 F.3d 1501, 1508 (6th Cir. 1995)  
to qualify for standing a petitioner must allege a concrete and particularized injury that is fairly  
traceable to the challenged action and likely to be redressed by a favorable decision; LBP-07-11, 66  
NRC 52 (2007)
- Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 733-36 (3d Cir. 1989)  
a policy statement is neither a rule nor an order, and therefore does not establish requirements that  
bind either the agency or the public; CLI-07-27, 66 NRC 240 (2007)

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- Long Island Lighting Co.* (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 851 (1973)  
licensing boards are bound to comply with Commission adjudicatory decisions whether they agree with them or not; LBP-07-14, 66 NRC 194 (2007)  
terrorist attacks are not to be considered part of the NEPA analysis required for licensing actions; LBP-07-14, 66 NRC 185 (2007)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-87-12, 26 NRC 383, 395 (1987)  
the plume-exposure pathway emergency planning zone for nuclear power reactors is an area about 10 miles in radius; LBP-07-11, 66 NRC 93 (2007)
- Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-2, 33 NRC 61, 72 n.3 (1991)  
although the Council on Environmental Quality's guidance does not bind NRC, the Commission gives such guidance substantial deference; CLI-07-27, 66 NRC 222 n.21 (2007)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 104 (1998)  
an early site permit applicant's environmental report must identify all reasonable alternatives to the proposed site; CLI-07-27, 66 NRC 222 (2007)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 106-10 (1998)  
a board's direction to Staff to revise the final environmental impact statement to consider actions to mitigate the impacts of relocating the road and the project on property values for disadvantaged communities is upheld; CLI-07-27, 66 NRC 248 n.183 (2007)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 109 (1998)  
a final environmental impact statement's discussion of alternative sites need not be elaborate or lengthy, but a conclusory statement on some negative impact on property values, without explanation or analysis, is plainly deficient; CLI-07-27, 66 NRC 241 (2007)
- Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-97-8, 45 NRC 367, 375 (1997), *rev'd on other grounds*, CLI-98-3, 47 NRC 77, 100-110 (1998)  
although NRC, as an independent agency, is not bound by Executive Order 12,898 on environmental justice, it nonetheless committed to undertake environmental justice reviews; CLI-07-27, 66 NRC 238 (2007)  
treatment of environmental justice issues is described; CLI-07-27, 66 NRC 238 (2007)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 224 (2004), *reconsideration denied*, CLI-04-35, 60 NRC 619, 625 (2004)  
contentions must be filed with the original petition within 60 days of notice of the proceeding in the *Federal Register*, unless a longer period is therein specified or an extension is granted; LBP-07-11, 66 NRC 56 n.45 (2007)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-25, 60 NRC 223, 225, *reconsideration denied*, CLI-04-35, 60 NRC 619, 623-24 (2004)  
new arguments may not be introduced for the first time in a reply pleading; CLI-07-25, 66 NRC 106 n.26 (2007); LBP-07-10, 66 NRC 32 (2007)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004)  
petitioner is not required to present its entire case at the contention admissibility stage of the proceeding; LBP-07-15, 66 NRC 271 (2007)
- Louisiana Energy Services, L.P.* (National Enrichment Facility), LBP-04-14, 60 NRC 40, 55 (2004)  
petitioner's issue will be ruled inadmissible if petitioner has offered no tangible information, no experts, no substantive affidavits, but instead only bare assertions and speculation; LBP-07-16, 66 NRC 288 (2007)
- Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992)  
a petitioner must demonstrate a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-07-14, 66 NRC 182 (2007)
- Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), ALAB-161, 6 AEC 1003, 1009 (1973)  
a touchstone for determining whether the reasonable assurance standard is satisfied is compliance with Commission regulations; LBP-07-17, 66 NRC 340 (2007)

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- Maine Yankee Atomic Power Co.* (Maine Yankee Atomic Power Station), CLI-04-5, 59 NRC 52, 57 n.16 (2004)  
to establish standing, petitioner must show an injury in fact fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-07-16, 66 NRC 285, 300, 326 n.339 (2007)
- Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 371 (1989)  
by focusing government and public attention on the environmental effects of proposed agency action, NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to be corrected; LBP-07-11, 66 NRC 62 n.74 (2007)
- Maryland v. Baltimore Radio Show*, 338 U.S. 912, 919 (1950)  
denial of *certiorari* carries with it no implication whatever regarding the Court's views on the merits of a case that it has declined to review; LBP-07-11, 66 NRC 86-87 (2007)
- Metropolitan Edison Co. v. People Against Nuclear Energy*, 460 U.S. 766, 774 (1983)  
prior NRC precedent is consistent with Supreme Court NEPA doctrine, which requires a reasonably close causal relationship between federal agency action and environmental consequences before NEPA is triggered, a relationship similar to that of proximate cause in tort law; LBP-07-14, 66 NRC 186 (2007)
- Metropolitan Edison Co.* (Three Mile Island Nuclear Station, Unit 2), ALAB-384, 5 NRC 612, 614, 619 (1977)  
traditionally, a crucial issue at the operating license stage was whether the facility had indeed been constructed in accordance with the permit; LBP-07-14, 66 NRC 203 n.83 (2007)
- Mobley v. Continental Casualty*, 405 F. Supp. 2d 42, 47 (D.D.C. 2005)  
although wholly conclusory statements for which no supporting evidence is offered need not be taken as true for summary judgment purposes, a court may not make credibility determinations or weigh the evidence at the summary judgment stage; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131 (2007)
- More v. Snow*, 480 F. Supp. 2d 257, 274 (D.D.C. 2007)  
although wholly conclusory statements for which no supporting evidence is offered need not be taken as true for summary judgment purposes, a court may not make credibility determinations or weigh the evidence at the summary judgment stage; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131 (2007)
- Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 834 (D.C. Cir. 1982)  
the issue of whether the level of detail in the Staff's alternative site analysis was so narrow as to render the results foreordained or, instead, whether the level of detail was reasonable under NEPA's rule of reason is considered; CLI-07-27, 66 NRC 229 (2007)
- New England Coalition on Nuclear Pollution v. NRC*, 582 F.2d 87, 94 (1st Cir. 1978)  
amendment of the final environmental impact statement by the adjudicatory hearing record and subsequent licensing board decision is entirely proper under NRC regulations and court precedent; CLI-07-27, 66 NRC 230 n.79 (2007)
- Norfolk Southern Corp. v. Oberly*, 632 F. Supp. 1225, 1243 (D. Del. 1986), *aff'd*, 822 F.2d 388 (3d Cir. 1987)  
summary judgment is not appropriate if it would require a judge to assess the correctness of facts and conclusions that are embodied in the competing, well-founded opinions of the parties' experts; LBP-07-12, 66 NRC 126 (2007); LBP-07-13, 66 NRC 131 (2007)
- North Anna Environmental Coalition v. NRC*, 533 F.2d 655, 667 (D.C. Cir. 1973)  
whether the reasonable assurance standard is satisfied is based on sound technical judgment applied on a case-by-case basis; LBP-07-17, 66 NRC 340 (2007)
- Northern Indiana Public Service Co.* (Bailly Generating Station, Nuclear-1), ALAB-207, 7 AEC 957, 958 (1974)  
the Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses or NRC regulations; LBP-07-14, 66 NRC 209 n.94 (2007)
- Nuclear Management Co., LLC* (Palisades Nuclear Plant), CLI-07-9, 65 NRC 139 (2007)  
the Commission is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question, and is not prevented from relitigating the issue in future cases; LBP-07-14, 66 NRC 186 (2007)

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- Nuclear Management Co., LLC* (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 336-42 (2006)  
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- Nunez v. Superior Oil Co.*, 572 F.2d 1119, 1123-24 (5th Cir. 1978)  
in a case heard by a judge without a jury, a judge may be warranted in drawing inferences without resort to the expense of trial and may grant summary judgment if trial would not enhance its ability to draw inferences and conclusions, if there are no issues of witness credibility and a trial on the merits would reveal no additional data; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131 (2007)
- Pacific Gas & Electric Co. v. Federal Power Commission*, 506 F.2d 33 (D.C. Cir. 1974)  
a policy statement is neither a rule nor an order, and therefore does not establish requirements that bind either the agency or the public; CLI-07-27, 66 NRC 240 (2007)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-03-2, 57 NRC 19, 29 (2003)  
the Commission has long declined to assume that licensees will refuse to meet their obligations under their licenses or NRC regulations; LBP-07-14, 66 NRC 209 n.94 (2007)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-92-27, 36 NRC 196, 198 (1992)  
merely because a petitioner may have had standing in an earlier proceeding does not automatically grant standing in subsequent proceedings, even if the scope of the earlier and later proceedings is similar; LBP-07-16, 66 NRC 300 n.135 (2007)
- Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-93-1, 37 NRC 5, 29-30 (1993)  
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- Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), CLI-03-1, 57 NRC 1 (2003)  
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- Pacific Gas and Electric Co.* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 439-41 (2002), *petition for review denied*, CLI-03-12, 58 NRC 185, 191 (2003)  
any contention alleging deficiencies or errors in a license application must also indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment; LBP-07-10, 66 NRC 24 (2007)  
for a contention to pass the materiality test, there must be some significant link between a claimed deficiency and either the health and safety of the public, or the environment; LBP-07-16, 66 NRC 287 (2007)
- Petition for Emergency and Remedial Action*, CLI-78-6, 7 NRC 400, 404 (1978)  
protection of the health and safety of the public is what the NRC's licensing procedure is devoted to assuring; LBP-07-11, 66 NRC 81 (2007)  
the Commission generally interprets the Atomic Energy Act to require that it must have reasonable assurance that public health and safety are not endangered by its licensing actions; LBP-07-11, 66 NRC 69 (2007)
- Philadelphia Electric Co.* (Limerick Generating Station, Units 1 and 2), ALAB-819, 22 NRC 681, 705 (1985), *review denied*, CLI-86-5, 23 NRC 125 (1986), *aff'd in part and denied in part on other grounds*, *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719 (3rd Cir. 1989)  
amendment of the final environmental impact statement by the adjudicatory hearing record and subsequent licensing board decision is entirely proper under NRC regulations and court precedent; CLI-07-27, 66 NRC 230 n.79 (2007)
- Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20, *aff'd in part on other grounds*, CLI-74-32, 8 AEC 217 (1974)  
an adjudication is not the proper forum for challenging applicable statutory requirements or the basic structure of the agency's regulatory process; LBP-07-10, 66 NRC 22 (2007)  
any contention that amounts to an attack on applicable statutory requirements must be rejected by a licensing board as outside the scope of the proceeding; LBP-07-11, 66 NRC 58 (2007)

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- the purpose of the contention rule is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-07-16, 66 NRC 285 (2007)
- Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 (1974)
- any contention that amounts to an attack on applicable statutory requirements or represents a challenge to the basic structure of the Commission's regulatory process must be rejected; LBP-07-16, 66 NRC 289 (2007)
- Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20-21 & n.33, *aff'd in part on other grounds*, CLI-74-32, 8 AEC 217 (1974)
- a contention that simply states the petitioner's views about what regulatory policy should be does not present a litigable issue; CLI-07-25, 66 NRC 106 (2007); LBP-07-10, 66 NRC 23 (2007)
- Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 21 n.33 (1974)
- the adjudicatory process is not the proper venue for the evaluation of a petitioner's own view regarding the direction regulatory policy should take; LBP-07-16, 66 NRC 289 (2007)
- Poller v. Columbia Broadcasting System, Inc.*, 368 U.S. 464, 467 (1962)
- summary disposition may be a useful device to eliminate the need for the time and cost of a hearing if the truth on a contested issue is clear and there is no genuine issue on any material fact; LBP-07-12, 66 NRC 127 (2007)
- Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 612 (1976)
- NRC applies traditional judicial concepts of standing when determining whether a petitioner has set forth a sufficient interest to intervene; LBP-07-14, 66 NRC 182 (2007)
- Portland General Electric Co.* (Pebble Springs Nuclear Plant, Units 1 and 2), CLI-76-27, 4 NRC 610, 614-17 (1976)
- intervention can be allowed as a matter of discretion; LBP-07-10, 66 NRC 16 (2007)
- Portland General Electric Co.* (Trojan Nuclear Plant), ALAB-534, 9 NRC 287, 289 n.6 (1979)
- any contention that falls outside the specified scope of the proceeding must be rejected; LBP-07-10, 66 NRC 23 (2007); LBP-07-16, 66 NRC 286 (2007)
- Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 85, 89 (1974)
- a contention that attacks a Commission rule, or that seeks to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, is inadmissible; LBP-07-10, 66 NRC 22 (2007)
- Power Reactor Development Co. v. International Union of Electrical, Radio and Machine Workers, AFL-CIO*, 367 U.S. 396, 402 (1961)
- the Commission generally interprets the Atomic Energy Act to require that it must have reasonable assurance that public health and safety are not endangered by its licensing actions; LBP-07-11, 66 NRC 69 (2007)
- PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 302-12 (2007)
- to intervene in an NRC proceeding, petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. 2.309(f)(1); LBP-07-11, 66 NRC 55 (2007)
- PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-10, 66 NRC 1, 19 n.9 (2007)
- a petitioner awarded standing in one proceeding need not restate all of its case to establish standing in another proceeding related to the same facility; LBP-07-14, 66 NRC 189 (2007)
- it is better practice for petitioners to present a fully developed argument for standing in each proceeding in which they seek to intervene, especially given that a board in one proceeding is not bound to follow the ruling of another board absent explicit affirmation by the Commission; LBP-07-14, 66 NRC 189 n.57 (2007)

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- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999)  
for representational standing, a petitioner must demonstrate that at least one of its members would have standing to intervene on his or her own behalf, and that such a specifically identified member has authorized the organization to represent the member's interests; LBP-07-14, 66 NRC 183 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 324 (1999)  
the board must make its finding on standing based on the factual circumstances presented by the information before the board regarding petitioner's activities, which may include consideration of the proximity, timing, and duration of those activities; LBP-07-10, 66 NRC 19 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999)  
failure to comply with any of the contention pleading requirements is grounds for dismissing a contention; LBP-07-10, 66 NRC 22 (2007); LBP-07-16, 66 NRC 286 (2007)  
if petitioner believes that an application fails to contain information on a relevant matter as required by law, each failure must be identified and the supporting reasons for the petitioner's belief provided; LBP-07-11, 66 NRC 56 (2007)  
information in support of a contention must include references to the specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute; LBP-07-11, 66 NRC 56 (2007)  
the process of sifting and weighing participants' factual proffers often calls upon a board to make difficult choices, so that a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself; LBP-07-10, 66 NRC 19 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-20, 56 NRC 147 (2002)  
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- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340 (2002)  
terrorist attacks are not to be considered part of the NEPA analysis required for licensing actions; LBP-07-14, 66 NRC 185, 195 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 n.22 (2002)  
although the Council on Environmental Quality's guidance does not bind NRC, the Commission gives such guidance substantial deference; CLI-07-27, 66 NRC 222 n.21, 236 n.115 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 (2002)  
NEPA excludes consideration in NRC license renewal proceedings of any intentional malevolent acts or actions of third-party miscreants; LBP-07-11, 66 NRC 87 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004)  
petitioner is not required to present its entire case at the contention admissibility stage of the proceeding; LBP-07-15, 66 NRC 271 (2007); LBP-07-16, 66 NRC 287 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 179-80 (1998)  
"materiality" requires that petitioner show why the alleged error or omission is of possible significance to the result of the proceeding; LBP-07-16, 66 NRC 287 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998)  
applicant argues that petitioners have not asserted that an alleged noncompliance with fire protection regulations described in a 2.206 petition (and rejected by the acting director) constitutes a genuine dispute of fact in regard to whether a license should be renewed; LBP-07-11, 66 NRC 71 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-99-23, 49 NRC 485, 491 (1999)  
summary disposition may be a useful device to eliminate the need for the time and cost of a hearing if the truth on a contested issue is clear and there is no genuine issue on any material fact; LBP-07-12, 66 NRC 128 (2007)

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- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509 (2001)  
summary disposition is not a tool for trying to convince a licensing board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing; LBP-07-12, 66 NRC 126 (2007); LBP-07-13, 66 NRC 131 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 509-10 (2001)  
it is inappropriate at the summary disposition stage for a board to attempt to untangle the expert affidavits and decide which experts are more correct; LBP-07-12, 66 NRC 127 (2007)  
summary judgment is not appropriate if it would require a judge to assess the correctness of facts and conclusions that are embodied in the competing, well-founded opinions of the parties' experts; LBP-07-12, 66 NRC 126 (2007); LBP-07-13, 66 NRC 131 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-01-39, 54 NRC 497, 510 (2001)  
it is inappropriate at the summary disposition stage for a board to attempt to untangle the expert affidavits and decide which experts are more correct; LBP-07-13, 66 NRC 131 (2007)
- Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-05-29, 62 NRC 635, 656 n.33 (2005)  
licensing boards are bound to comply with Commission adjudicatory decisions whether they agree with them or not; LBP-07-14, 66 NRC 194 (2007)  
the Commission addresses the problem of terrorist attacks at nuclear facilities in cooperation with other agencies, including the military, and outside the hearing process; LBP-07-14, 66 NRC 185 (2007)
- Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 NRC 167, 170-71 (1976)  
a contention is not cognizable unless it is material to matters that fall within the scope of the proceeding for which the licensing board has been delegated jurisdiction; LBP-07-11, 66 NRC 57 (2007)
- Public Service Co. of Indiana* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-493, 8 NRC 253, 270 (1978)  
four factors should be considered in ruling on any request for stay; LBP-07-11, 66 NRC 98 (2007)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-899, 28 NRC 93, 97 (1988), *aff'd sub nom. Massachusetts v. NRC*, 924 F.2d 311 (D.C. Cir. 1991), *cert. denied*, 502 U.S. 899 (1991)  
the brief explanation of the basis for the contention helps define the scope of a contention; LBP-07-16, 66 NRC 286 (2007)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-77-8, 5 NRC 503, 536 (1977)  
Staff's duty to consider other companies' sites in its alternative site review is questioned; CLI-07-27, 66 NRC 228 (2007)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 29 n.43 (1978)  
the final environmental impact statement may be modified by subsequent decisions of NRC adjudicatory tribunals; CLI-07-27, 66 NRC 230 n.79 (2007)
- Public Service Co. of New Hampshire* (Seabrook Station, Unit 1), CLI-91-14, 34 NRC 261, 266-67 (1991)  
a petitioner must demonstrate a concrete and particularized injury that is fairly traceable to the challenged action and is likely to be redressed by a favorable decision; LBP-07-14, 66 NRC 182 (2007)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-76, 16 NRC 1029, 1035 (1982)  
any contention that amounts to an attack on applicable statutory requirements or represents a challenge to the basic structure of the Commission's regulatory process must be rejected; LBP-07-16, 66 NRC 289 (2007)

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- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1654 (1982)  
determining whether a contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-07-16, 66 NRC 287 (2007)
- Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 NRC 1649, 1656 (1982)  
contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking are inadmissible; LBP-07-10, 66 NRC 22 (2007)
- Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487 (1973)  
as a rule, *pro se* petitioners are not held to the same standard of pleading as those represented by counsel; LBP-07-14, 66 NRC 188 (2007)
- Public Service Electric and Gas Co.* (Salem Nuclear Generating Station, Units 1 and 2), ALAB-136, 6 AEC 487, 489 (1973)  
somewhat greater latitude generally is afforded *pro se* petitioners in drafting their intervention petitions; LBP-07-10, 66 NRC 21 (2007)
- Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998)  
when determining whether a petitioner has established the necessary interest, licensing boards are to look to judicial concepts of standing for guidance; LBP-07-11, 66 NRC 52 (2007)
- Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 6 (1998)  
intervention petitioner's injury must arguably lie within the zone of interests protected by the Atomic Energy Act or the National Environmental Policy Act; LBP-07-11, 66 NRC 52 (2007)
- Reich v. John Alden Life Insurance Co.*, 126 F.3d 1, 6 (1st Cir. 1997)  
a district court judge in a nonjury case may weigh the evidence and draw inferences only where parties cross-move for summary disposition on stipulated facts and have in effect submitted their case as a case stated; LBP-07-12, 66 NRC 127 n.71 (2007); LBP-07-13, 66 NRC 131 (2007)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 333 (1989)  
the environmental impact statement requirement and NEPA's other action-forcing procedures implement that statute's sweeping policy goals by ensuring that agencies will take a hard look at environmental consequences; CLI-07-27, 66 NRC 229 (2007)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 334, 355-56 (1989)  
although the Council on Environmental Quality's regulations do not bind NRC, they are entitled to substantial deference; CLI-07-27, 66 NRC 222 n.21 (2007)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989)  
in every recommendation or report on major federal actions significantly affecting the quality of the human environment, federal agencies must include a detailed statement by the responsible official on the environmental impact of the proposed action; LBP-07-11, 66 NRC 62 (2007)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)  
the statutory requirement that a federal agency contemplating a major action prepare an environmental impact statement serves NEPA's action-forcing purpose in two important respects; LBP-07-11, 66 NRC 62 (2007)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)  
if the adverse environmental effects of proposed action are adequately identified and evaluated, the agency is not constrained by NEPA from deciding that other values outweigh the environmental costs; LBP-07-11, 66 NRC 62 n.74 (2007)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351-52 (1989)  
the environmental impact statement must discuss the extent to which adverse effects can be avoided; LBP-07-11, 66 NRC 64 n.88 (2007)
- Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989)  
neither the agency nor other interested groups or individuals can properly evaluate the severity of the adverse effects; LBP-07-11, 66 NRC 64 n.88 (2007)
- Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 246 (1993)  
a bald and conclusory assertion is inadequate to support a contention; LBP-07-11, 66 NRC 93 (2007)

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- a conclusory assertion that is little more than a claim that the evacuation plan ought to be studied is not an adequate basis for a contention; LBP-07-11, 66 NRC 93 (2007)
- Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 NRC 200, 247-48 (1993), *review declined*, CLI-94-2, 39 NRC 91 (1994)
- any contention that fails directly to controvert the application or that mistakenly asserts that the application does not address a relevant issue can be dismissed; LBP-07-10, 66 NRC 24 (2007); LBP-07-16, 66 NRC 289 (2007)
- San Carlos Apache Tribe v. United States*, 272 F. Supp. 2d 860, 880 (D. Ariz. 2003)
- although wholly conclusory statements for which no supporting evidence is offered need not be taken as true for summary judgment purposes, a court may not make credibility determinations or weigh the evidence at the summary judgment stage; LBP-07-12, 66 NRC 127 (2007); LBP-07-13, 66 NRC 131 (2007)
- San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016 (9th Cir. 2006), *cert. denied sub nom.*, *Pacific Gas & Electric Co. v. San Luis Obispo Mothers for Peace*, 127 S. Ct. 1124 (2007)
- NRC cannot under NEPA categorically refuse to consider the consequences of a terrorist attack against a spent fuel storage facility; LBP-07-11, 66 NRC 83 (2007)
- the possibility of a terrorist attack at a nuclear facility cannot be dismissed as unquantifiable or remote and highly speculative and NEPA therefore requires the agency to consider the environmental effects of terrorist attacks in its NEPA review; LBP-07-14, 66 NRC 185 (2007)
- Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 13 (2001)
- an intervention petitioner must demonstrate that its injury arguably falls within the zone of interests protected by the statutes governing NRC proceedings; LBP-07-14, 66 NRC 182 (2007)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71-72 (1994)
- to establish standing, petitioner must show an injury in fact fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-07-16, 66 NRC 285, 300, 326 n.339 (2007)
- Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994)
- although a proximity presumption has been invoked when resolving issues of standing for cases involving reactor licensing, in a case involving an enforcement order, the standing requirement is also based on the confirmatory order itself and the adverse effect of the confirmatory order; LBP-07-16, 66 NRC 296, 303, 311, 317, 324 (2007)
- the Commission has accepted a proximity presumption granting standing to residents within 50 miles of a reactor, but has not accepted any such presumption in nonreactor cases; LBP-07-14, 66 NRC 178 (2007)
- Siegel v. AEC*, 400 F.2d 778 (D.C. Cir. 1968)
- terrorist attacks are not to be considered part of the NEPA analysis required for licensing actions; LBP-07-14, 66 NRC 185 (2007)
- Sierra Club v. Froehlke*, 816 F.2d 205, 210 (5th Cir. 1987)
- an environmental impact statement is not to be supplemented any time that any new information becomes available, but only when the new information presents a seriously different picture of the environmental impact of the proposed project from what was previously envisioned; LBP-07-14, 66 NRC 192 (2007)
- South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Unit 1), ALAB-710, 17 NRC 25, 28 (1983)
- licensing boards are bound to comply with Commission adjudicatory decisions, whether they agree with them or not; LBP-07-11, 66 NRC 74 (2007); LBP-07-14, 66 NRC 194 (2007)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), CLI-07-17, 65 NRC 392 (2007)
- licensing boards have authority to apply designations to contentions; LBP-07-10, 66 NRC 25 n.15 (2007)
- Southern Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 253 (2007)
- for purposes of summary disposition, mere allegations, including speculative or bare conclusory statements by an expert, are insufficient; LBP-07-13, 66 NRC 144 (2007)

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- Steel Co. v. Citizens for a Better Environment*, 523 U.S. 83, 102-04 (1998)  
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- System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-7, 65 NRC 122 (2007)  
before an early site permit can be made effective, the Commission must review and approve the licensing board's initial decision authorizing its issuance; CLI-07-23, 66 NRC 35 (2007); CLI-07-27, 66 NRC 220 (2007)
- System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-10, 65 NRC 144 (2007)  
the Commission is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question, and is not prevented from relitigating the issue in future cases; LBP-07-14, 66 NRC 186 (2007)
- System Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-07-14, 65 NRC 216, 218-19 (2007)  
if certain environmental effects cannot be meaningfully assessed at the ESP stage, the Staff's decision to defer consideration of those effects until a time when they can be accurately assessed is consistent with NEPA's requirements; CLI-07-27, 66 NRC 236 (2007)
- Tennessee Valley Authority* (Browns Ferry Nuclear Plant, Units 1, 2, and 3), LBP-73-29, 6 AEC 682, 688 (1973)  
summary disposition may be a useful device to eliminate the need for the time and cost of a hearing if the truth on a contested issue is clear and there is no genuine issue on any material fact; LBP-07-12, 66 NRC 128 (2007)
- Tennessee Valley Authority* (Phipps Bend Nuclear Plant, Units 1 and 2), LBP-77-60, 6 NRC 647, 658 (1977), *aff'd*, ALAB-506, 8 NRC 533 (1978)  
Staff is chastised for what appears to have been a totally uncritical reliance on only those alternative site possibilities suggested to it through the medium of the applicant's environmental report; CLI-07-27, 66 NRC 230 n.78 (2007)
- Tennessee Valley Authority* (Sequoyah Nuclear Plant, Units 1 and 2; Watts Bar Nuclear Plant, Unit 1), LBP-02-14, 56 NRC 15, 25 (2002)  
precedent supports applying a proximity radius within 17 miles for a reactor that intended to add additional material to its core inventory; LBP-07-14, 66 NRC 187 (2007)  
the proximity presumption was allowed for those living within 17 miles of the nuclear facilities where the applicant proposed to add tens of millions of curies of highly combustible radioactive hydrogen gas to the core inventory; LBP-07-14, 66 NRC 183 (2007)  
there are obvious offsite consequences from a technical specification change that would add tens of millions of curies of radioactive gas to already significant core inventory; LBP-07-10, 66 NRC 18 (2007)
- Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), CLI-93-2, 37 NRC 55, 57-58 n.2 (1993)  
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only if one has been admitted as a party to a proceeding, through showing standing and submitting an admissible contention, can one have a request for stay considered by a presiding officer; LBP-07-11, 66 NRC 97 (2007)
- Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992), *appeals dismissed as moot*, CLI-93-10, 37 NRC 192 (1993)  
any contention that fails directly to controvert the application or that mistakenly asserts the application does not address a relevant issue can be dismissed; LBP-07-10, 66 NRC 24 (2007); LBP-07-11, 66 NRC 58 (2007); LBP-07-16, 66 NRC 289 (2007)
- TRW, Inc. v. Andrews*, 534 U.S. 19, 31 (2001)  
a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant; LBP-07-11, 66 NRC 78 n.161 (2007)
- Union of Concerned Scientists v. NRC*, 880 F.2d 552, 558 (D.C. Cir. 1989)  
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- United Paperworkers International Union, Local 14, AFL-CIO-CLC v. International Paper Co.*, 64 F.3d 28, 31 (1st Cir. 1995)  
where parties cross-move for summary disposition on stipulated facts and have in effect submitted their case as a case stated, in a nonjury case a district court is freed from the usual constraints that attend the adjudication of summary judgment motions; LBP-07-12, 66 NRC 127 n.71 (2007); LBP-07-13, 66 NRC 131 (2007)
- United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 722-23 (2d Cir. 1993)  
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- United States v. Mendoza*, 464 U.S. 154, 160 (1984)  
the Commission is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question, and is not prevented from relitigating the issue in future cases; LBP-07-14, 66 NRC 185 (2007)
- United States v. Stauffer Chemical Co.*, 464 U.S. 165, 173 (1984)  
the Commission is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question, and is not prevented from relitigating the issue in future cases; LBP-07-14, 66 NRC 185 (2007)
- United States Department of Energy* (Clinch River Breeder Reactor Plant), ALAB-721, 17 NRC 539, 543 (1983)  
four factors should be considered in ruling on any request for stay; LBP-07-11, 66 NRC 97-98 (2007)
- United Steelworkers of America, AFL-CIO-CLC v. North Star Steel Co., Inc.*, 5 F.3d 39, 43 (3d Cir. 1993)  
a statute's provisions should be read to be consistent with one another, rather than the contrary; LBP-07-11, 66 NRC 78 n.161 (2007)
- U.S. Army* (Jefferson Proving Ground Site), LBP-04-1, 59 NRC 27, 29 (2004)  
a petitioner's showing establishing standing in one proceeding need not be repeated to establish standing in another proceeding regarding that same facility; LBP-07-10, 66 NRC 19 n.9 (2007); LBP-07-14, 66 NRC 189 (2007)
- USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 458 (2006)  
litigants in NRC proceedings cannot raise entirely new arguments on appeal; CLI-07-25, 66 NRC 106 n.26 (2007)
- Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519, 551 (1978)  
the issue of whether the level of detail in the Staff's alternative site analysis was so narrow as to render the results foreordained or, instead, whether the level of detail was reasonable under NEPA's rule of reason is considered; CLI-07-27, 66 NRC 229 (2007)
- Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.* 435 U.S. 519, 553-54 (1978)  
the purpose of the contention rule is to focus litigation on concrete issues and result in a clearer and more focused record for decision; LBP-07-16, 66 NRC 285 (2007)
- Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44 n.17 (1989), *vacated in part on other grounds*, CLI-90-4, 31 NRC 333 (1990)  
although Council on Environmental Quality regulations do not bind the Commission, it does look to them for guidance; CLI-07-27, 66 NRC 236 n.115 (2007)
- Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990)  
information, facts, and expert opinions provided by the petitioner will be examined by the board to confirm that they do indeed supply adequate support for the contention; LBP-07-10, 66 NRC 24 (2007); LBP-07-16, 66 NRC 288 (2007)
- Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-146, 6 AEC 631, 633 (1973)  
a petition that is not submitted under oath and does not state expressly the manner in which the petitioner's interest would be affected by the proceeding is a defect that may be readily curable; LBP-07-11, 66 NRC 55 (2007)

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- Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-146, 6 AEC 631, 633-34 (1973)  
although there must be strict observance of the requirements governing intervention, interested persons should not be rebuffed by the inflexible application of procedural requirements; LBP-07-11, 66 NRC 54 (2007)
- Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), ALAB-522, 9 NRC 54, 56 (1979)  
close proximity to a facility has always been deemed to be enough, standing alone, to establish the requisite interest to confer standing; LBP-07-11, 66 NRC 52 n.22 (2007)  
the Commission has accepted a proximity presumption granting standing to residents within 50 miles of a reactor, but has not accepted any such presumption in nonreactor cases; LBP-07-14, 66 NRC 178 (2007)
- Virginia Petroleum Jobbers Ass'n v. Federal Power Commission*, 259 F.2d 921, 925 (D.C. Cir. 1958)  
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- Wilderness Society v. Griles*, 824 F.2d 4, 11 (D.C. Cir. 1987)  
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- Wilson v. Westinghouse Electric Corp.*, 838 F.2d 286, 289-90 (8th Cir. 1988)  
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- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996)  
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- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 251 (1996)  
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- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998)  
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- Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998)  
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- 10 C.F.R. 2.206  
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- 10 C.F.R. 2.309(f)(1)  
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- 10 C.F.R. 2.309(f)(1)(iv)  
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- 10 C.F.R. 2.309(f)(1)(vi)
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- 10 C.F.R. 2.309(f)(2)(i)-(iii)
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- 10 C.F.R. 2.335  
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- 10 C.F.R. 2.341  
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- 10 C.F.R. 2.710(b)  
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- 10 C.F.R. 2.1205(c)  
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- 10 C.F.R. 2.1213(a)  
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- 10 C.F.R. Part 20, Subpart D  
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- 10 C.F.R. 20.1301(a)(1)  
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- 10 C.F.R. 30.33(a)(2)  
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- 10 C.F.R. Part 50  
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- 10 C.F.R. 50.9(b)  
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- 10 C.F.R. 50.34a  
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standards apply on a per-reactor basis, requiring that all nuclear reactors be designed so that releases of radioactivity are ALARA; CLI-07-27, 66 NRC 250 (2007)
- 10 C.F.R. 50.34a(a)  
numerical guidance on design objectives are provided for light water reactors to meet the requirements that radioactive material in effluents released to unrestricted areas be kept ALARA; CLI-07-27, 66 NRC 251 (2007)
- 10 C.F.R. 50.36a  
if a COL or CP applicant chooses to pursue a new reactor design before the Commission has set specific standards applicable to that type of reactor, then the applicant will be required to demonstrate that its emissions will be ALARA pursuant to this section; CLI-07-27, 66 NRC 254 (2007)
- 10 C.F.R. 50.36a(a)  
each licensee of a nuclear power reactor must include technical specifications that, among other things, require compliance with 10 C.F.R. 20.1301(a), in order to keep releases of radioactive materials during normal conditions ALARA; CLI-07-27, 66 NRC 25 n.197 (2007)
- 10 C.F.R. 50.47(b)(10), (c)(2)  
the plume-exposure pathway emergency planning zone for nuclear power reactors is an area about 10 miles in radius; LBP-07-11, 66 NRC 93 (2007)
- 10 C.F.R. 50.48(c)(2)(vii)  
licensees who wish to use performance-based methods for certain fire protection program elements and minimum design requirements may apply for license amendments to allow for such use in lieu of other fire protection requirements; LBP-07-11, 66 NRC 74 (2007)
- 10 C.F.R. 50.58(b)(6)  
the Staff's significant hazards consideration determination is final, subject only to the Commission's discretion, on its own initiative, to review the determination; LBP-07-10, 66 NRC 32 n.22 (2007)

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- 10 C.F.R. 50.72(b)(3)(ii)(A) & (B)  
if it discovers any significant corrosion on the drywell shell, licensee is required to notify NRC Staff and take immediate corrective action, consistent with its current licensing basis, to ensure the plant presents no undue risk of harm to public health and safety; LBP-07-17, 66 NRC 367 n.55 (2007)
- 10 C.F.R. Part 50, Appendix I  
numerical guidance on design objectives are provided for light water reactors to meet the requirements that radioactive material in effluents released to unrestricted areas be kept ALARA; CLI-07-27, 66 NRC 251 (2007)
- 10 C.F.R. 51.20(a)(2)  
NRC Staff must prepare an environmental impact statement for issuance or renewal of a nuclear reactor operating license; LBP-07-11, 66 NRC 63 (2007)
- 10 C.F.R. 51.41  
the initial requirement to analyze the environmental impacts of an action, including license renewal, is directed to applicants; LBP-07-11, 66 NRC 63 (2007)
- 10 C.F.R. 51.45(b)(3)  
as part of its application, an early site permit applicant must submit an environmental report that addresses alternatives to the proposed site sufficiently complete to aid the Commission in developing and exploring appropriate alternatives to recommended courses of action; CLI-07-27, 66 NRC 222 (2007)
- 10 C.F.R. 51.53(c)  
with its application, a license renewal applicant must submit an environmental report describing the proposed action, including applicant's plans to modify the facility or its administrative control procedures; LBP-07-11, 66 NRC 63 (2007)
- 10 C.F.R. 51.53(c)(1) & (2)  
a license renewal applicant must submit an environmental report describing in detail the modifications directly affecting the environment or affecting plant effluents that affect the environment; LBP-07-11, 66 NRC 63 (2007)
- 10 C.F.R. 51.53(c)(3)(i)  
applicant's environmental report is not required to contain analyses of environmental impacts identified as "Category 1," or "generic," issues in Part 51, Subpart A, Appendix B, Table B-1; LBP-07-11, 66 NRC 63 (2007)  
in their site-specific environmental reports, license renewal applicants may refer to and adopt the generic environmental impact findings found in Appendix B, Table B-1, for all Category 1 issues; LBP-07-11, 66 NRC 64 (2007)
- 10 C.F.R. 51.53(c)(3)(ii)  
an environmental report must contain analyses of the environmental impacts of the proposed action, including the impacts of refurbishment activities, if any, associated with license renewal and the impacts of operation during the renewal term and identified as "Category 2," or "plant-specific," issues in Table B-1; LBP-07-11, 66 NRC 64 (2007)
- 10 C.F.R. 51.53(c)(3)(ii)(L)  
alternatives to mitigate severe accidents must be considered for all plants that have not previously considered such alternatives; LBP-07-11, 66 NRC 64 (2007)  
at the operating license renewal stage, if Staff has not previously considered severe accident mitigation alternatives for applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided; LBP-07-13, 66 NRC 141 (2007)
- 10 C.F.R. 51.53(c)(3)(iv)  
even if a matter would normally fall within a Category 1 issue, environmental reports are required to contain any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware; LBP-07-11, 66 NRC 64 n.83 (2007)
- 10 C.F.R. 51.70  
Staff's supplemental environmental impact statement for license renewal is specific to the particular site involved and provides the Staff's independent assessment of the applicant's environmental report; LBP-07-11, 66 NRC 65 (2007)

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- 10 C.F.R. 51.70(b)  
the requirements of NEPA are directed to federal agencies and thus the primary duties of NEPA fall on the NRC Staff in NRC proceedings; LBP-07-11, 66 NRC 63 (2007)
- 10 C.F.R. 51.71(d)  
after analyzing applicant's environmental report and performing its own independent review, the Staff must publish for public comment a draft environmental impact statement analyzing the comparative environmental effects of locating the new reactor on the proposed and alternative sites; CLI-07-27, 66 NRC 223 (2007)
- 10 C.F.R. 51.73-51.74  
Staff's supplemental environmental impact statement for license renewal is specific to the particular site involved and provides the Staff's independent assessment of the applicant's environmental report; LBP-07-11, 66 NRC 65 (2007)
- 10 C.F.R. 51.91(c)  
after reviewing public comments on the draft environmental impact statement, the Staff must issue a final environmental impact statement stating how the alternatives considered will or will not achieve the requirements of sections 101 and 102(1) of NEPA; CLI-07-27, 66 NRC 223 (2007)
- 10 C.F.R. 51.92  
because of the nature of the two-step structure created for the MOX fuel fabrication facility, environmental contentions are beyond the scope of the current proceeding unless they meet requirements for supplementing the environmental impact statement; LBP-07-14, 66 NRC 192 (2007)
- 10 C.F.R. 51.95(c)  
although the initial requirement for addressing environmental impacts falls upon an applicant, the ultimate responsibility lies with the NRC Staff, who must address these issues in a supplemental environmental impact statement; LBP-07-11, 66 NRC 65 (2007)  
applicant's environmental report is not required to contain analyses of environmental impacts identified as "Category 1," or "generic," issues in Part 51, Subpart A, Appendix B, Table B-1; LBP-07-11, 66 NRC 63 (2007)
- 10 C.F.R. 51.103  
requirements for the "record of decision" relating to any license renewal application are defined; LBP-07-11, 66 NRC 65 (2007)
- 10 C.F.R. 51.103(a)(5)  
the standard that the Commission must apply in making a decision on a license renewal application is described; LBP-07-11, 66 NRC 65 (2007)
- 10 C.F.R. 51.105(a)(1)  
in the mandatory early site permit hearing, the NRC must address whether the requirements of section 102(2)(A), (C), and (E) of NEPA and the regulations in 10 C.F.R. Part 51, Subpart A have been complied with; CLI-07-27, 66 NRC 221 (2007)
- 10 C.F.R. 51.105(a)(2)  
in the mandatory early site permit hearing, the NRC must independently consider the final balance among the conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; CLI-07-27, 66 NRC 221 (2007)
- 10 C.F.R. 51.105(a)(3)  
in the mandatory early site permit hearing, the NRC must determine, after considering reasonable alternatives, whether the construction permit should be issued, denied, or appropriately conditioned to protect environmental values; CLI-07-27, 66 NRC 221, 257 (2007)
- 10 C.F.R. 51.105(a)(4)  
in the mandatory early site permit hearing, the NRC must address whether the review conducted by the Commission pursuant to the National Environmental Policy Act has been adequate; CLI-07-27, 66 NRC 221 (2007)
- 10 C.F.R. 50.109(a)(3)  
Staff may impose new conditions on existing licenses only under very limited circumstances; CLI-07-27, 66 NRC 234 (2007)
- 10 C.F.R. 51.109(f)  
the final environmental impact statement may be modified by subsequent decisions of NRC adjudicatory tribunals; CLI-07-27, 66 NRC 230 (2007)

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- 10 C.F.R. Part 51, Subpart A, Appendix A, § 5  
an early site permit applicant's environmental report must identify all reasonable alternatives to the proposed site; CLI-07-27, 66 NRC 222 (2007)
- 10 C.F.R. Part 51, Subpart A, Appendix B  
in their environmental report, applicants must address environmental issues for which the Commission was not able to make generic environmental findings; LBP-07-11, 66 NRC 64 (2007)  
issues on which the Commission can draw generic conclusions applicable to all existing nuclear power plants, or to a specific subgroup of plants, are identified as "Category 1" issues; LBP-07-11, 66 NRC 63 (2007)
- 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1  
alternatives to mitigate severe accidents must be considered for all plants that have not previously considered such alternatives; LBP-07-11, 66 NRC 64 (2007)
- 10 C.F.R. 52.1  
"design parameters" is defined as the postulated features of a reactor or reactors that could be built at a proposed site; CLI-07-27, 66 NRC 257 n.227 (2007)  
"site characteristics" is defined as the actual physical, environmental, and demographic features of a site; CLI-07-27, 66 NRC 257 n.227 (2007)
- 10 C.F.R. 52.17(a)(1)  
an early site permit applicant must describe the maximum levels of radiological effluents each facility will produce, and demonstrate that radiological effluent release limits can be met, with appropriate design, given the atmospheric dispersion characteristics of the site; CLI-07-27, 66 NRC 250 (2007)  
it is not necessary to address compliance with the ALARA requirements in an early site permit proceeding because Part 100 provides that an ESP applicant need only show that radiological effluent release limits associated with normal operation from the type of facility proposed to be located at the site can be met for any individual located offsite; CLI-07-27, 66 NRC 253 (2007)
- 10 C.F.R. 52.17(a)(2)  
an early site permit applicant's environmental report must evaluate alternative sites to determine whether there is any obviously superior alternative to the site proposed; CLI-07-27, 66 NRC 222, 236 (2007)  
an environmental report need not include an assessment of the need for power; CLI-07-27, 66 NRC 237 (2007)  
with respect to the environmental review for an early site permit, an ESP applicant must submit a complete environmental report focusing on construction and operation of one or more new reactors; CLI-07-27, 66 NRC 236 (2007)
- 10 C.F.R. 52.18  
where one or more particular environmental impacts cannot be meaningfully assessed at the early site permit stage, those matters may be designated as unresolved, provided they do not interfere with the Staff's ability to determine whether there is any obviously superior alternative to the proposed site; CLI-07-27, 66 NRC 236 (2007)
- 10 C.F.R. 52.39  
should the Commission approve issuance of an early site permit, the site characteristics and plant parameters must be specified in the ESP; CLI-07-27, 66 NRC 257 (2007)
- 10 C.F.R. 52.39(a)(2)  
should a CP or COL applicant reference the ESP, and the Staff ultimately determine that a representation or assumption has not been satisfied at the CP/COL stage, that information would be considered new and potentially significant, and the affected impact area could be subject to re-examination; CLI-07-27, 66 NRC 258 (2007)
- 10 C.F.R. 52.79  
should the Commission approve issuance of an early site permit, the site characteristics and plant parameters must be specified in the ESP; CLI-07-27, 66 NRC 257 n.227 (2007)
- 10 C.F.R. 52.79(a)(1)  
in the environmental context, the contents of the final environmental impact statement bounds the reach of both issue preclusion and Staff inquiry into new and significant information in a future CP or COL proceeding referencing an ESP granted for the North Anna ESP site; CLI-07-27, 66 NRC 259 (2007)

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- 10 C.F.R. 52.89  
in the environmental context, the contents of the final environmental impact statement bounds the reach of both issue preclusion and Staff inquiry into new and significant information in a future CP or COL proceeding referencing an ESP granted for the North Anna ESP site; CLI-07-27, 66 NRC 259 (2007)
- 10 C.F.R. 54.3  
acceptance criteria are part of the plant's current licensing basis in that they are plant-specific design-basis information defined in 10 C.F.R. 50.2 as documented in the most recent final safety analysis report as required by 10 C.F.R. 50.71; LBP-07-17, 66 NRC 344-45 (2007)  
"current licensing basis" is the set of NRC requirements applicable to a specific plant and a licensee's written commitments and the plant-specific design basis, including all modifications and additions to such commitments over the life of the license, that are docketed and in effect; LBP-07-11, 66 NRC 60-61 n.66 (2007); LBP-07-17, 66 NRC 334 n.10, 339 n.17 (2007)
- 10 C.F.R. 54.4(a)  
plant systems, structures, and components that are within the ambit of license renewal proceedings are described; LBP-07-11, 66 NRC 59-60 n.61 (2007)
- 10 C.F.R. 54.17(c)  
a license extension may be filed as much as 20 years before license expiration; LBP-07-14, 66 NRC 207 n.89 (2007)
- 10 C.F.R. 54.21  
a license renewal applicant must demonstrate that its UT monitoring program is adequate to manage the aging effects of corrosion in the sand bed region of the plant's drywell shell so the intended functions of the shell will be maintained during the renewal period consistent with the current licensing basis; LBP-07-17, 66 NRC 339, 340 (2007)  
any safety-related opposition to license renewal can be based only on matters stemming from the aging of the facility; LBP-07-14, 66 NRC 207 n.89 (2007)  
licensee must establish an aging management program that provides reasonable assurance that the drywell shell will continue to perform its intended function consistent with the current licensing basis during the additional 20 years of the renewal period; LBP-07-17, 66 NRC 340 (2007)  
technical information to be included in a license renewal application is described and relevant structures and components are identified; LBP-07-11, 66 NRC 60 (2007)  
with its application, a license renewal applicant must submit an environmental report describing the proposed action, including applicant's plans to modify the facility or its administrative control procedures; LBP-07-11, 66 NRC 63 (2007)
- 10 C.F.R. 54.21(a)  
petitioner contends that applicant's license renewal application does not include an adequate plan to monitor and manage the effects of aging due to metal fatigue on key reactor components that are subject to an aging management review; LBP-07-15, 66 NRC 264 (2007)  
renewal applicants must demonstrate how their aging management programs will be effective in managing the effects of aging during the proposed period of extended operation; LBP-07-17, 66 NRC 339 (2007)
- 10 C.F.R. 54.21(a)(1)(i)  
some of the detrimental effects of aging and related time-limited issues are described; LBP-07-11, 66 NRC 61 (2007)
- 10 C.F.R. 54.21(c)  
petitioner contends that applicant's license renewal application does not include an adequate plan to monitor and manage the effects of aging due to metal fatigue on key reactor components that are subject to an evaluation of the time-limited aging analysis; LBP-07-15, 66 NRC 264 (2007)
- 10 C.F.R. 54.21(c)(1)(i)-(iii)  
a metal fatigue issue and applicant's approach to meeting the requirements of this section with respect to that issue is an aging management issue that is clearly within the scope of a license renewal proceeding; LBP-07-15, 66 NRC 270 (2007)
- 10 C.F.R. 54.21(c)(1)(iii)  
applicant must demonstrate that the effects of aging due to metal fatigue on key reactor components will be adequately managed for the period of extended operation; LBP-07-15, 66 NRC 264 (2007)

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- 10 C.F.R. 54.29  
a license renewal review considers aging-management issues and some time-limited aging analyses that are associated with the functions of relevant plant systems, structures, and components; LBP-07-11, 66 NRC 60 (2007)  
any safety-related opposition to license renewal can be based only on matters stemming from the aging of the facility; LBP-07-14, 66 NRC 207 n.89 (2007)  
failure of applicant to file its intended license amendment application in time to allow for an aging-related review of whatever new fire protection system would otherwise be proposed and possibly approved, might arguably be occasion to submit a new request for hearing, petition to intervene, and contention(s); LBP-07-11, 66 NRC 80 (2007)  
licensee must establish an aging management program that provides reasonable assurance that the drywell shell will continue to perform its intended function consistent with the current licensing basis during the additional 20 years of the renewal period; LBP-07-17, 66 NRC 340 (2007)  
standards defining the findings the NRC must make to support a license renewal are set forth in this regulation; LBP-07-11, 66 NRC 58 (2007)  
the current licensing basis is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-07-11, 66 NRC 61 (2007)
- 10 C.F.R. 54.29(a)  
as a condition precedent to granting licensee's license renewal request, the NRC Staff must find there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis; LBP-07-11, 66 NRC 79-80 (2007); LBP-07-17, 66 NRC 339-40 (2007)
- 10 C.F.R. 54.30  
the current licensing basis is effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-07-11, 66 NRC 61 (2007)  
whether licensee is in compliance with its current licensing basis is beyond the scope of a license renewal proceeding because the Commission's ongoing regulatory process, which includes inspection and enforcement activities, seeks to ensure a licensee's current compliance with the CLB; LBP-07-17, 66 NRC 339 n.17 (2007)
- 10 C.F.R. 54.31(b)  
the scope of license renewal proceedings generally concern requests to renew 40-year reactor operating licenses for additional 20-year terms; LBP-07-11, 66 NRC 59 (2007)
- 10 C.F.R. 70.23(a)(8)  
contentions questioning whether construction of the principal structures, systems, and components of a fuel fabrication facility has been completed in accordance with the application can scarcely avoid containing elements of speculation or prematurity if they have to be filed before that construction had even commenced; LBP-07-14, 66 NRC 203 (2007)
- 10 C.F.R. 70.23a  
for enrichment facilities a single construction/operation hearing is held; LBP-07-14, 66 NRC 208 n.92 (2007)
- 10 C.F.R. 70.72(a)  
any increase in the maximum inventory of either radionuclides or chemicals used to perform the evaluations in the ISA Summary are subject to the requirements of this section; LBP-07-14, 66 NRC 204-05 (2007)  
licensee must establish a configuration management system to evaluate, implement, and track each change to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel; LBP-07-14, 66 NRC 204 (2007)
- 10 C.F.R. 70.72(a)(2)  
licensee's configuration management system must address the impact of changes on safety and health or control of licensed material; LBP-07-14, 66 NRC 204 (2007)
- 10 C.F.R. 70.72(a)(6)  
licensee's configuration management system must address impacts or modifications to the integrated safety analysis, integrated safety analysis summary, or other safety program information; LBP-07-14, 66 NRC 204 (2007)

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- 10 C.F.R. 72.214  
petitioner's spent fuel cask failure assertion is an impermissible challenge to the rulemaking certification of those casks; LBP-07-10, 66 NRC 32 n.24 (2007)
- 10 C.F.R. 100.21(c)(1)  
an early site permit applicant must describe the maximum levels of radiological effluents each facility will produce, and demonstrate that radiological effluent release limits can be met, with appropriate design, given the atmospheric dispersion characteristics of the site; CLI-07-27, 66 NRC 250 (2007)  
it is not necessary to address compliance with the ALARA requirements in an early site permit proceeding because Part 100 provides that an ESP applicant need only show that radiological effluent release limits associated with normal operation from the type of facility proposed to be located at the site can be met for any individual located offsite; CLI-07-27, 66 NRC 253 (2007)
- 10 C.F.R. 100.21(h)  
reactor sites should be located away from very densely populated centers; CLI-07-27, 66 NRC 232 (2007)
- 40 C.F.R. 190.02(b)  
the uranium fuel cycle encompasses the processes in production of uranium fuel, generation of electricity by a light-water cooled nuclear power plant using uranium fuel, and reprocessing spent uranium fuel; CLI-07-27, 66 NRC 251 (2007)
- 40 C.F.R. 190.10  
a multireactor site could have up to five units conforming to the Appendix I design objectives without violating the limits of this section; CLI-07-27, 66 NRC 252 n.203 (2007)  
dose is considered to be a cumulative dose for all operations at a given site; CLI-07-27, 66 NRC 254 (2007)  
gas-cooled nuclear power reactors are not subject to the stricter 25-mrem per-site limit; CLI-07-27, 66 NRC 251 (2007)  
this regulation applies only to light water reactors; CLI-07-27, 66 NRC 251 (2007)  
this regulation is a per-site restriction, applying to all sources within the uranium fuel cycle at a given site; CLI-07-27, 66 NRC 250 (2007)
- 40 C.F.R. 1500.2(d)  
as part of environmental scoping, specific efforts should be made to interview representatives of minority communities having specific knowledge about the locations, resource dependencies, customs and practices, and preexisting health and socioeconomic conditions of minority and low-income populations in the region; CLI-07-27, 66 NRC 243 n.156 (2007)
- 40 C.F.R. 1501.2(a)  
a final environmental impact statement should be analytic rather than encyclopedic; CLI-07-27, 66 NRC 241 n.150 (2007)
- 40 C.F.R. 1502.14(a)  
reasonable alternatives to applicant's proposed site must be rigorously explored and objectively evaluated; CLI-07-27, 66 NRC 222 n.21 (2007)
- 40 C.F.R. 1502.22(b)  
a final environmental impact statement can overcome a deficiency in information that may be unavoidably incomplete or unavailable if it states that fact, explains how the missing information is relevant, sets forth the existing information, and evaluates the environmental impacts to the best of the agency's ability; CLI-07-27, 66 NRC 236 (2007)

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STATUTES**

- Atomic Energy Act, 189a, 42 U.S.C. § 2239(a)  
an uncontested early site permit proceeding is still subject to the mandatory hearing requirement;  
CLI-07-27, 66 NRC 221 (2007)  
if petitioner can show that new and materially different information has become available during the  
processing of the application, and petitioner 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; LBP-07-15, 66 NRC 267 n.12 (2007)
- Atomic Energy Act, 189a(1)(A), 42 U.S.C. § 2239(a)(1)(A)  
NRC must provide a hearing upon the request of any person whose interest may be affected by the  
proceeding; LBP-07-11, 66 NRC 51 (2007); LBP-07-14, 66 NRC 182 (2007)
- Clean Water Act, 316(a)  
EPA's alternative thermal effluent limitations do not apply to a plant that employs closed-cycle cooling;  
CLI-07-25, 66 NRC 106 (2007)
- National Environmental Policy Act, 42 U.S.C. § 4332(2)(C) (2000)  
in every recommendation or report on major federal actions significantly affecting the quality of the  
human environment, federal agencies must include a detailed statement by the responsible official on  
the environmental impact of the proposed action; LBP-07-11, 66 NRC 62 (2007)
- National Environmental Policy Act, 42 U.S.C. § 4332(2)(C)(ii)  
alternatives to mitigate severe accidents must be considered for all plants that have not previously  
considered such alternatives; LBP-07-11, 66 NRC 64 n.88 (2007)
- National Environmental Policy Act, 102(2)(C)(iii), 42 U.S.C. § 4332(2)(C)(iii)  
NRC must provide a detailed statement on alternatives to the proposed action; CLI-07-27, 66 NRC 222  
(2007)

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OTHERS**

- Fed. R. App. P. 4(a)(5)  
a district court is authorized to extend time to file a notice of appeal; LBP-07-17, 66 NRC 370-71 n.59 (2007)
- Fed. R. Civ. P. 56  
if the presiding officer determines from affidavits filed by the party opposing summary disposition that the opposing party cannot present by affidavit the facts essential to justify its opposition, the presiding officer may order a continuance to permit such affidavits to be obtained, or may take other appropriate action; LBP-07-13, 66 NRC 131 (2007)  
whether a movant for summary disposition in an NRC proceeding has shown the absence of a genuine issue of material fact is evaluated according to the same standards used by such trial courts in ruling on motions for summary judgment; LBP-07-12, 66 NRC 125 (2007)
- 10A Charles Alan Wright et al., *Federal Practice & Procedure* § 2720 (3d ed. 1998)  
a procedure that amounts to a trial of the action and technically is not a disposition by summary judgment is appropriate only if it is clear that there is nothing else to be offered by the parties and there is no prejudice in proceeding in this fashion; LBP-07-12, 66 NRC 127 n.71 (2007)
- 10A Charles Alan Wright et al., *Federal Practice & Procedure* § 2727 (3d ed. 1998)  
a summary disposition movant fails to meet its burden when the filings demonstrate the existence of a genuine material fact, when the evidence introduced does not show that the nonmovant's position is a sham, when the matters presented fail to foreclose the possibility of a factual dispute, or when there is an issue as to the credibility of the moving party's evidentiary material; LBP-07-12, 66 NRC 125 (2007)
- 10A Charles Alan Wright et al., *Federal Practice & Procedure* § 2727, at 93-95 (1983)  
factual disputes that are irrelevant or unnecessary will not be counted; LBP-07-13, 66 NRC 140 (2007)

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### ACTION ITEMS

these identify significant information requirements that do not affect Staff's ability to make the requisite safety findings for issuance of an early site permit, but nevertheless merit tracking and resolution during the safety review performed for a subsequent CP or COL application referencing the ESP; CLI-07-27, 66 NRC 215 (2007)

### AFFIDAVITS

even though members' affidavits did not explicitly authorize the organizations to represent them, this was implicit in their providing the affidavits; LBP-07-11, 66 NRC 41 (2007)

if summary disposition movant satisfies its initial burden and supports its motion by affidavit, opponent must either proffer rebutting evidence or submit an affidavit explaining why it is impractical to do so; LBP-07-12, 66 NRC 113 (2007)

if the presiding officer determines from affidavits filed by the party opposing summary disposition that the opposing party cannot present by affidavit the facts essential to justify its opposition, the presiding officer may order a continuance to permit such affidavits to be obtained, or may take other appropriate action; LBP-07-12, 66 NRC 113 (2007)

specificity and support are required for the positions parties take in their filings; LBP-07-13, 66 NRC 131 (2007)

### AGING MANAGEMENT

although a contention challenging whether a new proposed fire protection program effectively addresses all relevant aging issues is denied, it could be refiled at a later point in the license renewal proceeding; LBP-07-11, 66 NRC 41 (2007)

an issue can be related to plant aging and still not warrant review at the time of a license renewal application, if the aging-related issue is adequately dealt with by regulatory processes on an ongoing basis; LBP-07-11, 66 NRC 41 (2007)

applicant moves for summary disposition of a contention involving whether leak detection through monitoring wells is necessary as part of the plant's aging management program; LBP-07-12, 66 NRC 113 (2007)

applicant must demonstrate, by a preponderance of the evidence, that its aging management program provides reasonable assurance that activities authorized by the renewed license will be conducted in a manner consistent with the current licensing basis, and that the effects of aging will be detected and corrected; LBP-07-17, 66 NRC 327 (2007)

in a license renewal proceeding, safety contentions must focus on topics related to the detrimental effects of aging and related time-limited issues; LBP-07-15, 66 NRC 261 (2007)

metal fatigue is an example of age-related degradation that properly falls within the scope of a license renewal proceeding; LBP-07-15, 66 NRC 261 (2007)

the scope of license renewal proceedings is limited to the potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs; LBP-07-11, 66 NRC 41 (2007); LBP-07-17, 66 NRC 327 (2007)

### AIRCRAFT CRASHES

NEPA imposes no duty on NRC to consider intentional malevolent acts in a license renewal proceeding; LBP-07-11, 66 NRC 41 (2007)

### ALARA PRINCIPLE

unless and until specific numerical guidelines for maintaining effluent releases ALARA for non-LWRs are implemented, compliance with ALARA requirements will be determined on a case-by-case basis in the

## SUBJECT INDEX

- context of a future COL or CP application referencing the early site permit; CLI-07-27, 66 NRC 215 (2007)
- AMENDMENT OF CONTENTIONS**
- after the initial filing, permission of the board must be sought to file new or amended contentions; LBP-07-14, 66 NRC 169 (2007)
- the February 2004 revision of the NRC procedural rules no longer permits the amendment and supplementation of petitions and filing of contentions after the original filing of petitions; LBP-07-11, 66 NRC 41 (2007)
- when facility proponents bring forward a solution that allegedly cures the deficiency alleged in a contention and then move to dismiss the contention, this triggers a period during which petitioners can amend the original contention to challenge the solution's substance; LBP-07-14, 66 NRC 169 (2007)
- when new contentions are based on breaking developments or information, they are to be treated as new or amended, not as nontimely; LBP-07-14, 66 NRC 169 (2007)
- APPEALS**
- an automatic right to appeal a board decision denying a petition to intervene exists; CLI-07-25, 66 NRC 101 (2007)
- the Commission generally defers to the board in matters of case management, such as censure orders; CLI-07-28, 66 NRC 275 (2007)
- APPELLATE REVIEW**
- before an early site permit can be made effective, the Commission must review and approve the licensing board's initial decision authorizing its issuance; CLI-07-23, 66 NRC 35 (2007)
- requests for extension of time to file a petition for review are to be determined by the relevant appellate body, and accordingly must be directed to that body; LBP-07-17, 66 NRC 327 (2007)
- APPLICANTS**
- absent evidence to the contrary, it is assumed NRC licensees will not contravene agency regulations; LBP-07-10, 66 NRC 1 (2007)
- although the primary duties of NEPA fall on the NRC Staff in NRC proceedings, the initial requirement to analyze the environmental impacts of an action, including license renewal, is directed to applicants; LBP-07-11, 66 NRC 41 (2007)
- license renewal applicant must demonstrate, by a preponderance of the evidence, that its aging management program provides reasonable assurance that activities authorized by the renewed license will be conducted in a manner consistent with the current licensing basis, and that the effects of aging will be detected and corrected; LBP-07-17, 66 NRC 327 (2007)
- ATOMIC ENERGY ACT**
- NRC must provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-07-11, 66 NRC 41 (2007)
- BRIEFS, APPELLATE**
- litigants in NRC proceedings cannot raise entirely new arguments; CLI-07-25, 66 NRC 101 (2007)
- requests for extension of time to file a petition for review are to be determined by the relevant appellate body, and accordingly must be directed to that body; LBP-07-17, 66 NRC 327 (2007)
- BURDEN OF PERSUASION**
- summary disposition movant bears the burden of showing the absence of a genuine issue as to any material fact; LBP-07-12, 66 NRC 113 (2007)
- BURDEN OF PROOF**
- a party is not required to prove its case in making or opposing a motion for summary disposition; LBP-07-13, 66 NRC 131 (2007)
- if the support a party offers to demonstrate that a genuine dispute exists as to a material fact indicates that, after expanding that support to its logical limits, it cannot support a finding of fact material to the determination the agency must make, that party's position cannot prevail; LBP-07-13, 66 NRC 131 (2007)
- license renewal applicant must demonstrate, by a preponderance of the evidence, that its aging management program provides reasonable assurance that activities authorized by the renewed license will be conducted in a manner consistent with the current licensing basis, and that the effects of aging will be detected and corrected; LBP-07-17, 66 NRC 327 (2007)
- petitioner bears the burden of establishing its standing in a proceeding; LBP-07-10, 66 NRC 1 (2007)

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### CASE MANAGEMENT

the Commission generally defers to the board in matters of case management, such as censure orders; CLI-07-28, 66 NRC 275 (2007)

### COMBINED LICENSE PROCEEDING

compliance with applicable radiation standards is deferred at the early site permit stage, and can only be determined in a COL or CP proceeding; CLI-07-27, 66 NRC 215 (2007)

when one or more particular environmental impacts cannot be meaningfully assessed at the ESP stage, those matters may be designated as "unresolved," provided they do not interfere with the Staff's ability to determine whether there is any obviously superior alternative to the proposed site; CLI-07-27, 66 NRC 215 (2007)

### COMBINED LICENSES

action items identify significant information requirements that do not affect Staff's ability to make the requisite safety findings for issuance of an early site permit, but nevertheless merit tracking and resolution during the safety review performed for a subsequent CP or COL application referencing the ESP; CLI-07-27, 66 NRC 215 (2007)

representations, assumptions, and unresolved issues discussed in the final environmental impact statement neither place limitations on the ESP or the ESP holder, nor bind a CP or COL applicant in the preparation of future applications referencing the ESP; CLI-07-27, 66 NRC 215 (2007)

### CONFIRMATORY ORDER

the scope of an enforcement proceeding is limited to whether an enforcement order should be sustained; LBP-07-16, 66 NRC 277 (2007)

### CONSIDERATION OF ALTERNATIVES

for an early site permit, NRC is required to provide a detailed statement on alternatives to the proposed action; CLI-07-27, 66 NRC 215 (2007)

if NRC Staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided; LBP-07-13, 66 NRC 131 (2007)

the Commission's discussion of the Staff's underlying review adds necessary additional details and constitutes a supplement to the final environmental impact statement's alternative site review; CLI-07-27, 66 NRC 215 (2007)

under the National Environmental Policy Act, Staff is obliged to perform a severe accident mitigation alternatives analysis; LBP-07-13, 66 NRC 131 (2007)

### CONSTRUCTION PERMIT PROCEEDING

compliance with applicable radiation standards is deferred at the early site permit stage, and can only be determined in a COL or CP proceeding; CLI-07-27, 66 NRC 215 (2007)

### CONTEMPT

boards may reprimand, censure, or suspend intervenors for contemptuous conduct; CLI-07-28, 66 NRC 275 (2007)

### CONTENTIONS

a classic "contention of omission" occurs when petitioners allege that certain necessary safety-related steps or analyses have not been taken; LBP-07-14, 66 NRC 169 (2007)

although the February 2004 revision of the NRC procedural rules no longer permits the amendment and supplementation of petitions and filing of contentions after the original filing of petitions, the substantive admissibility standards are essentially the same; LBP-07-11, 66 NRC 41 (2007)

detailed pleadings put other parties in the proceeding on notice of the petitioners' specific grievances, thereby giving them a good idea of the claims they will be either supporting or opposing; LBP-07-11, 66 NRC 41 (2007)

motion for summary disposition of contention questioning applicant's handling of its severe accident mitigation alternatives analysis concerning evacuation times, economic consequences, and meteorological patterns is granted; LBP-07-13, 66 NRC 131 (2007)

petitioner must read pertinent portions of the license application, including the safety analysis report and the environmental report, state applicant's position and petitioner's opposing view, and explain why petitioner disagrees with applicant; LBP-07-11, 66 NRC 41 (2007)

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strict pleading requirements help to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-07-11, 66 NRC 41 (2007)

the strict contention rule focuses the hearing process on real disputes susceptible of resolution in an adjudication; LBP-07-11, 66 NRC 41 (2007)

to intervene in an NRC proceeding, petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. 2.309(f)(1); LBP-07-11, 66 NRC 41 (2007)

when a Notice of Hearing is issued before construction is commenced, additional petitions to intervene or statements of contentions may be filed as construction unfolds and reveals potential shortcomings; LBP-07-14, 66 NRC 169 (2007)

See also Amendment of Contentions

### CONTENTIONS, ADMISSIBILITY

a board appropriately rejected the contention of a petitioner who failed to support his premise that a river water intake valve is a safety-related system with information or expert opinion; CLI-07-25, 66 NRC 101 (2007)

a brief explanation of the basis for the contention is a necessary prerequisite; LBP-07-16, 66 NRC 277 (2007)

a contention must allege facts sufficient to establish that it falls directly within the scope of a proceeding; LBP-07-11, 66 NRC 41 (2007)

a contention that merely seeks to advance generalizations regarding a petitioner's particular view of what applicable policies ought to be is not admissible; CLI-07-25, 66 NRC 101 (2007)

a matter raised for the first time in a prehearing conference would only be admissible if the petitioner could satisfy the test for admitting late-filed contentions; CLI-07-25, 66 NRC 101 (2007)

a new non-NEPA contention is admissible if it is based on information that was not previously available, if the new information is materially different from previously available information, and if the contention is submitted in a timely manner once the new information becomes available; LBP-07-15, 66 NRC 261 (2007)

a proposed new contention challenging the adequacy of applicant's recently issued metal fatigue calculations meets both the three-factor and six-factor tests for admissibility; LBP-07-15, 66 NRC 261 (2007)

all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-07-10, 66 NRC 1 (2007)

allegation that some aspect of a license application is "inadequate" or "unacceptable" does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect; LBP-07-11, 66 NRC 41 (2007)

allegations of deficiencies or errors in an application also must indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment; LBP-07-10, 66 NRC 1 (2007)

although a board may appropriately view petitioner's support for its contention in a light that is favorable to the petitioner, the petitioner must provide some support for his or her contention, in the form of either facts or expert testimony; LBP-07-16, 66 NRC 277 (2007)

an attack on applicable statutory requirements or a challenge to the basic structure of the Commission's regulatory process does not form an admissible contention; LBP-07-16, 66 NRC 277 (2007)

an issue can be related to plant aging and still not warrant review at the time of a license renewal application, if the aging-related issue is adequately dealt with by regulatory processes on an ongoing basis; LBP-07-11, 66 NRC 41 (2007)

any contention that falls outside the specified scope of the proceeding must be rejected; LBP-07-10, 66 NRC 1 (2007)

any new contentions filed by petitioners, whose original petition was timely and who have demonstrated their standing, that are attributable to the applicant's construction activity or change of plans or design, are governed by the basic provisions of 10 C.F.R. 2.309(f)(2) rather than by the more restrictive elements applicable to nontimely filings; LBP-07-14, 66 NRC 169 (2007)

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any supporting material provided by a petitioner, including those portions of the material that are not relied upon, is subject to board scrutiny; LBP-07-10, 66 NRC 1 (2007); LBP-07-16, 66 NRC 277 (2007)

assertions regarding purported water fouling incidents by members of applicant's corporate family who are not NRC licensees fall far short of what is required to establish circumstances that would create a genuine material dispute; LBP-07-10, 66 NRC 1 (2007)

challenge to adequacy of a plant's evacuation plan must be denied because emergency planning is not within the scope of license renewal as a safety issue; LBP-07-11, 66 NRC 41 (2007)

challenge to specific input data to the severe accident mitigation alternatives analysis could bring a contention on adequacy of an evacuation plan within the scope of license renewal; LBP-07-11, 66 NRC 41 (2007)

contention that a license renewal application fails to satisfy NEPA because it does not address environmental impacts of an attack by deliberate and malicious crash of aircraft into the plant is denied; LBP-07-11, 66 NRC 41 (2007)

contentions must be based on documents or other information available at the time the petition is to be filed; LBP-07-14, 66 NRC 169 (2007)

contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking are inadmissible; LBP-07-10, 66 NRC 1 (2007)

contentions that attack a Commission rule, or that seek to litigate a matter that is, or clearly is about to become, the subject of a rulemaking, are inadmissible; LBP-07-10, 66 NRC 1 (2007)

determining whether a contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-07-16, 66 NRC 277 (2007)

environmental issues identified as "Category 1," or "generic," issues in 10 C.F.R. Part 51, Subpart A, Appendix B, are not within the scope of a license renewal proceeding; LBP-07-11, 66 NRC 41 (2007)

failure to comply with any of the pleading requirements is grounds for dismissing a contention; LBP-07-10, 66 NRC 1 (2007); LBP-07-11, 66 NRC 41 (2007); LBP-07-16, 66 NRC 277 (2007)

failure to directly controvert the application or mistakenly asserting that the application does not address a relevant issue will result in dismissal; LBP-07-10, 66 NRC 1 (2007)

fire safety issues do not come within the NRC's safety review of a license renewal application because they are already the focus of ongoing regulatory processes; LBP-07-11, 66 NRC 41 (2007)

for a contention to pass the materiality test, there must be some significant link between a claimed deficiency and either the health and safety of the public, or the environment; LBP-07-16, 66 NRC 277 (2007)

if petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions of fact that favor the petitioner, nor may the board supply information that is lacking; LBP-07-10, 66 NRC 1 (2007)

if safety contentions filed before construction begins would be considered premature and/or speculative, NRC hearing opportunities could soon come to be viewed as chimerical; LBP-07-14, 66 NRC 169 (2007)

in a license renewal proceeding, safety contentions must focus on topics related to the detrimental effects of aging and related time-limited issues; LBP-07-15, 66 NRC 261 (2007)

intervenor may not challenge a licensee's current licensing basis; LBP-07-17, 66 NRC 327 (2007)

issues concerning alleged violations of state law or regulations are outside the scope of, and not material to, an NRC power uprate proceeding; CLI-07-25, 66 NRC 101 (2007)

licensing boards, in determining whether proffered contentions are premature, must apply norms in a manner that fits the circumstances and must consider whether to condition rejection of such contentions so as to preserve the opportunity for them to be re-presented later; LBP-07-14, 66 NRC 169 (2007)

licensing boards may appropriately view a petitioner's supporting information in a light favorable to the petitioner, but failure to provide such information regarding a proffered contention requires that the contention be rejected; LBP-07-10, 66 NRC 1 (2007)

material provided in support of a contention will be carefully examined by the board to confirm that on its face it does supply an adequate basis for the contention; LBP-07-10, 66 NRC 1 (2007)

neither mere speculation nor bare or conclusory assertions alleging that a matter should be considered will suffice to allow the admission of a proffered contention; LBP-07-10, 66 NRC 1 (2007)

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new and significant information that would normally fall within a Category 1 issue is not a proper subject for a contention, absent a waiver of the rule that Category 1 issues need not be addressed in a license renewal proceeding; LBP-07-11, 66 NRC 41 (2007)

new or amended environmental contentions can be freely filed if new data or conclusions appear in new documents; LBP-07-14, 66 NRC 169 (2007)

no petition on, or other request for review of, the Staff's significant hazards consideration determination will be entertained by the Commission; LBP-07-10, 66 NRC 1 (2007)

nontimely new contentions are subject to the more stringent eight-factor balancing test; LBP-07-15, 66 NRC 261 (2007)

NRC's adjudicatory process is not a forum for litigating matters that are primarily the responsibility of other federal or state/local regulatory agencies; LBP-07-10, 66 NRC 1 (2007)

petitioner does not have to prove its contention at the admissibility stage; LBP-07-16, 66 NRC 277 (2007)

petitioner is obliged to present the factual information and expert opinions necessary to support its contention adequately; LBP-07-10, 66 NRC 1 (2007); LBP-07-16, 66 NRC 277 (2007)

petitioner may not demand an adjudicatory hearing to attack generic NRC requirements or regulations or to express generalized grievances about NRC policies; LBP-07-11, 66 NRC 41 (2007)

petitioner must demonstrate that the issue raised in a contention is both within the scope of the proceeding and material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-07-10, 66 NRC 1 (2007)

petitioner must show that he, she, or it would be adversely affected by the enforcement order as it exists, not that they are harmed by the failure of the Commission to impose a hypothetical order the petitioner asserts would be an improvement; LBP-07-11, 66 NRC 41 (2007); LBP-07-16, 66 NRC 277 (2007)

petitioners' pleadings must contain more systematic support for contention admissibility than a passing reference to new information; LBP-07-14, 66 NRC 169 (2007)

pleading requirements for contentions are specified; LBP-07-10, 66 NRC 1 (2007)

properly formulated contentions must focus on the license application in question, challenging either specific portions of or alleged omissions from the application, including the safety analysis report and the environmental report, so as to establish that a genuine dispute exists with the applicant on a material issue of law or fact; LBP-07-10, 66 NRC 1 (2007)

reply pleadings are an improper place to attempt to introduce a new argument to establish a contention's admissibility; LBP-07-10, 66 NRC 1 (2007)

simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention; LBP-07-10, 66 NRC 1 (2007)

statements of petitioner's views about what regulatory policy should be do not present litigable issues; LBP-07-10, 66 NRC 1 (2007)

the contention admissibility threshold is less than is required at the summary disposition stage; LBP-07-16, 66 NRC 277 (2007)

the fact that a given guidance document upon which an applicant relied was withdrawn does not suffice to support a contention; LBP-07-14, 66 NRC 169 (2007)

the proper scope of an irradiation licensing proceeding and whether it requires or otherwise encompasses analyses of endemic site-related risks are questioned; CLI-07-26, 66 NRC 109 (2007)

the requirement that the issue raised in a contention must be within the scope of the proceeding is of particular relevance given the two-stage jurisdictional procedure established prior to the first mixed oxide fuel fabrication facility proceeding; LBP-07-14, 66 NRC 169 (2007)

the scope of a license renewal proceeding is addressed, with regard to safety-related issues, in 10 C.F.R. Part 54, and, with regard to environmental issues, in 10 C.F.R. Part 51; LBP-07-11, 66 NRC 41 (2007)

the scope of an enforcement proceeding is limited to whether an enforcement order should be sustained; LBP-07-16, 66 NRC 277 (2007)

the scope of license renewal proceedings is limited to the potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs; LBP-07-17, 66 NRC 327 (2007)

the scope of the proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-07-16, 66 NRC 277 (2007)

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the six-factor test in 10 C.F.R. 2.309(f)(1) applies regardless of whether a contention is submitted at the beginning of a proceeding, as a timely new contention under section 2.309(f)(2), or as a nontimely new contention under section 2.309(c); LBP-07-15, 66 NRC 261 (2007)

the subject matter of the contention must impact the grant or denial of a pending license application; LBP-07-10, 66 NRC 1 (2007)

timely new non-NEPA contentions are subject to a three-factor test; LBP-07-15, 66 NRC 261 (2007)

to challenge a rule or regulation in the adjudicatory context, petitioner must submit a request for waiver of the rule under 10 C.F.R. 2.335; LBP-07-11, 66 NRC 41 (2007)

to the extent that petitioner's request for release of information seeks to enhance the enforcement measures already outlined by the Staff in the confirmatory order, this is also outside the scope of an enforcement proceeding; LBP-07-16, 66 NRC 277 (2007)

water use issues that are under the jurisdiction of another agency, and which are not affected by any NRC regulation, are outside the scope of an NRC proceeding; CLI-07-25, 66 NRC 101 (2007)

when environmental issues are dealt with in a separate proceeding, environmental contentions are beyond the scope of the safety proceeding unless they meet requirements beyond the ordinary contention admissibility tests; LBP-07-14, 66 NRC 169 (2007)

when new contentions are based on breaking developments or information, they are to be treated as new or amended, not as nontimely; LBP-07-14, 66 NRC 169 (2007)

with limited exceptions, no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-07-16, 66 NRC 277 (2007)

**CONTENTIONS, LATE-FILED**

a matter raised for the first time in a prehearing conference would only be admissible if the petitioner could satisfy the test for admitting late-filed contentions; CLI-07-25, 66 NRC 101 (2007)

after the initial filing, permission of the board must be sought to file new or amended contentions; LBP-07-14, 66 NRC 169 (2007)

any new contentions filed by petitioners, whose original petition was timely and who have demonstrated their standing, that are attributable to the applicant's construction activity or change of plans or design, are governed by the basic provisions of 10 C.F.R. 2.309(f)(2) rather than by the more restrictive elements applicable to nontimely filings; LBP-07-14, 66 NRC 169 (2007)

nontimely new contentions are subject to the more stringent eight-factor balancing test; LBP-07-15, 66 NRC 261 (2007)

NRC regulations do not provide a specific deadline for determining whether a new contention is timely; LBP-07-15, 66 NRC 261 (2007)

when new contentions are based on breaking developments or information, they are to be treated as new or amended, not as nontimely; LBP-07-14, 66 NRC 169 (2007)

**COOLING SYSTEMS**

EPA's alternative thermal effluent limitations do not apply to a plant that employs closed-cycle cooling; CLI-07-25, 66 NRC 101 (2007)

**COST-BENEFIT ANALYSES**

in its SAMA analysis, Staff compares the estimated equivalent dollar amount of computed reduction in the risk of a severe accident associated with implementation of a particular mitigation alternative with the estimated potential cost of implementation of that alternative; LBP-07-13, 66 NRC 131 (2007)

**COUNCIL ON ENVIRONMENTAL QUALITY GUIDELINES**

although CEQ guidance is not binding on NRC, it is given substantial deference; CLI-07-27, 66 NRC 215 (2007)

**CURRENT LICENSING BASIS**

challenges to a licensee's current compliance with its CLB or other operational requirements may be raised via a section 2.206 petition; LBP-07-17, 66 NRC 327 (2007)

intervenors may not challenge a licensee's CLB in a license renewal proceeding; LBP-07-17, 66 NRC 327 (2007)

licensee's discretionary use of testing and assessment criteria that are more conservative than those in the CLB does not transform the former criteria into part of the CLB; LBP-07-17, 66 NRC 327 (2007)

licensee's written commitments that are docketed and in effect constitute part of the CLB; LBP-07-17, 66 NRC 327 (2007)

## SUBJECT INDEX

the Commission's ongoing regulatory process, which includes inspection and enforcement activities, seeks to ensure a licensee's current compliance with the CLB; LBP-07-17, 66 NRC 327 (2007)

### DEADLINES

a specific rule may be established by a licensing board in the initial scheduling order for filing new contentions; LBP-07-15, 66 NRC 261 (2007)

### DICTA

a board's decision on one of the admission elements does not necessarily render any discussion of the other superfluous because a decision addressing only one of the two items creates the potential for significant delay if that single determination is later overturned on appeal; LBP-07-10, 66 NRC 1 (2007)

a ruling on standing does not constitute dicta simply because the board also concluded that the petitioner had failed to proffer an admissible contention; LBP-07-10, 66 NRC 1 (2007)

### DOSE LIMITS

compliance with applicable radiation standards is deferred at the early site permit stage, and can only be determined in a COL or CP proceeding; CLI-07-27, 66 NRC 215 (2007)

if applicant pursues a new reactor design before the Commission has set specific standards applicable to that type of reactor, then applicant will be subject to the existing requirement of 10 C.F.R.

20.1301(a)(1), and will further be required to demonstrate that its emissions will be ALARA pursuant to 10 C.F.R. 50.34a, 50.36a, and 20.1101; CLI-07-27, 66 NRC 215 (2007)

unless and until specific numerical guidelines for maintaining effluent releases ALARA for non-LWRs are implemented, compliance with ALARA requirements will be determined on a case-by-case basis in the context of a future COL or CP application referencing the early site permit; CLI-07-27, 66 NRC 215 (2007)

### DOSE, RADIOLOGICAL

showing that estimated dose consequences associated with operation under extended power uprate conditions can be expected to increase by the 20% power level change establishes that the proposed EPU creates an obvious potential for offsite consequences; LBP-07-10, 66 NRC 1 (2007)

the limiting standard for light-water-cooled reactors is 10 C.F.R. 20.1301(e), because a licensee within the uranium fuel cycle could not release the 100-mrem limit permitted by section 20.1301(a) without necessarily violating the 25-mrem limit of section 20.1301(e) that applies to the entire site; CLI-07-27, 66 NRC 215 (2007)

### EARLY SITE PERMIT PROCEEDINGS

compliance with applicable radiation standards is deferred at the ESP stage, and can only be determined in a COL or CP proceeding; CLI-07-27, 66 NRC 215 (2007)

in a mandatory ESP hearing, NRC must address six issues; CLI-07-27, 66 NRC 215 (2007)

### EARLY SITE PERMITS

approval of an ESP does not, and is not intended to, approve the construction or operation of reactor(s) of any specific design at the proposed site; CLI-07-27, 66 NRC 215 (2007)

before an early site permit can be made effective, the Commission must review and approve the licensing board's initial decision authorizing its issuance; CLI-07-23, 66 NRC 35 (2007)

representations, assumptions, and unresolved issues discussed in the final environmental impact statement neither place limitations on the ESP or the ESP holder, nor bind a CP or COL applicant in the preparation of future applications referencing the ESP; CLI-07-27, 66 NRC 215 (2007)

when one or more particular environmental impacts cannot be meaningfully assessed at the ESP stage, those matters may be designated as "unresolved," provided they do not interfere with the Staff's ability to determine whether there is any obviously superior alternative to the proposed site; CLI-07-27, 66 NRC 215 (2007)

### ECONOMIC EFFECTS

motion for summary disposition of contention questioning applicant's handling of its severe accident mitigation alternatives analysis; LBP-07-13, 66 NRC 131 (2007)

### EFFECTIVENESS

before an early site permit can be made effective, the Commission must review and approve the licensing board's initial decision authorizing its issuance; CLI-07-23, 66 NRC 35 (2007)

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### EMERGENCY PLANNING

a contention that a plant's evacuation plan does not adequately protect the health and safety of public and plant workers must be denied because emergency planning is not within the scope of license renewal as a safety issue; LBP-07-11, 66 NRC 41 (2007)

challenge to specific input data to the severe accident mitigation alternatives analysis could bring a contention on adequacy of an evacuation plan within the scope of license renewal; LBP-07-11, 66 NRC 41 (2007)

### ENFORCEMENT PROCEEDINGS

although a proximity presumption has been invoked when resolving issues of standing for cases involving reactor licensing, in a case involving an enforcement order, the standing requirement is also based on the confirmatory order itself and the adverse effect of the confirmatory order; LBP-07-16, 66 NRC 277 (2007)

boards are not to consider whether enforcement orders need strengthening; LBP-07-16, 66 NRC 277 (2007)

standing is determined by reviewing the alleged injury stemming from the regulatory action, not that asserted to arise generally from operation of the facility or the actions of the licensee involved in the proceeding; LBP-07-16, 66 NRC 277 (2007)

the scope of the proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-07-16, 66 NRC 277 (2007)

the scope of the proceeding is limited to whether an enforcement order should be sustained; LBP-07-16, 66 NRC 277 (2007)

to the extent that petitioner's request for release of information seeks to enhance the enforcement measures already outlined by the Staff in the confirmatory order, this is outside the scope of the proceeding; LBP-07-16, 66 NRC 277 (2007)

### ENVIRONMENTAL EFFECTS

prior NRC precedent is consistent with Supreme Court NEPA doctrine, which requires a reasonably close causal relationship between federal agency action and environmental consequences before NEPA is triggered, a relationship similar to that of proximate cause in tort law; LBP-07-14, 66 NRC 169 (2007)

when one or more particular environmental impacts cannot be meaningfully assessed at the ESP stage, those matters may be designated as "unresolved," provided they do not interfere with the Staff's ability to determine whether there is any obviously superior alternative to the proposed site; CLI-07-27, 66 NRC 215 (2007)

### ENVIRONMENTAL IMPACT STATEMENT

agencies may defer certain issues in an EIS for a multistage project when detailed useful information on a given topic is not meaningfully possible to obtain, and the unavailable information is not essential to determination at the earlier stage; CLI-07-27, 66 NRC 215 (2007)

although the primary duties of NEPA fall on the NRC Staff in NRC proceedings, the initial requirement to analyze the environmental impacts of an action is directed to applicants; LBP-07-11, 66 NRC 41 (2007)

an EIS ensures that an agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; LBP-07-11, 66 NRC 41 (2007)

an EIS guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision; LBP-07-11, 66 NRC 41 (2007)

federal agencies must include in every recommendation or report on major federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on the environmental impact of the proposed action; LBP-07-11, 66 NRC 41 (2007)

if NRC Staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided; LBP-07-13, 66 NRC 131 (2007)

NRC's NEPA process for preparation of an EIS mandates openness and clarity; CLI-07-27, 66 NRC 215 (2007)

See also Final Environmental Impact Statement

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### ENVIRONMENTAL ISSUES

- although the primary duties of NEPA fall on the NRC Staff in NRC proceedings, the initial requirement to analyze the environmental impacts of an action is directed to applicants; LBP-07-11, 66 NRC 41 (2007)
- Category 2 issues involve environmental impact severity levels that could differ significantly from plant to plant, or involve impacts for which additional plant-specific mitigation measures should be considered; LBP-07-11, 66 NRC 41 (2007)
- environmental issues identified as “Category 1,” or “generic,” issues in 10 C.F.R. Part 51, Subpart A, Appendix B, are not within the scope of a license renewal proceeding; LBP-07-11, 66 NRC 41 (2007)
- federal agencies must include in every recommendation or report on major federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on the environmental impact of the proposed action; LBP-07-11, 66 NRC 41 (2007)
- for an early site permit, NRC is required to provide a detailed statement on alternatives to the proposed action; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory early site permit proceeding, NRC must address whether the requirements of section 102(2)(A), (C), and (E) of the National Environmental Policy Act and the regulations in 10 C.F.R. Part 51, Subpart A have been complied with; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory early site permit proceeding, NRC must address whether the review conducted by the Commission pursuant to the National Environmental Policy Act has been adequate; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory early site permit proceeding, NRC must determine, after considering reasonable alternatives, whether the construction permit should be issued, denied, or appropriately conditioned to protect environmental values; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory early site permit proceeding, NRC must independently consider the final balance among the conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; CLI-07-27, 66 NRC 215 (2007)
- new or amended environmental contentions can be freely filed if new data or conclusions appear in new documents; LBP-07-14, 66 NRC 169 (2007)

### ENVIRONMENTAL JUSTICE

- although Staff’s explanation of how it reached its conclusions regarding environmental justice is cursory, the Commission believes that the review was sufficient; CLI-07-27, 66 NRC 215 (2007)
- Executive Order 12898 itself does not establish new substantive or procedural requirements applicable to NRC regulatory or licensing activities; CLI-07-27, 66 NRC 215 (2007)
- given the fact-specific nature of environmental justice issues and inquiries, the methods and form of Staff review, including any decision whether to hold discussions with knowledgeable community and governmental representatives, is best left to the informed discretion of the Staff; CLI-07-27, 66 NRC 215 (2007)

### ENVIRONMENTAL PROTECTION AGENCY

- alternative thermal effluent limitations do not apply to a plant that employs closed-cycle cooling; CLI-07-25, 66 NRC 101 (2007)

### ENVIRONMENTAL REPORT

- any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware must be included, even if this concerns a category 1 issue; LBP-07-11, 66 NRC 41 (2007)
- “Category 2,” or “plant specific,” issues are within the scope of license renewal, and applicants must provide a plant-specific review of them; LBP-07-11, 66 NRC 41 (2007)
- for license renewal, the ER must describe the proposed action, including the applicant’s plans to modify the facility or its administrative control procedures, and provide detail on the modifications directly affecting the environment or affecting plant effluents that affect the environment; LBP-07-11, 66 NRC 41 (2007)
- license renewal applicants may refer to and adopt the generic environmental impact findings found in Table B-1, Appendix B, for all Category 1 issues; LBP-07-11, 66 NRC 41 (2007)

### ENVIRONMENTAL REVIEW

- Part 51 was amended to establish environmental requirements for license renewals that are both efficient and more effectively focused; LBP-07-11, 66 NRC 41 (2007)

## SUBJECT INDEX

### EVACUATION PLANS

a contention that a plant's evacuation plan does not adequately protect the health and safety of public and plant workers must be denied because emergency planning is not within the scope of license renewal as a safety issue; LBP-07-11, 66 NRC 41 (2007)

### EVACUATION TIME ESTIMATES

motion for summary disposition of contention questioning applicant's handling of its severe accident mitigation alternatives analysis; LBP-07-13, 66 NRC 131 (2007)

where it is shown that even with no evacuation a severe accident mitigation alternative is still not cost-effective, any errors in assumptions regarding the evacuation time or pattern cannot reasonably be expected to rise to a level necessary to cause implementation of any SAMA to become cost-effective; LBP-07-13, 66 NRC 131 (2007)

### EXECUTIVE ORDER 12898

this order does not establish new substantive or procedural requirements applicable to NRC regulatory or licensing activities; CLI-07-27, 66 NRC 215 (2007)

### EXTENSION OF TIME

requests for extension of time to file a petition for review are to be determined by the relevant appellate body, and accordingly, must be directed to that body; LBP-07-17, 66 NRC 327 (2007)

### FEDERAL WATER POLLUTION CONTROL ACT

alternative thermal effluent limitations do not apply to a plant that employs closed-cycle cooling; CLI-07-25, 66 NRC 101 (2007)

### FINAL ENVIRONMENTAL IMPACT STATEMENT

an FEIS can overcome unavoidably incomplete or unavailable information if it states that fact, explains how the missing information is relevant, sets forth the existing information, and evaluates the environmental impacts to the best of the agency's ability; CLI-07-27, 66 NRC 215 (2007)

discussion need not be elaborate or lengthy, but a conclusory statement on some negative impact on property values, without explanation or analysis, is plainly deficient; CLI-07-27, 66 NRC 215 (2007)

in the environmental context, the contents of the FEIS bound the reach of both issue preclusion and Staff inquiry into new and significant information in a future CP or COL proceeding referencing an ESP granted for the ESP site; CLI-07-27, 66 NRC 215 (2007)

representations and assumptions help to form the basis for the Staff's finality determinations in the environmental arena during any subsequent CP or COL proceeding; CLI-07-27, 66 NRC 215 (2007)

the Commission's discussion of the Staff's underlying review adds necessary additional details and constitutes a supplement to the FEIS's alternative site review; CLI-07-27, 66 NRC 215 (2007)

### FIRE SAFETY

issues already the focus of ongoing regulatory processes do not come within the NRC's safety review of a license renewal application; LBP-07-11, 66 NRC 41 (2007)

### FUEL FABRICATION FACILITY LICENSING

the requirement that the issue raised in a contention must be within the scope of the proceeding is of particular relevance given the two-stage jurisdictional procedure established prior to the first mixed oxide fuel fabrication facility proceeding; LBP-07-14, 66 NRC 169 (2007)

when environmental issues are dealt with in a separate proceeding, environmental contentions are beyond the scope of the safety proceeding unless they meet requirements beyond the ordinary contention admissibility tests; LBP-07-14, 66 NRC 169 (2007)

### GENERIC ISSUES

environmental issues identified as "Category 1," or "generic," issues in 10 C.F.R. Part 51, Subpart A, Appendix B, are not within the scope of a license renewal proceeding; LBP-07-11, 66 NRC 41 (2007)

intervention petitioners may not demand an adjudicatory hearing to attack generic NRC requirements or regulations or to express generalized grievances about NRC policies; LBP-07-11, 66 NRC 41 (2007)

### HEARING PROCEDURES

in a license renewal proceeding, the board determines the hearing procedure on a contention-by-contention basis, selecting the most appropriate procedure for each contention; LBP-07-15, 66 NRC 261 (2007)

### HEARING RIGHTS

NRC must provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-07-11, 66 NRC 41 (2007)

## SUBJECT INDEX

### INFORMAL PROCEEDINGS

parties provide proposed written questions prior to, and during the course of, a Subpart L hearing; LBP-07-17, 66 NRC 327 (2007)

### INITIAL DECISIONS

before an early site permit can be made effective, the Commission must review and approve the licensing board's initial decision authorizing its issuance; CLI-07-23, 66 NRC 35 (2007)

### INJURY IN FACT

in an enforcement proceeding, standing is determined by reviewing the alleged injury stemming from the regulatory action, not that asserted to arise generally from operation of the facility or the actions of the licensee involved in the proceeding; LBP-07-16, 66 NRC 277 (2007)

licensing boards are to look to judicial concepts of standing to determine whether a petitioner has established the necessary interest for intervention; LBP-07-11, 66 NRC 41 (2007)

petitioners are not required to demonstrate their asserted injury with certainty or to provide extensive technical studies in support of their standing argument; LBP-07-14, 66 NRC 169 (2007)

showing that estimated dose consequences associated with operation under extended power uprate conditions can be expected to increase by the 20% power-level change establishes that the proposed EPU creates an obvious potential for offsite consequences; LBP-07-10, 66 NRC 1 (2007)

to establish standing to intervene, the injury may be either actual or threatened, but must lie arguably within the zone of interests protected by the statutes governing the proceeding; LBP-07-11, 66 NRC 41 (2007)

### INTERVENORS

boards may reprimand, censure, or suspend intervenors for contemptuous conduct; CLI-07-28, 66 NRC 275 (2007)

### INTERVENTION

petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. 2.309(f)(1); LBP-07-11, 66 NRC 41 (2007)

the contention admissibility threshold is less than is required at the summary disposition stage; LBP-07-16, 66 NRC 277 (2007)

### INTERVENTION PETITIONS

given the information known about the nature of the facility and the available radioactive and chemical materials at risk and the resulting potential for offsite consequences, there is no need for *pro se* petitioners to plead these matters more specifically; LBP-07-14, 66 NRC 169 (2007)

in ruling on standing, boards are to construe petitions in favor of the petitioner; LBP-07-10, 66 NRC 1 (2007)

petitioner bears the burden of establishing its standing to intervene in a proceeding; LBP-07-10, 66 NRC 1 (2007)

somewhat greater latitude generally is afforded *pro se* petitioners; LBP-07-10, 66 NRC 1 (2007)

when a Notice of Hearing is issued before construction is commenced, additional petitions to intervene or statements of contentions may be filed as construction unfolds and reveals potential shortcomings; LBP-07-14, 66 NRC 169 (2007)

### INTERVENTION RULINGS

a board's decision on one of the admission elements does not necessarily render any discussion of the other superfluous because a decision addressing only one of the two items creates the potential for significant delay if that single determination is later overturned on appeal; LBP-07-10, 66 NRC 1 (2007)

a ruling on standing does not constitute dicta simply because the board also concluded that the petitioner had failed to proffer an admissible contention; LBP-07-10, 66 NRC 1 (2007)

an automatic right to appeal a board decision denying a petition to intervene exists; CLI-07-25, 66 NRC 101 (2007)

determining whether a contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-07-16, 66 NRC 277 (2007)

in ruling on standing, boards are to construe intervention petitions in favor of the petitioner; LBP-07-10, 66 NRC 1 (2007)

## SUBJECT INDEX

### IRRADIATOR

the proper scope of an irradiator licensing proceeding, and whether it requires or otherwise encompasses analyses of endemic site-related risks, is questioned; CLI-07-26, 66 NRC 109 (2007)

### LEAKAGE

applicant moves for summary disposition of a contention involving whether leak detection through monitoring wells is necessary as part of the plant's aging management program; LBP-07-12, 66 NRC 113 (2007)

### LICENSE RENEWAL APPLICATIONS

in making a decision, the Commission shall determine whether or not the adverse environmental impacts are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable; LBP-07-11, 66 NRC 41 (2007)

NRC must provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-07-11, 66 NRC 41 (2007)

### LICENSE RENEWAL PROCEEDINGS

a contention that a plant's evacuation plan does not adequately protect the health and safety of public and plant workers must be denied because emergency planning is not within the scope of license renewal as a safety issue; LBP-07-11, 66 NRC 41 (2007)

a proposed new contention challenging the adequacy of applicant's recently issued metal fatigue calculations meets the three-factor test of 10 C.F.R. 2.309(f)(2)(i)-(iii) and the six-factor test of 10 C.F.R. 2.309(f)(1); LBP-07-15, 66 NRC 261 (2007)

an issue can be related to plant aging and still not warrant review at the time of a license renewal application, if the aging-related issue is adequately dealt with by regulatory processes on an ongoing basis; LBP-07-11, 66 NRC 41 (2007)

applicant moves for summary disposition of a contention involving whether leak detection through monitoring wells is necessary as part of the plant's aging management program; LBP-07-12, 66 NRC 113 (2007)

"Category 2," or "plant specific," issues are within the scope of license renewal, and applicants must provide a plant-specific review of them; LBP-07-11, 66 NRC 41 (2007)

challenge to specific input data to the severe accident mitigation alternatives analysis could bring a contention on adequacy of an evacuation plan within the scope of license renewal; LBP-07-11, 66 NRC 41 (2007)

environmental issues identified as "Category 1," or "generic," issues in 10 C.F.R. Part 51, Subpart A, Appendix B, are not within the scope of the proceeding; LBP-07-11, 66 NRC 41 (2007)

if a structure or component is already required to be replaced at mandated, specified time periods, it would fall outside the scope of review; LBP-07-11, 66 NRC 41 (2007)

intervenors may not challenge a licensee's current licensing basis; LBP-07-17, 66 NRC 327 (2007)

issues already the focus of ongoing regulatory processes do not come within the NRC's safety review of a license renewal application; LBP-07-11, 66 NRC 41 (2007)

metal fatigue is an example of age-related degradation that properly falls within the scope of this proceeding; LBP-07-15, 66 NRC 261 (2007)

motion for summary disposition of contention questioning applicant's handling of its severe accident mitigation alternatives analysis concerning evacuation times, economic consequences, and meteorological patterns is granted; LBP-07-13, 66 NRC 131 (2007)

NEPA imposes no duty on NRC to consider intentional malevolent acts; LBP-07-11, 66 NRC 41 (2007)

new and significant information that would normally fall within a Category 1 issue is not a proper subject for a contention, absent a waiver of the rule that Category 1 issues need not be addressed in a license renewal proceeding; LBP-07-11, 66 NRC 41 (2007)

resolution of a summary disposition motion is governed by the standards for summary disposition set forth in Subpart G; LBP-07-12, 66 NRC 113 (2007)

safety contentions must focus on topics related to the detrimental effects of aging and related time-limited issues; LBP-07-15, 66 NRC 261 (2007)

the board determines the hearing procedure on a contention-by-contention basis, selecting the most appropriate procedure for each contention; LBP-07-15, 66 NRC 261 (2007)

the licensing board finds that petitioners have standing to intervene but have not submitted a contention that is admissible, and the proceeding must therefore be terminated; LBP-07-11, 66 NRC 41 (2007)

## SUBJECT INDEX

the scope of a proceeding is addressed, with regard to safety-related issues, in 10 C.F.R. Part 54, and, with regard to environmental issues, in 10 C.F.R. Part 51; LBP-07-11, 66 NRC 41 (2007)

the scope of the proceeding is limited to the potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs; LBP-07-17, 66 NRC 327 (2007)

there is no mandatory or automatic default to Subpart L procedures; LBP-07-15, 66 NRC 261 (2007)

whether the "reasonable assurance" standard is satisfied is based on sound technical judgment applied on a case-by-case basis not susceptible to formalistic quantification or mechanistic application; LBP-07-17, 66 NRC 327 (2007)

whether the reasonable assurance standard is satisfied is directly linked to an assessment of the adequacy of the aging management program; LBP-07-17, 66 NRC 327 (2007)

### LICENSE RENEWALS

although the primary duties of NEPA fall on the NRC Staff in NRC proceedings, the initial requirement to analyze the environmental impacts of an action is directed to applicants; LBP-07-11, 66 NRC 41 (2007)

applicant must demonstrate, by a preponderance of the evidence, that its aging management program provides reasonable assurance that activities authorized by the renewed license will be conducted in a manner consistent with the current licensing basis, and that the effects of aging will be detected and corrected; LBP-07-17, 66 NRC 327 (2007)

federal agencies must include in every recommendation or report on major federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on the environmental impact of the proposed action; LBP-07-11, 66 NRC 41 (2007)

focus of the safety review is on those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs; LBP-07-11, 66 NRC 41 (2007)

Part 51 was amended to establish environmental review requirements for license renewals that are both efficient and more effectively focused; LBP-07-11, 66 NRC 41 (2007)

standards defining the findings NRC must make to support a license renewal are set forth in 10 C.F.R. 54.29; LBP-07-11, 66 NRC 41 (2007)

the ER must describe the proposed action, including the applicant's plans to modify the facility or its administrative control procedures, and provide detail on the modifications directly affecting the environment or affecting plant effluents that affect the environment; LBP-07-11, 66 NRC 41 (2007)

### LICENSING BOARD DECISIONS

a board's decision on one of the admission elements does not necessarily render any discussion of the other superfluous because a decision addressing only one of the two items creates the potential for significant delay if that single determination is later overturned on appeal; LBP-07-10, 66 NRC 1 (2007)

a ruling on standing does not constitute dicta simply because the board also concluded that the petitioner had failed to proffer an admissible contention; LBP-07-10, 66 NRC 1 (2007)

### LICENSING BOARDS

even if standing is undisputed, its jurisdictional nature requires independent examination; LBP-07-10, 66 NRC 1 (2007)

in addressing a summary disposition motion and the opposition thereto, boards must examine the substance of the information provided by the parties; LBP-07-13, 66 NRC 131 (2007)

### LICENSING BOARDS, AUTHORITY

any supporting material provided by a petitioner, including those portions of the material that are not relied upon, is subject to board scrutiny; LBP-07-10, 66 NRC 1 (2007); LBP-07-16, 66 NRC 277 (2007)

boards are not to consider whether enforcement orders need strengthening; LBP-07-16, 66 NRC 277 (2007)

boards may reprimand, censure, or suspend intervenors for contemptuous conduct; CLI-07-28, 66 NRC 275 (2007)

determining whether a contention is adequately supported by a concise allegation of the facts or expert opinion is not a hearing on the merits; LBP-07-16, 66 NRC 277 (2007)

if petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions of fact that favor the petitioner, nor may the board supply information that is lacking; LBP-07-10, 66 NRC 1 (2007)

## SUBJECT INDEX

in conducting Subpart L hearings, board members pose questions to the parties' witnesses in those areas that, in the board's judgment, require additional clarification and development; LBP-07-17, 66 NRC 327 (2007)

material provided in support of a contention will be carefully examined by the board to confirm that on its face it does supply an adequate basis for the contention; LBP-07-10, 66 NRC 1 (2007)

requests for extension of time to file a petition for review are to be determined by the relevant appellate body, and accordingly must be directed to that body; LBP-07-17, 66 NRC 327 (2007)

to determine whether there is potential for offsite consequences at specific sites, boards may infer obvious intermediate steps in a chain of causation that could lead to offsite doses; LBP-07-14, 66 NRC 169 (2007)

### LIGHT-WATER REACTORS

the limiting standard for light-water-cooled reactors is 10 C.F.R. 20.1301(e), because a licensee within the uranium fuel cycle could not release the 100-mrem limit permitted by section 20.1301(a) without necessarily violating the 25-mrem limit of section 20.1301(e) that applies to the entire site; CLI-07-27, 66 NRC 215 (2007)

### MANAGEMENT CHARACTER AND COMPETENCE

absent evidence to the contrary, it is assumed NRC licensees will not contravene agency regulations; LBP-07-10, 66 NRC 1 (2007)

### MANDATORY HEARINGS

before an early site permit can be made effective, the Commission must review and approve the licensing board's initial decision authorizing its issuance; CLI-07-23, 66 NRC 35 (2007)

in an early site permit proceeding, NRC must address six issues; CLI-07-27, 66 NRC 215 (2007)

### MATERIALITY

allegations of deficiencies or errors in an application also indicate some significant link between the claimed deficiency and either the health and safety of the public or the environment; LBP-07-10, 66 NRC 1 (2007); LBP-07-16, 66 NRC 277 (2007)

for a fact to be material with regard to the SAMA analysis, it must be a fact that can reasonably be expected to impact the Staff's conclusion that any particular mitigation alternative may or may not be cost-effective; LBP-07-13, 66 NRC 131 (2007)

in addressing a summary disposition motion, guidance on determining whether an issue is "material" is taken from procedures for contention admissibility; LBP-07-13, 66 NRC 131 (2007)

NRC regulations teach that a fact cannot be material to a summary disposition ruling unless its consideration could materially affect the decision of the NRC vis-a-vis implementation of any particular severe accident mitigation alternative; LBP-07-13, 66 NRC 131 (2007)

only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment; LBP-07-13, 66 NRC 131 (2007)

petitioner must demonstrate that the issue raised in a contention is material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-07-11, 66 NRC 41 (2007)

petitioner show why an alleged error or omission is of possible significance to the result of the proceeding; LBP-07-16, 66 NRC 277 (2007)

the subject matter of the contention must impact the grant or denial of a pending license application; LBP-07-10, 66 NRC 1 (2007)

### MATERIALS LICENSE PROCEEDINGS

the proper scope of an irradiation licensing proceeding and whether it requires or otherwise encompasses analyses of endemic site-related risks are questioned; CLI-07-26, 66 NRC 109 (2007)

### MATERIALS LICENSES

a license to possess and to use special nuclear materials at a fuel fabrication facility is the functional equivalent of an operating license for more standard facilities; LBP-07-14, 66 NRC 169 (2007)

### METEOROLOGICAL FACTORS

the board rules on a motion for summary disposition of a contention questioning applicant's handling of its severe accident mitigation alternatives analysis; LBP-07-13, 66 NRC 131 (2007)

### NATIONAL ENVIRONMENTAL POLICY ACT

a final environmental impact statement is necessarily more concise than the underlying pre-FEIS analysis, as the explanation is intended to summarize the analysis in a manner both concise and understandable to the public; CLI-07-27, 66 NRC 215 (2007)

## SUBJECT INDEX

- agencies may defer certain issues in an environmental impact statement for a multistage project when detailed useful information on a given topic is not meaningfully possible to obtain, and the unavailable information is not essential to determination at the earlier stage; CLI-07-27, 66 NRC 215 (2007)
- although the primary duties of NEPA fall on the NRC Staff in NRC proceedings, the initial requirement to analyze the environmental impacts of an action, including license renewal, is directed to applicants; LBP-07-11, 66 NRC 41 (2007)
- contention that a license renewal application fails to satisfy NEPA because it does not address environmental impacts of an attack by deliberate and malicious crash of aircraft into the plant is denied; LBP-07-11, 66 NRC 41 (2007)
- Executive Order 12898 itself does not establish new substantive or procedural requirements applicable to NRC regulatory or licensing activities; CLI-07-27, 66 NRC 215 (2007)
- for an early site permit, NRC is required to provide a detailed statement on alternatives to the proposed action; CLI-07-27, 66 NRC 215 (2007)
- given the fact-specific nature of environmental justice issues and inquiries, the methods and form of Staff review, including any decision whether to hold discussions with knowledgeable community and governmental representatives, is best left to the informed discretion of the Staff; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory early site permit proceeding, NRC must address whether the requirements of section 102(2)(A), (C), and (E) of NEPA and the regulations in 10 C.F.R. Part 51, Subpart A have been complied with; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory early site permit proceeding, NRC must address whether the review conducted by the Commission pursuant to NEPA has been adequate; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory early site permit proceeding, NRC must determine, after considering reasonable alternatives, whether the construction permit should be issued, denied, or appropriately conditioned to protect environmental values; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory early site permit proceeding, NRC must independently consider the final balance among the conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; CLI-07-27, 66 NRC 215 (2007)
- NRC's process for preparation of an environmental impact statement mandates openness and clarity; CLI-07-27, 66 NRC 215 (2007)
- prior NRC precedent is consistent with Supreme Court NEPA doctrine, which requires a reasonably close causal relationship between federal agency action and environmental consequences before NEPA is triggered, a relationship similar to that of proximate cause in tort law; LBP-07-14, 66 NRC 169 (2007)
- Staff is obliged to perform a severe accident mitigation alternatives analysis; LBP-07-13, 66 NRC 131 (2007)
- terrorist attacks are not to be considered part of the NEPA analysis required for licensing actions; LBP-07-14, 66 NRC 169 (2007)
- the Commission's discussion of the Staff's underlying review adds necessary additional details and constitutes a supplement to the final environmental impact statement's alternative site review; CLI-07-27, 66 NRC 215 (2007)
- NO SIGNIFICANT HAZARDS DETERMINATION**
- no petition on or other request for review of the Staff's significant hazards consideration determination will be entertained by the Commission; LBP-07-10, 66 NRC 1 (2007)
- Staff's determination is final, subject only to the Commission's discretion on its own initiative, to review the determination; LBP-07-10, 66 NRC 1 (2007)
- NOTICE OF HEARING**
- if safety contentions filed before construction begins would be considered premature and/or speculative, NRC hearing opportunities could soon come to be viewed as chimerical; LBP-07-14, 66 NRC 169 (2007)
- the fundamental purpose of the notice is to provide facility opponents a fair opportunity to be heard; LBP-07-14, 66 NRC 169 (2007)
- NRC POLICY**
- intervention petitioners may not demand an adjudicatory hearing to attack generic NRC requirements or regulations or to express generalized grievances about NRC policies; LBP-07-11, 66 NRC 41 (2007)

## SUBJECT INDEX

### NRC PROCEEDINGS

water use issues that are under the jurisdiction of another agency, and which are not affected by any NRC regulation, are outside the scope; CLI-07-25, 66 NRC 101 (2007)

### NRC STAFF

although the primary duties of NEPA fall on the NRC Staff in NRC proceedings, the initial requirement to analyze the environmental impacts of an action, including license renewal, is directed to applicants; LBP-07-11, 66 NRC 41 (2007)

### NRC STAFF REVIEW

although Staff's explanation of how it reached its conclusions regarding environmental justice is cursory, the Commission believes that the review was sufficient; CLI-07-27, 66 NRC 215 (2007)

given the fact-specific nature of environmental justice issues and inquiries, the methods and form of Staff review, including any decision whether to hold discussions with knowledgeable community and governmental representatives, is best left to the informed discretion of the Staff; CLI-07-27, 66 NRC 215 (2007)

in the mandatory early site permit proceeding, NRC must address whether the review conducted by the Commission pursuant to the National Environmental Policy Act has been adequate; CLI-07-27, 66 NRC 215 (2007)

it is necessary for Staff to take a uniform approach to its review of analyses by license applicants and for performance of its own analyses; LBP-07-13, 66 NRC 131 (2007)

no petition or other request for review of the Staff's significant hazards consideration determination will be entertained by the Commission; LBP-07-10, 66 NRC 1 (2007)

Staff's significant hazards consideration determination is final, subject only to the Commission's discretion on its own initiative, to review the determination; LBP-07-10, 66 NRC 1 (2007)

under the National Environmental Policy Act, Staff is obliged to perform a severe accident mitigation alternatives analysis; LBP-07-13, 66 NRC 131 (2007)

### NUCLEAR REGULATORY COMMISSION, AUTHORITY

NRC's adjudicatory process is not a forum for litigating matters that are primarily the responsibility of other federal or state/local regulatory agencies; LBP-07-10, 66 NRC 1 (2007)

the Commission is not obliged to adhere, in all of its proceedings, to the first court of appeals decision to address a controversial question, and is not prevented from relitigating the issue in future cases; LBP-07-14, 66 NRC 169 (2007)

### NUCLEAR REGULATORY COMMISSION, JURISDICTION

NRC's adjudicatory process is not the proper forum for investigating alleged violations that are primarily the responsibility of other federal, state, or local agencies; CLI-07-25, 66 NRC 101 (2007)

### OFFICIAL NOTICE

a licensing board can take official notice of the locations and the distances to the various locations specified by a petitioner as denominated on Mapquest and an American Automobile Association roadmap; LBP-07-10, 66 NRC 1 (2007)

### OPERATING LICENSE AMENDMENT PROCEEDINGS

extended power uprate involves increase in reactor core radioactivity with obvious potential for offsite consequences; LBP-07-10, 66 NRC 1 (2007)

in the absence of a showing that the proposed amendment obviously entails an increased potential for offsite consequences, petitioner must base its standing upon more than residence or activities within a particular proximity of the plant by making a showing of a plausible chain of events that would result in offsite radiological consequences posing a distinct new harm or threat to the participant; LBP-07-10, 66 NRC 1 (2007)

licensee requests that operating licenses for both units be amended to change the associated technical specifications to implement uprated power operation; LBP-07-10, 66 NRC 1 (2007)

petitioner must assert an injury-in-fact associated with the challenged license amendment, not simply a general objection to the facility; LBP-07-10, 66 NRC 1 (2007)

### OPERATING LICENSE AMENDMENTS

absent evidence to the contrary, it is assumed NRC licensees will not contravene agency regulations; LBP-07-10, 66 NRC 1 (2007)

no petition or other request for review on the Staff's significant hazards consideration determination will be entertained by the Commission; LBP-07-10, 66 NRC 1 (2007)

## SUBJECT INDEX

- technical aspects of an extended power uprate are discussed; LBP-07-10, 66 NRC 1 (2007)
- OPERATING LICENSE RENEWAL**
- if NRC Staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided; LBP-07-13, 66 NRC 131 (2007)
- ORDERS**
- policy statements are neither rules nor orders, and therefore do not establish requirements that bind either the agency or the public; CLI-07-27, 66 NRC 215 (2007)
- PLEADINGS**
- affidavits must set forth facts that would be admissible in evidence; LBP-07-13, 66 NRC 131 (2007)
- detailed pleadings put other parties in the proceeding on notice of the petitioners' specific grievances, thereby giving them a good idea of the claims they will be either supporting or opposing; LBP-07-11, 66 NRC 41 (2007)
- petitioner should submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings; LBP-07-10, 66 NRC 1 (2007)
- specificity and support are required for the positions parties take in their filings; LBP-07-13, 66 NRC 131 (2007)
- POLICY STATEMENTS**
- these are neither rules nor orders, and therefore do not establish requirements that bind either the agency or the public; CLI-07-27, 66 NRC 215 (2007)
- POWER UPRATE**
- issues concerning alleged violations of state law or regulations are outside the scope of, and not material to, an NRC power uprate proceeding; CLI-07-25, 66 NRC 101 (2007)
- licensee requests that operating licenses for both units be amended to change the associated technical specifications to implement uprated power operation; LBP-07-10, 66 NRC 1 (2007)
- showing that estimated dose consequences associated with operation under extended power uprate conditions can be expected to increase by the 20% power level change establishes that the proposed EPU creates an obvious potential for offsite consequences; LBP-07-10, 66 NRC 1 (2007)
- technical aspects of an extended power uprate are discussed; LBP-07-10, 66 NRC 1 (2007)
- PRECEDENTIAL EFFECT**
- a board in one proceeding is not constrained to follow the rulings of another board on standing, absent explicit affirmation by the Commission; LBP-07-10, 66 NRC 1 (2007)
- petitioner's showing establishing standing in one proceeding need not be repeated to establish standing in another proceeding regarding that same facility; LBP-07-10, 66 NRC 1 (2007); LBP-07-14, 66 NRC 169 (2007)
- PRO SE LITIGANTS**
- boards may reprimand, censure, or suspend intervenors for contemptuous conduct; CLI-07-28, 66 NRC 275 (2007)
- given the information known about the nature of the facility and the available radioactive and chemical materials at risk and the resulting potential for offsite consequences, there is no need for petitioners to plead these matters more specifically; LBP-07-14, 66 NRC 169 (2007)
- somewhat greater latitude generally is afforded *pro se* petitioners in drafting their intervention petitions; LBP-07-10, 66 NRC 1 (2007)
- PROXIMATE CAUSE**
- prior NRC precedent is consistent with Supreme Court NEPA doctrine, which requires a reasonably close causal relationship between federal agency action and environmental consequences before NEPA is triggered, a relationship similar to that of proximate cause in tort law; LBP-07-14, 66 NRC 169 (2007)
- PROXIMITY PRESUMPTION**
- a licensing board can take official notice of the locations and the distances to the various locations specified by a petitioner as denominated on Mapquest and an American Automobile Association roadmap; LBP-07-10, 66 NRC 1 (2007)
- a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself; LBP-07-10, 66 NRC 1 (2007)

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- although a proximity presumption has been invoked when resolving issues of standing for cases involving reactor licensing, in a case involving an enforcement order, the standing requirement is also based on the confirmatory order itself and the adverse effect of the confirmatory order; LBP-07-16, 66 NRC 277 (2007)
- an extended power uprate is directly associated with continuing reactor operation, and thus the potential geographic scope of the consequences of EPU operation can be considered to be similar to that which supported the creation of a 50-mile presumption for construction permit and operating license proceedings; LBP-07-10, 66 NRC 1 (2007)
- even in nonreactor construction permit/operating license cases involving an increased potential for offsite consequences in which proximity can be the primary basis for establishing standing, the distance at which a petitioner can be presumed to be affected must take into account the nature of the proposed action and the significance of the radioactive source; LBP-07-10, 66 NRC 1 (2007)
- in addition to the distance of petitioner from a facility, a link between the confirmatory order and the alleged harm to the petitioner is necessary to establish standing in an enforcement proceeding; LBP-07-16, 66 NRC 277 (2007)
- in cases involving the possible construction or operation of a nuclear power reactor, the Commission has created a presumption that residing or regularly conducting activities within a 50-mile proximity of the proposed facility is considered sufficient to establish the requisite injury, causation, and redressability elements; LBP-07-10, 66 NRC 1 (2007)
- in evaluating the specificity of petitioners' standing arguments, a licensing board must take into account the information provided by the applicant and the NRC Staff in the environmental impact statement; LBP-07-14, 66 NRC 169 (2007)
- in the absence of a showing that the proposed operating license amendment obviously entails an increased potential for offsite consequences, petitioner must base its standing upon more than residence or activities within a particular proximity of the plant by making a showing of a plausible chain of events that would result in offsite radiological consequences posing a distinct new harm or threat to the participant; LBP-07-10, 66 NRC 1 (2007)
- proximity-based standing must be based on the factual circumstances presented by the information before the licensing board regarding the petitioner's activities, which may include consideration of the proximity, timing, and duration of those activities; LBP-07-10, 66 NRC 1 (2007)
- regular but intermittent residence 1 week a month in a house 35 miles from a facility is sufficient for standing purposes; LBP-07-10, 66 NRC 1 (2007)
- standing depends on the petitioner's present circumstances or the extent to which activities in the recent past reflect a likely pattern of future conduct; LBP-07-10, 66 NRC 1 (2007)
- the appropriate distance for proximity standing is decided on a case-by-case basis taking into account the nature of the proposed action and the significance of the radioactive source; LBP-07-14, 66 NRC 169 (2007)
- the benefits of the proximity presumption are not limited to those who reside within the area in which the presumption applies, but can be extended to those who conduct everyday activities or visit within that area; LBP-07-10, 66 NRC 1 (2007)
- the Commission has accepted a proximity presumption granting standing to residents within 50 miles of a reactor, but has not accepted any such presumption in nonreactor cases; LBP-07-14, 66 NRC 169 (2007)
- the elements of standing will be presumed to be satisfied if an individual lives within the zone of possible harm from a significant source of radioactivity, which has been defined in proceedings involving nuclear power plants as being within a 50-mile radius of such a plant; LBP-07-11, 66 NRC 41 (2007)
- three conditions must be satisfied for the proximity presumption to afford standing as of right; LBP-07-10, 66 NRC 1 (2007)
- RADIOLOGICAL MONITORING**
- applicant moves for summary disposition of a contention involving whether leak detection through monitoring wells is necessary as part of the plant's aging management program; LBP-07-12, 66 NRC 113 (2007)

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### REACTOR DESIGN

unless and until specific numerical guidelines for maintaining effluent releases ALARA for non-LWRs are implemented, compliance with ALARA requirements will be determined on a case-by-case basis in the context of a future COL or CP application referencing the early site permit; CLI-07-27, 66 NRC 215 (2007)

### RECORD OF DECISION

after the board issues its initial decision, it must provide questions proffered by the parties to the Commission's Secretary for inclusion in the official record of the proceeding; LBP-07-17, 66 NRC 327 (2007)

in making a decision on license renewal, the Commission shall determine whether or not the adverse environmental impacts are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable; LBP-07-11, 66 NRC 41 (2007)

### REGULATIONS

a rule or regulation may be challenged outside the adjudicatory context by filing a petition for rulemaking under 10 C.F.R. 2.802 or requesting that the NRC Staff take enforcement action under 10 C.F.R. 2.206; LBP-07-11, 66 NRC 41 (2007)

adjudication is not the proper forum for challenging applicable statutory requirements or the basic structure of the agency's regulatory process; LBP-07-10, 66 NRC 1 (2007)

although CEQ guidance is not binding on NRC, it is given substantial deference; CLI-07-27, 66 NRC 215 (2007)

intervention petitioners may not demand an adjudicatory hearing to attack generic NRC requirements or regulations or to express generalized grievances about NRC policies; LBP-07-11, 66 NRC 41 (2007)

Part 51 of 10 C.F.R. sets out Staff's obligation to perform a severe accident mitigation alternatives analysis, as required by the National Environmental Policy Act; LBP-07-13, 66 NRC 131 (2007)

probabilistic rather than deterministic methodology is required to perform a severe accident mitigation alternatives analysis because modeling of extremely complex time- and physical condition-dependent phenomena is involved; LBP-07-13, 66 NRC 131 (2007)

to challenge a rule or regulation in the adjudicatory context, petitioner must submit a request for waiver of the rule under 10 C.F.R. 2.335; LBP-07-11, 66 NRC 41 (2007)

with limited exceptions, no rule or regulation of the Commission is subject to attack in any adjudicatory proceeding; LBP-07-16, 66 NRC 277 (2007)

### REGULATIONS, INTERPRETATION

any new contentions filed by petitioners, whose original petition was timely and who have demonstrated their standing, that are attributable to the applicant's construction activity or change of plans or design, are governed by the basic provisions of 10 C.F.R. 2.309(f)(2) rather than by the more restrictive elements applicable to nontimely filings; LBP-07-14, 66 NRC 169 (2007)

### REGULATORY GUIDES

the fact that a given guidance document upon which an applicant relied was withdrawn does not suffice to support a contention; LBP-07-14, 66 NRC 169 (2007)

### REPLY BRIEFS

attempt to introduce a new argument to establish a contention's admissibility is improper; LBP-07-10, 66 NRC 1 (2007)

litigants in NRC proceedings cannot raise entirely new arguments; CLI-07-25, 66 NRC 101 (2007)

the scope of a reply filed pursuant to 10 C.F.R. 2.309(h)(2) should be narrowly focused on the legal or logical arguments presented in the applicant/licensee or NRC Staff answer; LBP-07-16, 66 NRC 277 (2007)

### REVIEW

See Appellate Review; Environmental Review; NRC Staff Review; Safety Review

### RULES

policy statements are neither rules nor orders, and therefore do not establish requirements that bind either the agency or the public; CLI-07-27, 66 NRC 215 (2007)

### RULES OF PRACTICE

a board appropriately rejected the contention of a petitioner who failed to support his premise that a river water intake valve is a safety-related system with information or expert opinion; CLI-07-25, 66 NRC 101 (2007)

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- a board in one proceeding is not constrained to follow the rulings of another board on standing, absent explicit affirmation by the Commission; LBP-07-10, 66 NRC 1 (2007)
- a brief explanation of the basis for the contention is a necessary prerequisite to its admission; LBP-07-16, 66 NRC 277 (2007)
- a license to possess and to use special nuclear materials at a fuel fabrication facility is the functional equivalent of an operating license for more standard facilities; LBP-07-14, 66 NRC 169 (2007)
- a licensing board cannot make a determination of whether there is a genuine issue of material fact without carefully examining the evidence presented in the parties' affidavits; LBP-07-13, 66 NRC 131 (2007)
- a licensing board ruling on a summary disposition motion must view the record in the light most favorable to the party opposing such a motion and deny the motion if movant fails to meet its burden, even in the face of an inadequate response; LBP-07-12, 66 NRC 113 (2007)
- a party is not required to prove its case in making or opposing a motion for summary disposition; LBP-07-13, 66 NRC 131 (2007)
- a petitioner awarded standing in one proceeding need not restate all of its case to establish standing in another proceeding related to the same facility; LBP-07-14, 66 NRC 169 (2007)
- a rule or regulation may be challenged outside the adjudicatory context by filing a petition for rulemaking under 10 C.F.R. 2.802 or requesting that the NRC Staff take enforcement action under 10 C.F.R. 2.206; LBP-07-11, 66 NRC 41 (2007)
- adjudication is not the proper forum for challenging applicable statutory requirements or the basic structure of the agency's regulatory process; LBP-07-10, 66 NRC 1 (2007)
- admissibility requirements for contentions are specified; LBP-07-10, 66 NRC 1 (2007)
- after the board issues its initial decision, it must provide questions proffered by the parties to the Commission's Secretary for inclusion in the official record of the proceeding; LBP-07-17, 66 NRC 327 (2007)
- all proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board; LBP-07-10, 66 NRC 1 (2007)
- although a proximity presumption has been invoked when resolving issues of standing for cases involving reactor licensing, in a case involving an enforcement order, the standing requirement is also based on the confirmatory order itself and the adverse effect of the confirmatory order; LBP-07-16, 66 NRC 277 (2007)
- although the February 2004 revision of the NRC procedural rules no longer permits the amendment and supplementation of petitions and filing of contentions after the original filing of petitions, the substantive contention admissibility standards are essentially the same; LBP-07-11, 66 NRC 41 (2007)
- although wholly conclusory statements for which no supporting evidence is offered need not be taken as true for summary judgment purposes, a court may not make credibility determinations or weigh the evidence at the summary judgment stage; LBP-07-12, 66 NRC 113 (2007)
- an automatic right to appeal a board decision denying a petition to intervene exists; CLI-07-25, 66 NRC 101 (2007)
- any supporting material provided by a petitioner, including those portions of the material that are not relied upon, is subject to board scrutiny; LBP-07-16, 66 NRC 277 (2007)
- detailed pleadings put other parties in the proceeding on notice of the petitioners' specific grievances, thereby giving them a good idea of the claims they will be either supporting or opposing; LBP-07-11, 66 NRC 41 (2007)
- discretionary standing is appropriate only when one petitioner has been shown to have standing as of right and an admissible contention so that a hearing will be conducted; LBP-07-10, 66 NRC 1 (2007)
- even if standing is undisputed, its jurisdictional nature requires independent examination by the board; LBP-07-10, 66 NRC 1 (2007)
- even if the basic facts are uncontroverted, summary disposition is inappropriate when the evidence is susceptible of different interpretations or inferences; LBP-07-12, 66 NRC 113 (2007)
- facts are "material" if they will affect the outcome of a proceeding under the governing law; LBP-07-12, 66 NRC 113 (2007)
- factual disputes that are irrelevant or unnecessary will not be counted in ruling on summary disposition motions; LBP-07-13, 66 NRC 131 (2007)

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- failure to comply with any of the pleading requirements is grounds for dismissing a contention; LBP-07-10, 66 NRC 1 (2007); LBP-07-11, 66 NRC 41 (2007); LBP-07-16, 66 NRC 277 (2007)
- for organizational standing, petitioner must show injury in fact to the interests of the organization itself; LBP-07-14, 66 NRC 169 (2007)
- for representational standing, petitioner must demonstrate that at least one of its members would have standing to intervene on his or her own behalf, and that such a specifically identified member has authorized the organization to represent the member's interests; LBP-07-14, 66 NRC 169 (2007)
- for the purposes of summary disposition, mere allegations are insufficient, including speculative or bare conclusory statements by an expert; LBP-07-13, 66 NRC 131 (2007)
- given the information known about the nature of the facility and the available radioactive and chemical materials at risk and the resulting potential for offsite consequences, there is no need for *pro se* petitioners to plead these matters more specifically; LBP-07-14, 66 NRC 169 (2007)
- if petitioner neglects to provide the requisite support for its contentions, it is not within the board's power to make assumptions of fact that favor the petitioner, nor may the board supply information that is lacking; LBP-07-10, 66 NRC 1 (2007)
- if petitioner requests a remedy that is beyond the scope of the proceeding, then the hearing request must be denied because it is incapable of being redressed by a favorable decision; LBP-07-16, 66 NRC 277 (2007)
- if safety contentions filed before construction begins would be considered premature and/or speculative, NRC hearing opportunities could soon come to be viewed as chimerical; LBP-07-14, 66 NRC 169 (2007)
- if summary disposition movant satisfies its initial burden and supports its motion by affidavit, opponent must either proffer rebutting evidence or submit an affidavit explaining why it is impractical to do so; LBP-07-12, 66 NRC 113 (2007)
- if the filings demonstrate the existence of a genuine material fact, the evidence submitted in support of a motion fails to show the nonmovant's position is a sham or fails to foreclose the possibility of a factual dispute, or there is an issue as to the credibility of movant's evidentiary material, movant will be found to have failed to meet its burden on summary disposition; LBP-07-12, 66 NRC 113 (2007)
- if the presiding officer determines from affidavits filed by the party opposing summary disposition that the opposing party cannot present by affidavit the facts essential to justify its opposition, the presiding officer may order a continuance to permit such affidavits to be obtained, or may take other appropriate action; LBP-07-12, 66 NRC 113 (2007)
- if the support a party offers, to demonstrate that a genuine dispute exists as to a material fact, indicates that, after expanding that support to its logical limits, it cannot support a finding of fact material to the determination the agency must make, that party's position cannot prevail; LBP-07-13, 66 NRC 131 (2007)
- if there is doubt as to whether the parties should be required to proceed further, a motion for summary disposition should be denied; LBP-07-12, 66 NRC 113 (2007)
- in a license renewal proceeding, there is no mandatory or automatic default to Subpart L procedures; LBP-07-15, 66 NRC 261 (2007)
- in addressing a summary disposition motion and the opposition thereto, licensing boards must examine the substance of the information provided by the parties; LBP-07-13, 66 NRC 131 (2007)
- in addressing a summary disposition motion, guidance on determining whether an issue is "material" is taken from procedures for contention admissibility; LBP-07-13, 66 NRC 131 (2007)
- in cases involving the possible construction or operation of a nuclear power reactor, the Commission has created a presumption that residing or regularly conducting activities within a 50-mile proximity of the proposed facility is considered sufficient to establish the requisite injury, causation, and redressability elements; LBP-07-10, 66 NRC 1 (2007)
- in conducting Subpart L hearings, board members pose questions to the parties' witnesses in those areas that, in the board's judgment, require additional clarification and development; LBP-07-17, 66 NRC 327 (2007)
- in determining whether an individual or organization should be granted party status in a proceeding based on standing "as of right," the agency has applied contemporaneous judicial standing concepts; LBP-07-10, 66 NRC 1 (2007)

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in evaluating the specificity of petitioners' standing arguments, a licensing board must take into account the information provided by the applicant and the NRC Staff in the environmental impact statement; LBP-07-14, 66 NRC 169 (2007)

in operating license amendment cases, a petitioner must assert an injury-in-fact associated with the challenged license amendment, not simply a general objection to the facility; LBP-07-10, 66 NRC 1 (2007)

in ruling on standing, boards are to construe intervention petitions in favor of the petitioner; LBP-07-10, 66 NRC 1 (2007)

in the absence of a showing that the proposed operating license amendment obviously entails an increased potential for offsite consequences, petitioner must base its standing upon more than residence or activities within a particular proximity of the plant by making a showing of a plausible chain of events that would result in offsite radiological consequences posing a distinct new harm or threat to the participant; LBP-07-10, 66 NRC 1 (2007)

it is inappropriate at the summary disposition stage for a board to attempt to untangle the expert affidavits and decide which experts are more correct; LBP-07-12, 66 NRC 113 (2007)

licensing boards are to look to judicial concepts of standing to determine whether a petitioner has established the necessary interest for intervention; LBP-07-11, 66 NRC 41 (2007)

licensing boards, in determining whether proffered contentions are premature, must apply norms in a manner that fits the circumstances and must consider whether to condition rejection of such contentions so as to preserve the opportunity for them to be re-presented later; LBP-07-14, 66 NRC 169 (2007)

licensing boards may appropriately view a petitioner's supporting information in a light favorable to the petitioner, but failure to provide such information regarding a proffered contention requires the contention be rejected; LBP-07-10, 66 NRC 1 (2007)

nontimely new contentions are subject to the more stringent eight-factor balancing test; LBP-07-15, 66 NRC 261 (2007)

NRC applies traditional judicial concepts of standing when determining whether a petitioner has set forth a sufficient interest to intervene; LBP-07-14, 66 NRC 169 (2007)

NRC regulations teach that a fact cannot be material to a summary disposition ruling unless its consideration could materially affect the decision of the NRC vis-a-vis implementation of any particular severe accident mitigation alternative; LBP-07-13, 66 NRC 131 (2007)

NRC's adjudicatory process is not a forum for litigating matters that are primarily the responsibility of other federal or state/local regulatory agencies; LBP-07-10, 66 NRC 1 (2007)

only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment; LBP-07-13, 66 NRC 131 (2007)

parties provide proposed written questions prior to, and during the course of, a Subpart L hearing; LBP-07-17, 66 NRC 327 (2007)

petitioner may not demand an adjudicatory hearing to attack generic NRC requirements or regulations or to express generalized grievances about NRC policies; LBP-07-11, 66 NRC 41 (2007)

petitioner must demonstrate that the issue raised in a contention is both within the scope of the proceeding and material to the findings the NRC must make to support the action that is involved in the proceeding; LBP-07-10, 66 NRC 1 (2007); LBP-07-11, 66 NRC 41 (2007)

petitioner must present factual information and/or expert opinion necessary to support its contention; LBP-07-10, 66 NRC 1 (2007)

petitioner should submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings; LBP-07-10, 66 NRC 1 (2007)

petitioners are not required to demonstrate their asserted injury with certainty or to provide extensive technical studies in support of their standing argument; LBP-07-14, 66 NRC 169 (2007)

petitioner's showing establishing standing in one proceeding need not be repeated to establish standing in another proceeding regarding that same facility; LBP-07-10, 66 NRC 1 (2007)

proposed questions that are proffered to the board during a Subpart L hearing must be kept by the board in confidence until they are either propounded by the board, or until issuance of the initial decision on the issue being litigated; LBP-07-17, 66 NRC 327 (2007)

regular but intermittent residence 1 week a month in a house 35 miles from a facility is sufficient to establish standing; LBP-07-10, 66 NRC 1 (2007)

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resolution of a summary disposition motion in a license renewal proceeding is governed by the standards for summary disposition set forth in Subpart G; LBP-07-12, 66 NRC 113 (2007)

showing that estimated dose consequences associated with operation under extended power uprate conditions can be expected to increase by the 20% power level change establishes that the proposed EPU creates an obvious potential for offsite consequences; LBP-07-10, 66 NRC 1 (2007)

simply attaching material or documents as a basis for a contention, without setting forth an explanation of that information's significance, is inadequate to support the admission of the contention; LBP-07-10, 66 NRC 1 (2007)

somewhat greater latitude generally is afforded *pro se* petitioners in drafting their intervention petitions; LBP-07-10, 66 NRC 1 (2007)

specificity and support are required for the positions parties take in their filings; LBP-07-13, 66 NRC 131 (2007)

strict contention pleading requirements help to ensure that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions; LBP-07-11, 66 NRC 41 (2007)

summary disposition is not a tool for trying to convince a licensing board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing; LBP-07-12, 66 NRC 113 (2007)

summary disposition motions are generally evaluated according to the same standards used by Federal District Courts in ruling on motions for summary judgment; LBP-07-12, 66 NRC 113 (2007)

summary disposition opponent must set forth specific facts showing that there is a genuine issue, and may not rely on mere allegations or denials; LBP-07-12, 66 NRC 113 (2007)

the appropriate distance for proximity standing is decided on a case-by-case basis taking into account the nature of the proposed action and the significance of the radioactive source; LBP-07-14, 66 NRC 169 (2007)

the benefits of the proximity presumption are not limited to those who reside within the area in which the presumption applies, but can be extended to those who conduct everyday activities or visit within that area; LBP-07-10, 66 NRC 1 (2007)

the board declines to impose a requirement that petitioners perform an independent technical analysis at the standing phase of a proceeding, especially when the chain of plausible causation that could lead to offsite doses is abundantly clear; LBP-07-14, 66 NRC 169 (2007)

the board determines the hearing procedure on a contention-by-contention basis, selecting the most appropriate for each contention; LBP-07-15, 66 NRC 261 (2007)

the determinative factor in a summary disposition motion is whether there is any genuine issue of material fact remaining in dispute, and that determination is made through examination of the filings in respect of the motion; LBP-07-13, 66 NRC 131 (2007)

the elements of standing will be presumed to be satisfied if an individual lives within the zone of possible harm from a significant source of radioactivity, which has been defined in proceedings involving nuclear power plants as being within a 50-mile radius of such a plant; LBP-07-11, 66 NRC 41 (2007)

the foundation for the threshold criteria regarding the level of support required for summary disposition is found in the contention admissibility provisions; LBP-07-13, 66 NRC 131 (2007)

the fundamental purpose of a Notice of Hearing is to provide facility opponents a fair opportunity to be heard; LBP-07-14, 66 NRC 169 (2007)

the preliminary question for a judge deciding a summary disposition motion is whether there is any evidence upon which a jury could properly proceed to find a verdict for the nonmovant; LBP-07-13, 66 NRC 131 (2007)

the scope of an enforcement proceeding is limited to whether an enforcement order should be sustained; LBP-07-16, 66 NRC 277 (2007)

the six-factor contention admissibility test in 10 C.F.R. 2.309(f)(1) applies regardless of whether a contention is submitted at the beginning of a proceeding, as a timely new contention under section 2.309(f)(2), or as a nontimely new contention under section 2.309(c); LBP-07-15, 66 NRC 261 (2007)

the strict contention rule serves multiple interests; LBP-07-11, 66 NRC 41 (2007)

three conditions must be satisfied for the proximity presumption to afford standing as of right; LBP-07-10, 66 NRC 1 (2007)

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- timely new non-NEPA contentions are subject to a three-factor test; LBP-07-15, 66 NRC 261 (2007)
- to challenge a rule or regulation in the adjudicatory context, petitioner must submit a request for waiver of the rule under 10 C.F.R. 2.335; LBP-07-11, 66 NRC 41 (2007)
- to establish organizational standing it must be shown that the interests of the organization will be harmed by the proceeding; LBP-07-11, 66 NRC 41 (2007)
- to establish representational standing, it must be demonstrated that the interests of at least one member who has standing to sue in his or her own right may be affected by the licensing action, that member must be identified by name and address, and it must be shown that the organization is authorized to request a hearing on behalf of that member; LBP-07-11, 66 NRC 41 (2007)
- to establish standing, petitioner must show an injury in fact that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-07-16, 66 NRC 277 (2007)
- to intervene in an NRC proceeding, petitioner must, in addition to demonstrating standing, submit at least one contention meeting the requirements of 10 C.F.R. 2.309(f)(1); LBP-07-11, 66 NRC 41 (2007)
- when a Notice of Hearing is issued before construction is commenced, additional petitions to intervene or statements of contentions may be filed as construction unfolds and reveals potential shortcomings; LBP-07-14, 66 NRC 169 (2007)
- when environmental issues are dealt with in a separate proceeding, environmental contentions are beyond the scope of the safety proceeding unless they meet requirements beyond the ordinary contention admissibility tests; LBP-07-14, 66 NRC 169 (2007)
- when new contentions are based on breaking developments or information, they are to be treated as new or amended, not as nontimely; LBP-07-14, 66 NRC 169 (2007)
- when standing in a prior proceeding related to the same facility is based on an issue that is outside the scope of the new proceeding, it cannot serve as the basis for standing in the new proceeding; LBP-07-14, 66 NRC 169 (2007)
- where applicant is required to include measures to prevent nuclear criticality, an applicant's assertion that petitioners have not demonstrated that the facility involves a significant source of radioactivity with an obvious potential for offsite consequences does not stand up; LBP-07-14, 66 NRC 169 (2007)
- SAFETY ISSUES**
- a board appropriately rejected the contention of a petitioner who failed to support his premise that a river water intake valve is a safety-related system with information or expert opinion; CLI-07-25, 66 NRC 101 (2007)
- if safety contentions filed before construction begins would be considered premature and/or speculative, NRC hearing opportunities could soon come to be viewed as chimerical; LBP-07-14, 66 NRC 169 (2007)
- in a license renewal proceeding, contentions must focus on topics related to the detrimental effects of aging and related time-limited issues; LBP-07-15, 66 NRC 261 (2007)
- in the mandatory hearing, NRC must address whether issuance of an early site permit will be inimical to the common defense and security or to the health and safety of the public; CLI-07-27, 66 NRC 215 (2007)
- in the mandatory hearing, NRC must address whether, taking into consideration the site criteria contained in 10 C.F.R. Part 100, a reactor or reactors having the characteristics that fall within the parameters for the site can be constructed and operated without undue risk to the health and safety of the public; CLI-07-27, 66 NRC 215 (2007)
- metal fatigue is an example of age-related degradation that properly falls within the scope of a license renewal proceeding; LBP-07-15, 66 NRC 261 (2007)
- SAFETY REVIEW**
- for license renewal, the focus is on those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs; LBP-07-11, 66 NRC 41 (2007)
- SANCTIONS**
- boards may reprimand, censure, or suspend intervenors for contemptuous conduct; CLI-07-28, 66 NRC 275 (2007)
- SEVERE ACCIDENT MITIGATION ALTERNATIVES ANALYSIS**
- challenge to specific input data to the severe accident mitigation alternatives analysis could bring a contention on adequacy of an evacuation plan within the scope of license renewal; LBP-07-11, 66 NRC 41 (2007)

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- for a fact to be material with regard to the SAMA analysis, it must be a fact that can reasonably be expected to impact the Staff's conclusion that any particular mitigation alternative may or may not be cost-effective; LBP-07-13, 66 NRC 131 (2007)
- if NRC Staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided; LBP-07-13, 66 NRC 131 (2007)
- motion for summary disposition of contention questioning applicant's handling of its SAMA analysis concerning evacuation times, economic consequences, and meteorological patterns is granted; LBP-07-13, 66 NRC 131 (2007)
- NRC regulations require the use of probabilistic rather than deterministic methodology because modeling of extremely complex time- and physical condition-dependent phenomena is involved; LBP-07-13, 66 NRC 131 (2007)
- the manner in which NRC meets its obligation to consider these alternatives is to perform a cost-benefit analysis; LBP-07-13, 66 NRC 131 (2007)
- under the National Environmental Policy Act, Staff is obliged to perform a SAMA analysis; LBP-07-13, 66 NRC 131 (2007)
- where it is shown that even with no evacuation a severe accident mitigation alternative is still not cost-effective, any errors in assumptions regarding the evacuation time or pattern cannot reasonably be expected to rise to a level necessary to cause implementation of any SAMA to become cost-effective; LBP-07-13, 66 NRC 131 (2007)
- where these analyses are customarily prepared using the MACCS2 code, and where this code has been widely used and accepted as an appropriate tool in a large number of similar instances, the Staff is fully justified in finding that analysis using this code is an acceptable method; LBP-07-13, 66 NRC 131 (2007)
- SHOW-CAUSE PROCEEDINGS**
- challenges to a licensee's current compliance with its current licensing basis or other operational requirements may be raised via a section 2.206 petition; LBP-07-17, 66 NRC 327 (2007)
- SITE SAFETY ANALYSIS REPORT**
- whether a safety analysis of the risks asserted to be endemic should be performed for a proposed irradiator site at an airport is questioned; CLI-07-26, 66 NRC 109 (2007)
- SITE SUITABILITY**
- the Commission's discussion of the Staff's underlying review adds necessary additional details and constitutes a supplement to the final environmental impact statement's alternative site review; CLI-07-27, 66 NRC 215 (2007)
- SOURCE TERM**
- in making its determination on the postulated source terms at the early site permit stage, Staff need not authorize proposed reactors to release radioactivity in the amounts used in connection with the dose estimates; CLI-07-27, 66 NRC 215 (2007)
- STANDARD OF PROOF**
- a touchstone for determining whether the reasonable assurance standard is satisfied is compliance with Commission regulations; LBP-07-17, 66 NRC 327 (2007)
- in the context of license renewal proceedings, whether the reasonable assurance standard is satisfied is directly linked to an assessment of the adequacy of the aging management program; LBP-07-17, 66 NRC 327 (2007)
- license renewal applicant must demonstrate, by a preponderance of the evidence, that its aging management program provides reasonable assurance that activities authorized by the renewed license will be conducted in a manner consistent with the current licensing basis, and that the effects of aging will be detected and corrected; LBP-07-17, 66 NRC 327 (2007)
- whether the "reasonable assurance" standard is satisfied is based on sound technical judgment applied on a case-by-case basis not susceptible to formalistic quantification or mechanistic application; LBP-07-17, 66 NRC 327 (2007)

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### STANDARD REVIEW PLANS

where applicant is required to include measures to prevent nuclear criticality, an applicant's assertion that petitioners have not demonstrated that the facility involves a significant source of radioactivity with an obvious potential for offsite consequences does not stand up; LBP-07-14, 66 NRC 169 (2007)

### STANDING TO INTERVENE

a board in one proceeding is not constrained to follow the rulings of another board, absent explicit affirmation by the Commission; LBP-07-10, 66 NRC 1 (2007)

a board's decision on one of the admission elements does not necessarily render any discussion of the other superfluous because a decision addressing only one of the two items creates the potential for significant delay if that single determination is later overturned on appeal; LBP-07-10, 66 NRC 1 (2007)

a licensing board can take official notice of the locations and the distances to the various locations specified by a petitioner as denominated on Mapquest and an American Automobile Association roadmap; LBP-07-10, 66 NRC 1 (2007)

a petitioner awarded standing in one proceeding need not restate all of its case to establish standing in another proceeding related to the same facility; LBP-07-14, 66 NRC 169 (2007)

a petitioner who fails to provide specific information regarding the geographic proximity or the timing and duration of its visits only complicates matters for itself; LBP-07-10, 66 NRC 1 (2007)

a ruling on standing does not constitute dicta simply because the board also concluded that the petitioner had failed to proffer an admissible contention; LBP-07-10, 66 NRC 1 (2007)

although a proximity presumption has been invoked when resolving issues of standing for cases involving reactor licensing, in a case involving an enforcement order, the standing requirement is also based on the confirmatory order itself and the adverse effect of the confirmatory order; LBP-07-16, 66 NRC 277 (2007)

an extended power uprate is directly associated with continuing reactor operation, and thus the potential geographic scope of the consequences of EPU operation can be considered to be similar to that which supported the creation of a 50-mile presumption for construction permit and operating license proceedings; LBP-07-10, 66 NRC 1 (2007)

because petitioner must show an injury, the issue of standing is directly related to the issue of the scope of the proceeding; LBP-07-16, 66 NRC 277 (2007)

boards are to construe intervention petitions in favor of the petitioner; LBP-07-10, 66 NRC 1 (2007)

discretionary standing is appropriate only when one petitioner has been shown to have standing as of right and an admissible contention so that a hearing will be conducted; LBP-07-10, 66 NRC 1 (2007)

even if standing is undisputed, its jurisdictional nature requires independent examination by the board; LBP-07-10, 66 NRC 1 (2007)

even in nonreactor construction permit/operating license cases involving an increased potential for offsite consequences in which proximity can be the primary basis for establishing standing, the distance at which a petitioner can be presumed to be affected must take into account the nature of the proposed action and the significance of the radioactive source; LBP-07-10, 66 NRC 1 (2007)

if the agencies do not see fit to calculate projected doses at several different distances from a facility and to differentiate areas that might receive radiation doses from those that will not, it is hardly reasonable, or fair, to expect petitioners to do better in making their arguments for standing; LBP-07-14, 66 NRC 169 (2007)

in cases involving the possible construction or operation of a nuclear power reactor, the Commission has created a presumption that residing or regularly conducting activities within a 50-mile proximity of the proposed facility is considered sufficient to establish the requisite injury, causation, and redressability elements; LBP-07-10, 66 NRC 1 (2007)

in determining whether an individual or organization should be granted party status in a proceeding based on standing "as of right," the agency has applied contemporaneous judicial standing concepts; LBP-07-10, 66 NRC 1 (2007)

in evaluating the specificity of petitioners' standing arguments, a licensing board must take into account the information provided by the applicant and the NRC Staff in the environmental impact statement; LBP-07-14, 66 NRC 169 (2007)

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in operating license amendment cases, a petitioner must assert an injury-in-fact associated with the challenged license amendment, not simply a general objection to the facility; LBP-07-10, 66 NRC 1 (2007)

in the absence of a showing that the proposed operating license amendment obviously entails an increased potential for offsite consequences, petitioner must base its standing upon more than residence or activities within a particular proximity of the plant by making a showing of a plausible chain of events that would result in offsite radiological consequences posing a distinct new harm or threat to the participant; LBP-07-10, 66 NRC 1 (2007)

injury may be either actual or threatened, but must lie arguably within the zone of interests protected by the statutes governing the proceeding; LBP-07-11, 66 NRC 41 (2007)

licensing boards are to look to judicial concepts of standing to determine whether a petitioner has established the necessary interest for intervention; LBP-07-11, 66 NRC 41 (2007)

merely because a petitioner may have had standing in an earlier proceeding does not automatically grant standing in subsequent proceedings, even if the scope of the earlier and later proceedings is similar; LBP-07-16, 66 NRC 277 (2007)

NRC applies traditional judicial concepts of standing when determining whether a petitioner has set forth a sufficient interest to intervene; LBP-07-14, 66 NRC 169 (2007)

NRC must provide a hearing upon the request of any person whose interest may be affected by the proceeding; LBP-07-11, 66 NRC 41 (2007)

offsite consequences need only be plausible, not necessarily probable or likely, and thus standing can be based on plausible but unlikely scenarios; LBP-07-14, 66 NRC 169 (2007)

petitioner bears the burden of establishing its standing in a proceeding; LBP-07-10, 66 NRC 1 (2007)

petitioner must allege a concrete and particularized injury that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-07-11, 66 NRC 41 (2007)

petitioner must show an injury in fact that is fairly traceable to the challenged action and likely to be redressed by a favorable decision; LBP-07-16, 66 NRC 277 (2007)

petitioner should submit a fully developed showing regarding standing in each proceeding in which it seeks to intervene, regardless of whether it has previously been found to have standing relative to the facility that is the locus of the proceedings; LBP-07-10, 66 NRC 1 (2007)

petitioners are not required to demonstrate their asserted injury with certainty or to provide extensive technical studies in support of their standing argument; LBP-07-14, 66 NRC 169 (2007)

petitioner's present circumstances or the extent to which activities in the recent past reflect a likely pattern of future conduct are considered; LBP-07-10, 66 NRC 1 (2007)

petitioner's showing establishing standing in one proceeding need not be repeated to establish standing in another proceeding regarding that same facility; LBP-07-10, 66 NRC 1 (2007)

proximity-based standing must be based on the factual circumstances presented by the information before the licensing board regarding the petitioner's activities, which may include consideration of the proximity, timing, and duration of those activities; LBP-07-10, 66 NRC 1 (2007)

regular but intermittent residence 1 week a month in a house 35 miles from a facility is sufficient for standing purposes; LBP-07-10, 66 NRC 1 (2007)

showing that estimated dose consequences associated with operation under extended power uprate conditions can be expected to increase by the 20% power level change establishes that the proposed EPU creates an obvious potential for offsite consequences; LBP-07-10, 66 NRC 1 (2007)

the appropriate distance for proximity standing is decided on a case-by-case basis taking into account the nature of the proposed action and the significance of the radioactive source; LBP-07-14, 66 NRC 169 (2007)

the benefits of the proximity presumption are not limited to those who reside within the area in which the presumption applies, but can be extended to those who conduct everyday activities or visit within that area; LBP-07-10, 66 NRC 1 (2007)

the board declines to impose a requirement that petitioners perform an independent technical analysis at the standing phase of a proceeding, especially when the chain of plausible causation that could lead to offsite doses is abundantly clear; LBP-07-14, 66 NRC 169 (2007)

the Commission has accepted a proximity presumption granting standing to residents within 50 miles of a reactor, but has not accepted any such presumption in nonreactor cases; LBP-07-14, 66 NRC 169 (2007)

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the elements of standing will be presumed to be satisfied if an individual lives within the zone of possible harm from a significant source of radioactivity, which has been defined in proceedings involving nuclear power plants as being within a 50-mile radius of such a plant; LBP-07-11, 66 NRC 41 (2007)

three conditions must be satisfied for the proximity presumption to afford standing as of right; LBP-07-10, 66 NRC 1 (2007)

to determine whether there is potential for offsite consequences at specific sites, licensing boards have authority to infer obvious intermediate steps in a chain of causation that could lead to offsite doses; LBP-07-14, 66 NRC 169 (2007)

when standing in a prior proceeding related to the same facility is based on an issue that is outside the scope of the new proceeding, it cannot serve as the basis for standing in the new proceeding; LBP-07-14, 66 NRC 169 (2007)

### STANDING TO INTERVENE, ORGANIZATIONAL

petitioner must show injury in fact to the interests of the organization itself; LBP-07-11, 66 NRC 41 (2007); LBP-07-14, 66 NRC 169 (2007)

### STANDING TO INTERVENE, REPRESENTATIONAL

even though members' affidavits did not explicitly authorize the organizations to represent them, this was implicit in their providing the affidavits; LBP-07-11, 66 NRC 41 (2007)

petitioner must demonstrate that at least one of its members would have standing to intervene on his or her own behalf, and that such a specifically identified member has authorized the organization to represent the member's interests; LBP-07-11, 66 NRC 41 (2007); LBP-07-14, 66 NRC 169 (2007)

### STATE REGULATORY REQUIREMENTS

issues concerning alleged violations of state law or regulations are outside the scope of, and not material to, an NRC power uprate proceeding; CLI-07-25, 66 NRC 101 (2007)

### STATE STATUTES

issues concerning alleged violations of state law or regulations are outside the scope of, and not material to, an NRC power uprate proceeding; CLI-07-25, 66 NRC 101 (2007)

### STATUTES

adjudication is not the proper forum for challenging applicable statutory requirements or the basic structure of the agency's regulatory process; LBP-07-10, 66 NRC 1 (2007)

### SUBPART L PROCEEDINGS

after the board issues its initial decision, it must provide questions proffered by the parties to the Commission's Secretary for inclusion in the official record of the proceeding; LBP-07-17, 66 NRC 327 (2007)

in a license renewal proceeding, there is no mandatory or automatic default to Subpart L procedures; LBP-07-15, 66 NRC 261 (2007)

in conducting Subpart L hearings, board members pose questions to the parties' witnesses in those areas that, in the board's judgment, require additional clarification and development; LBP-07-17, 66 NRC 327 (2007)

proposed questions that are proffered to the board during a hearing must be kept by the board in confidence until they are either propounded by the board, or until issuance of the initial decision on the issue being litigated; LBP-07-17, 66 NRC 327 (2007)

### SUMMARY DISPOSITION

a licensing board cannot make a determination of whether there is a genuine issue of material fact without carefully examining the evidence presented in the parties' affidavits; LBP-07-13, 66 NRC 131 (2007)

a licensing board ruling on a summary disposition motion must view the record in the light most favorable to the party opposing such a motion and deny the motion if movant fails to meet its burden, even in the face of an inadequate response; LBP-07-12, 66 NRC 113 (2007)

a party is not required to prove its case in making or opposing a motion for summary disposition; LBP-07-13, 66 NRC 131 (2007)

affidavits must set forth facts that would be admissible in evidence; LBP-07-13, 66 NRC 131 (2007) although wholly conclusory statements for which no supporting evidence is offered need not be taken as true for summary judgment purposes, a court may not make credibility determinations or weigh the evidence at the summary judgment stage; LBP-07-12, 66 NRC 113 (2007)

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applicant moves for summary disposition of a contention involving whether leak detection through monitoring wells is necessary as part of the plant's aging management program; LBP-07-12, 66 NRC 113 (2007)

even if the basic facts are uncontroverted, summary disposition is inappropriate when the evidence is susceptible of different interpretations or inferences; LBP-07-12, 66 NRC 113 (2007)

facts are "material" if they will affect the outcome of a proceeding under the governing law; LBP-07-12, 66 NRC 113 (2007)

guidance on determining whether an issue is "material" is taken from procedures for contention admissibility; LBP-07-13, 66 NRC 131 (2007)

if movant satisfies its initial burden and supports its motion by affidavit, opponent must either proffer rebutting evidence or submit an affidavit explaining why it is impractical to do so; LBP-07-12, 66 NRC 113 (2007)

if the filings demonstrate the existence of a genuine material fact, the evidence submitted in support of a motion fails to show the nonmovant's position is a sham or fails to foreclose the possibility of a factual dispute, or there is an issue as to the credibility of movant's evidentiary material, movant will be found to have failed to meet its burden on summary disposition; LBP-07-12, 66 NRC 113 (2007)

if the presiding officer determines from affidavits filed by the opposing party that the opposing party cannot present by affidavit the facts essential to justify its opposition, the presiding officer may order a continuance to permit such affidavits to be obtained, or may take other appropriate action; LBP-07-12, 66 NRC 113 (2007)

if the support a party offers, to demonstrate that a genuine dispute exists as to a material fact, indicates that, after expanding that support to its logical limits, it cannot support a finding of fact material to the determination the agency must make, that party's position cannot prevail; LBP-07-13, 66 NRC 131 (2007)

if there is doubt as to whether the parties should be required to proceed further, a motion for summary disposition should be denied; LBP-07-12, 66 NRC 113 (2007)

in addressing the motion and the opposition thereto, licensing boards must examine the substance of the information provided by the parties; LBP-07-13, 66 NRC 131 (2007)

it is inappropriate at the summary disposition stage for a board to attempt to untangle the expert affidavits and decide which experts are more correct; LBP-07-12, 66 NRC 113 (2007)

mere allegations are insufficient, including speculative or bare conclusory statements by an expert; LBP-07-13, 66 NRC 131 (2007)

motion concerning contention questioning applicant's handling of its severe accident mitigation alternatives analysis concerning evacuation times, economic consequences, and meteorological patterns is granted; LBP-07-13, 66 NRC 131 (2007)

movant must show that there is no genuine issue as to any material fact and that movant is entitled to a decision as a matter of law; LBP-07-12, 66 NRC 113 (2007)

NRC regulations teach that a fact cannot be material to a ruling unless its consideration could materially affect the decision of the NRC vis-a-vis implementation of any particular severe accident mitigation alternative; LBP-07-13, 66 NRC 131 (2007)

only disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment; LBP-07-13, 66 NRC 131 (2007)

opponent does not have to show that it would prevail on the issues, but must demonstrate that there is a genuine factual issue to be tried; LBP-07-12, 66 NRC 113 (2007)

opponent must set forth specific facts showing that there is a genuine issue, and may not rely on mere allegations or denials; LBP-07-12, 66 NRC 113 (2007); LBP-07-13, 66 NRC 131 (2007)

resolution of a summary disposition motion in a license renewal proceeding is governed by the standards for summary disposition set forth in Subpart G; LBP-07-12, 66 NRC 113 (2007)

specificity and support are required for the positions parties take in their filings; LBP-07-13, 66 NRC 131 (2007)

specificity standards for contention admissibility serve as minimum conditions for setting out specific facts showing there is a genuine issue of fact; LBP-07-13, 66 NRC 131 (2007)

summary disposition motions are generally evaluated according to the same standards used by Federal District Courts in ruling on motions for summary judgment; LBP-07-12, 66 NRC 113 (2007)

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- the determinative factor in a summary disposition motion is whether there is any genuine issue of material fact remaining in dispute, and that determination is made through examination of the filings in respect of the motion; LBP-07-13, 66 NRC 131 (2007)
- the foundation for the threshold criteria regarding the required level of support is found in the contention admissibility provisions; LBP-07-13, 66 NRC 131 (2007)
- the preliminary question for a judge deciding a summary disposition motion is whether there is any evidence upon which a jury could properly proceed to find a verdict for the nonmovant; LBP-07-13, 66 NRC 131 (2007)
- this is not a tool for trying to convince a licensing board to decide, on written submissions, genuine issues of material fact that warrant resolution at a hearing; LBP-07-12, 66 NRC 113 (2007)
- TECHNICAL SPECIFICATIONS**
  - licensee requests that operating licenses for both units be amended to change the associated technical specifications to implement uprated power operation; LBP-07-10, 66 NRC 1 (2007)
- TERMINATION OF PROCEEDING**
  - the licensing board finds that petitioners have standing to intervene but have not submitted a contention that is admissible, and that therefore the proceeding must be terminated; LBP-07-11, 66 NRC 41 (2007)
- TERRORISM**
  - NEPA imposes no duty on NRC to consider intentional malevolent acts in a license renewal proceeding; LBP-07-11, 66 NRC 41 (2007)
  - terrorist attacks are not to be considered part of the NEPA analysis required for licensing actions; LBP-07-14, 66 NRC 169 (2007)
  - the Commission addresses the problem of terrorist attacks at nuclear facilities in cooperation with other agencies, including the military, and outside the hearing process; LBP-07-14, 66 NRC 169 (2007)
- VIOLATIONS**
  - issues concerning alleged violations of state law or regulations are outside the scope of, and not material to, an NRC power uprate proceeding; CLI-07-25, 66 NRC 101 (2007)
- WITNESSES, EXPERT**
  - it is inappropriate at the summary disposition stage for a board to attempt to untangle the expert affidavits and decide which experts are more correct; LBP-07-12, 66 NRC 113 (2007)

## FACILITY INDEX

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