

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
DOMINION NUCLEAR NORTH ANNA, LLC)	Docket No. 52-008-ESP
)	
(Early Site Permit for North Anna ESP Site))	ASLBP No. 04-822-02-ESP
)	

NRC STAFF ANSWER TO CONTENTIONS OF BLUE RIDGE ENVIRONMENTAL
DEFENSE LEAGUE, NUCLEAR INFORMATION AND RESOURCE SERVICE,
AND PUBLIC CITIZEN REGARDING THE EARLY SITE PERMIT APPLICATION
FOR THE NORTH ANNA NUCLEAR POWER PLANT SITE

INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(h)(1) and the Chief Administrative Judge’s Initial Prehearing Order dated March 8, 2004,¹ the staff of the Nuclear Regulatory Commission (“Staff”) hereby files its answer to the proposed contentions of Blue Ridge Environmental Defense League (“BREDL”), Nuclear Information and Resource Service (“NIRS”), and Public Citizen (collectively, “Petitioners”), filed May 3, 2004.² The Staff herein addresses the admissibility of Petitioners’ proposed contentions. For the reasons set forth below, the Staff opposes admission of Petitioners’ proposed contentions, with the exception of the portion of Proposed Contention 3.4 that relates to consideration of the no-action alternative.

¹ “*Exelon Generation Co. (Early Site Permit for Clinton ESP Site); Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site); System Energy Res., Inc. (Early Site Permit for Grand Gulf ESP Site), Memorandum and Order*” (“Initial Prehearing Order”), slip op. Mar. 8, 2004.

² See “Contentions of Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, and Public Citizen Regarding Early Site Permit Application for Site of North Anna Nuclear Power Plant, dated May 3, 2004 (“Proposed Contentions”).

BACKGROUND

On September 25, 2003, Dominion Nuclear North Anna, L.L.C. (“Dominion” or “Applicant”) submitted an application pursuant to 10 C.F.R. Part 52, Subpart A, in which it requested an Early Site Permit (“ESP”) for a site within the existing site of the North Anna Power Station.³ A Notice of Hearing initiating the proceeding on the application and offering an opportunity to petition for leave to intervene was published in the *Federal Register* on December 2, 2003.⁴ The Notice of Hearing defined the issues in the proceeding as follows:

Issues Pursuant to the Atomic Energy Act of 1954, as Amended

(1) Whether the issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public (Safety Issue 1); and, (2) whether, taking into consideration the site criteria contained in 10 CFR part 100, a reactor, or reactors, having characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public (Safety Issue 2).

Issue Pursuant to the National Environmental Policy Act (NEPA) of 1969, as Amended

Whether, in accordance with the requirements of subpart A of 10 CFR part 51, the ESP should be issued as proposed.

68 Fed. Reg. at 67,489. In response to the Notice of Hearing, Petitioners filed a joint petition for leave to intervene in the proceeding.⁵ In answers to the joint petition dated January 12, 2004⁶ and

³ See Letter from D.A. Christian, Dominion, to J.E. Dyer, NRC, “North Anna Early Site Permit Application,” dated September 25, 2003.

⁴ See 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).

⁵ See “Hearing Request and Petition to Intervene by Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, and Public Citizen,” dated January 2, 2004.

⁶ See “Applicant’s Answer to Hearing Request and Petition to Intervene by Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, and Public Citizen,” dated January 12, 2004.

January 20, 2004,⁷ neither the Applicant nor the Staff challenged the standing of any of the petitioning organizations.

On January 14, 2004, the Commission published its newly promulgated Rules of Practice ("New Part 2") in the *Federal Register* (see Final Rule, Changes to Adjudicatory Process, 69 Fed. Reg. 2182), and on January 16, 2004, the Applicant moved to apply New Part 2 to this proceeding.⁸ Petitioners opposed Applicant's motion,⁹ but the Staff did not.¹⁰ In a Memorandum and Order dated March 2, 2004, the Commission directed that this proceeding be conducted pursuant to New Part 2.¹¹ The Chief Administrative Judge then issued an Initial Prehearing Order, which addressed scheduling, including the filing of contentions, and other administrative matters. Thereafter, on March 22, 2004, this Atomic Safety and Licensing Board ("Board") was established. In response to the Initial Prehearing Order, Petitioners filed proposed contentions on May 3, 2004.

⁷ See "NRC Staff's Answer to Hearing Request and Petition to Intervene by Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, and Public Citizen," dated January 20, 2004.

⁸ See "Applicant's Motion to Apply New Adjudicatory Process," dated January 16, 2004. Because the Notice of Hearing was published prior to February 13, 2004, the effective date of New Part 2 (see 69 Fed. Reg. at 2182), the revised rules initially did not apply to this proceeding. The applicants in two other pending ESP adjudicatory proceedings involving the Clinton and Grand Gulf ESP sites, Exelon Generation Company ("Exelon"), and System Energy Resources., Inc. ("SERI"), respectively, made similar requests.

⁹ See "Petitioners' Opposition to Dominion Nuclear's Application for New Adjudicatory Process," dated January 26, 2004.

¹⁰ See "NRC Staff's Answer to Applicant's Motion to Apply New Adjudicatory Process," dated February 5, 2004.

¹¹ See *Dominion Nuclear North Anna, LLC* (Early Site Permit for North Anna ESP Site); *Exelon Generation Co.* (Early Site Permit for Clinton ESP Site); *System Energy Res., Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-04-08, 59 NRC 113 (2004). Accordingly, all references herein to 10 C.F.R. Part 2 are to the New Part 2, except as specifically noted.

DISCUSSION

I. Legal Standards

The Staff sets forth below the legal standards generally applicable to the admission of contentions in New Part 2. In addition, because analysis of one of Petitioners' proposed contentions, Proposed Contention 2.1, involves interpretation of the phrase "radiological consequence evaluation factors" in 10 C.F.R. § 52.17(a)(1), and this is a matter of first impression, the Staff also sets forth the legal standards governing applications for ESP as they relate to that subject. The Staff also summarizes the legal standards applicable to the environmental review of an ESP. The Staff first turns to the standards governing the admissibility of contentions, which remain unchanged from those that existed before the effective date of New Part 2. See 69 Fed. Reg. at 2220-21.

A. Legal Standards Governing the Admission of Contentions

To gain admission to a proceeding as a party, a petitioner must submit at least one valid contention that meets the requirements of 10 C.F.R. § 2.309(f)(1). This section states that a petitioner must provide:

- (i) a specific statement of the issue of law or fact to be raised or controverted;
- (ii) a brief explanation of the basis for the contention;
- (iii) a demonstration that the issue raised in the contention is within the scope of the proceeding;
- (iv) a demonstration 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) a concise statement of the alleged facts or expert opinions which support the 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 petitioner intends to rely to support its position on the issue; and

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

These provisions "incorporate the longstanding contention support requirements of former [10 C.F.R.] § 2.714—no contention will be admitted for litigation in any NRC adjudicatory proceeding unless these requirements are met." 69 Fed. Reg. at 2221. The Commission has emphasized that its rules on admission of contentions establish an evidentiary threshold more demanding than a mere pleading requirement and are "strict by design." *Dominion Nuclear Conn., Inc.* (Millstone Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001). Under the rule, a petitioner "must do more than submit 'bald or conclusory' allegation[s] of a dispute with the applicant." *Id.* Rather, the petitioner must "read the pertinent portions of the license application, . . . state the applicant's position and the petitioner's opposing view." *Id.* Moreover, a petitioner must provide a "clear statement as to the basis for the contentions and the submission of . . . supporting information and references to specific documents and sources that establish the validity of the contention. *Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2 & 3), CLI-91-12, 34 NRC 149, 155-56 (1991).

The contentions are limited by the scope of the proceeding, which is delineated by the Commission in the notice of hearing for the proposed licensing action. See *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111, 118 (1995); *Duke Power Co.* (Catawba Nuclear Station, Units 1 & 2), ALAB-825, 22 NRC 785, 790 (1985). In determining the scope of the proceeding, the Licensing Board should be guided by the regulations governing the substantive matters under consideration in the proceeding. See *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-00-23, 52 NRC 327,

329 (2000). Although the focal point of an NRC adjudication is on contentions rather than the underlying bases, the Commission recently reiterated, "[w]hen an issue arises over the scope of an admitted contention, NRC opinions have long referred back to the bases set forth in support of the contention." *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-28, 56 NRC 373, 379 (2002) (citations omitted).

B. Legal Standards Governing Radiological Consequence Evaluation Factors

Petitioners' proposed contentions assert a safety issue with respect to the application involving the radiological consequence evaluation factors in 10 C.F.R. § 52.17 (see Proposed Contentions at 2). Since this is a matter of first impression, the Staff describes, as set forth below, the legal standards relevant to this contention. The Staff first turns to the requirements for ESP applications set forth in 10 C.F.R. Part 52.

The Commission's regulations in 10 C.F.R. Part 52 set the standards for consideration of an application for an ESP. In particular, 10 C.F.R. § 52.17 requires that the application contain:

[A] description and safety assessment of the site on which the facility is to be located. The assessment must contain an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequence evaluation factors identified in § 50.34(a)(1) of this chapter. Site characteristics must comply with part 100 of this chapter.

10 C.F.R. § 52.17(a)(1) (2004). Neither § 50.34(a)(1) nor Part 100 explicitly defines the "radiological consequence evaluation factors" to which § 52.17(a)(1) refers. Part 100, however, applies to "applications for site approval for the purpose of constructing and operating stationary power and testing reactors pursuant to the provisions of part 50 or part 52." 10 C.F.R. § 100.2 (2004). Part 100, therefore, applies equally to ESPs, CPs, and COLs.

In this regard, Part 100 applies as follows: Inasmuch as Dominion filed its application on September 25, 2003, the evaluation factors in 10 C.F.R. Part 100, Subpart B for power reactor site applications filed after January 10, 1997, apply. Pursuant to Part 100, Subpart B, the Commission

considers, *inter alia*, the population density and use characteristics of the site environs, including the exclusion area, the population distribution, and site-related characteristics in determining the acceptability of a site for a power reactor. 10 C.F.R. § 100.20(a). Design matters are not subject to Part 100, Subpart B. See *id.* As relevant to an ESP proceeding, the matters identified in § 100.20(a) must be evaluated to determine whether individual as well as societal risk of potential plant accidents is low. *Id.* In addition, Part 100, Subpart B, requires that applications for site approval for commercial power reactors address the following:

(a) Every site must have an exclusion area and a low population zone, as defined in § 100.3;¹²

.....

(c) Site atmospheric dispersion characteristics must be evaluated and dispersion parameters established such that:

.....

(2) Radiological dose consequences of postulated accidents shall meet the criteria set forth in § 50.34(a)(1) of this chapter for the type of facility proposed to be located at the site[.]

10 C.F.R. § 100.21. Similar to § 52.17(a)(1), § 100.21(c)(2) requires dose consequences to meet the “criteria set forth in § 50.34(a)(1).”

The criteria in § 50.34(a)(1) for evaluating radiological dose consequences of postulated accidents are the following:

(1) An individual located at any point on the boundary of the exclusion area for any 2 hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem total effective dose equivalent (TEDE).

¹² As relevant here, § 100.3 states that:

Exclusion area means that area surrounding the reactor, in which the reactor licensee has the authority to determine all activities including exclusion or removal of personnel and property from the area[.]

Low population zone means the area immediately surrounding the exclusion area which contains residents, the total number and density of which are such that there is a reasonable probability that appropriate protective measures could be taken in their behalf in the event of a serious accident.

(2) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a radiation dose in excess of 25 rem total effective dose equivalent (TEDE).

10 C.F.R. § 50.34(a)(1)(ii)(D)(1) and (2) (2004)(footnote omitted). These dose consequence criteria, by their terms, apply only to the determination of the exclusion area and LPZ, given a postulated release of radioactive material to the environment and the site atmospheric dispersion characteristics.¹³ All the other criteria in § 50.34(a)(1) relate to reactor design, which is not mentioned in §§ 100.20 or 100.21.¹⁴ Accordingly, the “dose consequence evaluation factors in § 50.34(a)(1)” in § 52.17(a)(1), read *in pari materia* with Part 100, Subpart B, must refer to the dose consequence criteria for determining the acceptability of the exclusion area and the LPZ in § 50.34(a)(1)(ii)(D)(1) and (2).¹⁵

¹³ Part 100, Subpart B, requires evaluation of site atmospheric dispersion characteristics, but does not govern the calculation of a postulated release of radioactive material to the environment. See 10 C.F.R. § 100.21(c) (2004). Such a radioactive release considered in a CP or COL application is governed by 10 C.F.R. § 50.34(a)(1)(D), which requires that “an applicant shall assume a fission product release from the core into the containment assuming that the facility is operated at the ultimate power level contemplated.” In establishing a postulated release of radioactive material to the environment, an applicant for a CP or COL must also perform an analysis and evaluation of the fission product release into the containment, based on the expected demonstrable containment leak rate and a specified category of design features. See 10 C.F.R. § 50.34(a)(1)(D) (2004). For an ESP, § 52.17(a)(1) allows for evaluation of a postulated release of radioactive material to the environment by requiring “an analysis and evaluation of the major structures, systems, and components [“SSCs”] of the facility that bear significantly on the acceptability of the site” under the radiological consequence evaluation factors. Whether any SSCs have an effect on such a release and, therefore, “bear significantly on the acceptability of the site” depends on the contents of the application.

¹⁴ These design matters are properly resolved in CP, design certification, or COL proceedings. See 10 C.F.R. §§ 50.34(a), 52.47(a)(1)(i), and 52.79(b), respectively.

¹⁵ While there is no need to examine the regulatory history of § 52.17 in order to interpret it, the rulemaking history for this regulation and Part 100 supports the Staff’s interpretation, as set forth in the Staff’s discussion of Petitioners’ Proposed Contention 2.1.

C. Legal Standards Governing the Environmental Consideration of ESPs

In addition to a safety review, the Commission conducts an environmental review of each ESP application pursuant to the National Environmental Policy Act (“NEPA”), in accordance with the Commission’s implementing regulations set forth in 10 C.F.R. Part 51. Environmental review requirements specific to ESPs are set forth in 10 C.F.R. Part 52. Specifically, 10 C.F.R. § 52.18 states, in pertinent part:

[T]he Commission shall prepare an environmental impact statement during review of the application, in accordance with the applicable provisions of 10 C.F.R. part 51, provided, however, that the draft and final environmental impact statements prepared by the Commission focus on the environmental effects of construction and operation of a reactor, or reactors, which have characteristics that fall within the postulated site parameters, and provided further that the statements need not include an assessment of the benefits (for example, need for power) of the proposed action, but must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed.

See generally 10 C.F.R. §§ 51.70, 51.71, 51.73, 51.75, 51.90, 51.91, and 51.94 (setting forth general requirements for the Commission’s preparation and consideration of environmental impact statements). In connection with this EIS, 10 C.F.R. § 52.17(a)(2) requires that the applicant include with the ESP application:

A complete environmental report as required by 10 C.F.R. 51.45 and 51.50 . . . provided, however, that such environmental report must focus on the environmental effects of construction and operation of a reactor, or reactors, which have characteristics that fall within the postulated site parameters, and provided further that the report need not include an assessment of the benefits (for example, need for power) of the proposed action, but must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the proposal.

II. Petitioners’ Proposed Contentions

Petitioners submitted five proposed contentions, which are discussed below. As explained below, the Staff opposes admission of Petitioners’ proposed contentions, with the exception of the portion of Proposed Contention 3.4 that relates specifically to consideration of the no-action

alternative. The Staff discusses the proposed contentions *seriatim* as they appear in Petitioners' filing.

A. PROPOSED CONTENTION 2.1: Failure to provide adequate safety assessment of reactor interaction

The ESP application for the North Anna site fails to comply with 10 C.F.R. § 52.17 because its safety assessment does not contain an adequate analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequences evaluation factors identified in 10 C.F.R. § 50.23(a)(1) [*sic*, § 50.34(a)(1)]. In particular, the safety assessment does not adequately take into account the potential effects on radiological accident consequences of co-locating new reactors with advanced designs next to an older reactor. The safety assessment should contain a comprehensive evaluation and analysis of the ways in which interaction of the old and new plants under accident conditions may exacerbate the consequences of a radiological accident. Without such an evaluation and analysis, the presiding officer cannot make a finding that, taking into consideration the site criteria in Part 100 of the regulations, the proposed reactors can be operated "without undue risk to the health and safety of the public."

Proposed Contentions at 2-3 (citation omitted). Petitioners state in the basis to the proposed contention that "new reactors are designed with fewer features to protect station workers from radiation released during accident conditions, including loss-of-coolant accidents. An accident at the existing reactor could, therefore, have significant adverse effects on the operation of the new reactor." *Id.* at 4-5. This is the essence of Proposed Contention 2.1.

Staff Response to Proposed Contention 2.1

For the reasons set forth below, Proposed Contention 2.1 should be rejected because the proposed contention is not within the scope of this proceeding, Petitioners' claimed basis lacks specificity, and Petitioners do not otherwise raise a genuine dispute with the Applicant on a material issue of law or fact.

1. Proposed Contention 2.1 is not within the scope of this proceeding

As set forth above, Petitioners must “provide a demonstration that the issue raised in the contention is within the scope of the proceeding.” 10 C.F.R. § 2.309(f)(1)(iii). The scope of the proceeding is defined by the Notice of Hearing. See *Georgia Institute of Technology*, CLI-95-12, 42 NRC at 118. The Notice of Hearing, as described above, defines the scope of the safety issues in the proceeding as (1) whether the issuance of an ESP will be inimical to the common defense and security or to the health and safety of the public (“Safety Issue 1”); and, (2) whether, taking into consideration the site criteria contained in 10 C.F.R. Part 100, a reactor, or reactors, having characteristics that fall within the parameters for the site, can be constructed and operated without undue risk to the health and safety of the public (“Safety Issue 2”). Petitioners specifically invoke Safety Issue 2. See Proposed Contentions at 2-3. Safety Issue 2, refers to the “site criteria” of Part 100, and not any design issues. Petitioners, however, fail to link site criteria issues to the design issues they assert in the basis for Proposed Contention 2.1.

Looking to the basis of a proposed contention to define its scope, see *McGuire*, CLI-02-28, 56 NRC at 379, Petitioners assert, without support, that the application must address the design matters in 10 C.F.R. § 50.34(a)(1)(ii)(B)-(D). Specifically, Petitioners declare that:

[a]n ESP application must consider such “radiological consequence evaluation factors” as whether and to what extent “generally accepted engineering standards” are used to design the new plant, whether and to what extent the new reactor design incorporates “unique, unusual, or enhanced safety features having a significant bearing on the probability or consequences” of an accident[al] release of radiation, and plant design features that are “intended to mitigate the radiological consequences of accidents.”

Id. at 3 (footnote omitted). The “radiological consequence evaluation factors” to which § 52.17 refers, however, do not include the regulations that Petitioners cite, which by their terms relate to reactor design, and not site acceptability. Rather, as relevant to the basis of the proposed contention and as described above, § 52.17 requires consideration of whether the boundaries of

the exclusion area and the LPZ are determined so as to satisfy the dose criteria in § 50.34(a)(1)(ii)(D)(1) and (2).¹⁶ The regulations cited by Petitioners are simply irrelevant to this determination. The subject of the application is the adequacy of the site to accommodate a reactor with postulated parameters, and not the design of a specific reactor that might be located there. Since Proposed Contention 2.1 involves reactor design considerations, and not siting issues, it is outside the scope of this proceeding, and the Board should reject it. This conclusion is supported by the rulemaking history of § 52.17, which is set forth below.

As originally promulgated on April 18, 1989, § 52.17 required, *inter alia*, that an application for an ESP contain the information required by “the first three sentences of § 50.34(a)(1)[.]” Final Rule, Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors, 54 Fed. Reg. 15,372, 15,387 (Apr. 18, 1989) (“Part 52 Final Rule SOC [Statements of Consideration]”). The first three sentences of § 50.34(a)(1) then required, among other things, assessment of the then-existing site evaluation factors in Part 100. See 10 C.F.R. § 50.34(a)(1) (1989).¹⁷ In 1989, Part 100 required consideration of factors “relating both to the

¹⁶ As set forth above, § 52.17(a)(1) requires consideration of SSCs only to the extent needed to establish a release of radioactive material to the environment, which is used in evaluating the acceptability of the proposed exclusion area and the proposed LPZ, and, ultimately, the proposed ESP site.

¹⁷ The first three sentences of § 50.34(a)(1) then required an application to contain:

A description and safety assessment of the site on which the facility is to be located, with appropriate attention to features affecting facility design. Special attention should be directed to the site evaluation factors identified in Part 100 of this chapter. Such assessment shall contain an analysis and evaluation of the major structures, systems and components of the facility which bear significantly on the acceptability of the site under the site evaluation factors identified in Part 100 of this chapter, assuming that the facility will be operated at the ultimate power level which is contemplated by the applicant.

10 C.F.R. § 50.34(a)(1) (1989).

proposed reactor design and the characteristics peculiar to the site.” 10 C.F.R. § 100.10 (1989). The regulations then specifically required consideration of characteristics of reactor design and intended operation, including the factors identified by Petitioners. See 10 C.F.R. § 100.10(a)(1)-(4) (1989). Part 100 also then required determination of an exclusion area and an LPZ. See 10 C.F.R. § 100.11 (1989). In sum, as originally promulgated, § 52.17 did require that an application for an ESP contain the information identified by the Petitioners.¹⁸

In 1996, the Commission amended § 50.34(a), § 52.17, and Part 100 to incorporate the requirements currently reflected in those regulations. See Final Rule, Reactor Site Criteria Including Seismic and Earthquake Engineering Criteria for Nuclear Power Plants, 61 Fed. Reg. 65,157 (Dec. 11, 1996) (“Part 100 Final Rule SOC”).¹⁹ The 1996 Part 100 rule responded to the 1980 directive of Congress to decouple siting from design, and effected a partial decoupling of these matters. See *id.* at 65,157, 65,159. In the Part 100 Final Rule SOC, the Commission indicated that it was retaining source term and dose calculations to verify the adequacy of a site for a specific plant, but was relocating source term and dose calculations to Part 50 since “experience has shown that these calculations have tended to influence plant design aspects such as containment leak rate or filter performance rather than siting.” *Id.* at 65,159.

¹⁸ The Staff notes that the Commission indicated in the SOC for the Part 52 final rule that design certification would be the vehicle for early resolution of design issues, and an ESP would serve this role for resolving most site issues. See Part 52 Final Rule SOC, 54 Fed. Reg. at 15,374, 15,378. The SOC for the proposed rule introduced this concept in discussing the Commission’s expectations of how the ESP, design certification, and combined license processes might be used. That SOC stated that “it is possible to describe and evaluate plant designs on a generic basis, . . . and to propose and evaluate plant sites without plant design details.” Proposed Rule, Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors, 53 Fed. Reg. 32,060, 32,065 (Aug. 23, 1988)(emphasis added). The Part 52 final rule, as issued in 1989, did not appear to fully accomplish this goal.

¹⁹ The seismic and earthquake engineering criteria promulgated in this final rule are not relevant to the proposed contention.

With respect to the individual siting criteria, the Commission stated that it considered “an exclusion area to be an essential feature of a reactor site and is retaining this requirement, in Part 50, to verify that an applicant’s proposed exclusion area distance is adequate to assure that the radiological dose to an individual will be acceptably low in the event of a postulated accident.”

Id. Similarly, the Commission stated that it was “retaining the requirement that the dose consequences be evaluated at the outer boundary of the LPZ over the course of the postulated accident[.]”²⁰ *Id.* at 65,161. These are the “radiological consequence evaluation factors” to which § 52.17 refers. They simply do not include those provisions identified by Petitioners. Accordingly, the scope of this proceeding does not reach the criteria in § 50.34(a)(1)(ii)(B)-(D) identified by Petitioners, and the Applicant need not address them.²¹ Petitioners make no showing that the requirements they cite apply to an ESP application other than their bare assertion of applicability, and make no effort to relate these requirements to Safety Issue 2, as set forth in the Notice of

²⁰ When Part 52 was promulgated in 1989, Part 100 provided that the applicant was to assume a fission product release from the core into the containment to determine both the exclusion area and the LPZ. 10 C.F.R. § 100.11(a) (1989). A footnote to the regulation stated:

The fission product release assumed for these calculations should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events, that would result in potential hazards not exceeded by those from any accident considered credible. Such accidents have generally been assumed to result in substantial meltdown of the core with subsequent release of appreciable quantities of fission products.

10 C.F.R. § 100.11(a), n.1 (1989). This footnote was moved to § 50.34(a)(1)(ii)(D) in the Part 100 final rule. See Part 100 Final Rule SOC, 61 Fed. Reg. at 65,172.

²¹ The Part 100 final rule, as relevant to this proceeding, moved the requirements of former § 100.10 to amended § 50.34(a)(1)(ii)(A)-(D). See 10 C.F.R. § 100.10(a)(1)-(4) (1989); Part 100 Final Rule SOC, 61 Fed. Reg. at 65,163, 65,172. In addition, the Part 100 final rule moved the remainder of the “first three sentences of § 50.34(a)(1)” previously invoked by § 52.17 into § 52.17. See Part 100 Final SOC, 61 Fed. Reg. at 65,175. The changes to Parts 50, 52, and 100 in 1996 fully achieved the Commission’s goal of providing for evaluation of “plant sites without plant design details” in the consideration of ESP applications. See Part 52 Proposed Rule SOC, 53 Fed. Reg. at 32,065; n.18, *supra*.

Hearing. Therefore, Petitioners fail to satisfy the requirements of § 2.309(f)(1)(iii), and Proposed Contention 2.1 should be rejected as beyond the scope of the proceeding.²²

2. The basis asserted for Proposed Contention 2.1 lacks specificity.

Petitioners' basis for Proposed Contention 2.1 lacks the requisite specificity. Petitioners' proposed contention asserts that "the safety assessment does not adequately take into account the potential effects on radiological accident consequences of co-locating new reactors with advanced designs next to an older reactor." Proposed Contentions at 2. Further, Petitioners assert that "[t]he safety assessment should contain a comprehensive evaluation and analysis of the ways in which interaction of the old and new plants under accident conditions may exacerbate the consequences of a radiological accident." *Id.* As a basis for these assertions, Petitioners state that "new designs already certified by NRC and those currently under review by NRC are allegedly 'safer' and less likely to have an accident involving significant core damage. . . . Consequently, the new reactors are designed with fewer features to protect station workers from radiation released during accident conditions, including [LOCAs]. An accident at the existing reactor could, therefore, have significant adverse effects on the operation of the new reactor." *Id.* at 4-5.

Petitioners provide an example, involving control room design, in which the asserted lack of design features "may not adequately protect workers from postulated accidents at nearby reactors of different design." *Id.* at 5. Petitioners, however, do not provide any indication of how the site characteristics in the application (see Site Safety Analysis Report ("SSAR"), Chapter 2) might somehow be affected by the lack of such features, or how a reactor or reactors whose design parameters fall within the plant parameters envelope ("PPE") identified in SSAR § 1.3.2 or ESP site

²² Petitioners also rely on GDC 4 and 19, and 10 C.F.R. § 50.49 as requirements somehow applicable to an ESP proceeding. Petitioners make no attempt to show any relationship between these requirements and an ESP application, and, indeed, there is none. Neither § 52.17 nor § 50.34(a)(1) nor Part 100 mentions or refers to any of these design requirements in the context of an ESP application, and the Applicant need not make any showing with respect to them in this proceeding.

characteristics might be so affected. Moreover, even for this example, Petitioners describe the design of current plants in some detail (*id.* at 6), but give no description of the design features they deem lacking from the reactor or reactors that might be constructed at the site. Rather, Petitioners make the bare assertion that “[b]ecause new reactor designs are allegedly safer, the protection for control room operators is less.” *Id.* Not only do Petitioners fail to identify any asserted missing features, they also do not identify a source term at the existing reactors, or dispersion or transport characteristics between the existing and new reactors, and do not give any indication as to the dose the control room operators might receive. Accordingly, the proposed contention lacks the specificity required by 10 C.F.R. § 2.309(f)(1)(v).

As for Petitioners’ bare assertion that “[e]nvironmental qualification of electrical equipment provides another example of the potentially adverse interaction between old and new plant designs” (*id.* at 6), Petitioners’ basis again lacks specificity. Petitioners suggest that “accidents at nuclear plants of relatively new design are not expected to be as severe as accidents than [*sic*] for older plants” and, therefore, “electrical equipment in the new plants at the North Anna site may not be qualified to withstand levels of heat or radiation that may be generated by an accident at the existing plant.” *Id.* at 7. Petitioners assert that this should be of concern because of the “relatively close proximity of the new and existing plants.” *Id.* Petitioners, however, do not link their assertions regarding environmental qualification of electrical equipment to the PPE or site characteristics. Further, Petitioners fail to explain how heat and radiation generated in an existing reactor during an accident might somehow be transported to a new reactor that might be built on the proposed ESP site, and how such a new reactor might be affected. Moreover, Petitioners’ assertions in this regard are mere speculation, which does not provide an adequate basis for a contention. See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 180 (1998), citing *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 267 (1996).

Neither of the Petitioners' examples has a specific basis, as set forth above. Accordingly, the basis for Proposed Contention 2.1 does not provide a concise statement of the alleged facts which support the Petitioners' position on these issues, as required by 10 C.F.R. § 2.309(f)(1)(v), and Proposed Contention 2.1 should be rejected.²³

3. Petitioners do not identify any dispute with the Applicant other than out-of-scope design issues.

In support of Proposed Contention 2.1, Petitioners point to § 1.3.2 of the SSAR in Dominion's application, but do so only to identify three reactor designs that are listed in that section and that might be built on the proposed ESP site. Proposed Contentions at 4. That portion of the SSAR, however, identifies the designs on which the Applicant bases its PPE bounding values. See SSAR § 1.3.2. Petitioners do not identify any dispute with the PPE bounding values.²⁴ Further, Petitioners refer to the application only once more in a footnote (Proposed Contentions at 7, n.2), in the basis to Proposed Contention 2.1, but do not take issue with it.²⁵ Petitioners' complaint that the Applicant omitted information from the application is founded on bases clearly outside the

²³ The Staff notes that 10 C.F.R. § 52.17(a)(1)(vii) requires that an ESP application describe "[t]he location and description of any nearby industrial . . . facilities," and the Staff believes that the existing North Anna units should be treated as such industrial facilities. Further, 10 C.F.R. § 100.21(e) requires that "[p]otential hazards associated with nearby . . . industrial . . . facilities must be evaluated and site parameters established such that potential hazards from such . . . facilities will pose no undue risk to the type of facility proposed to be located at the site." Although these matters might appear related to Proposed Contention 2.1, the Staff's consideration of them will be limited to site suitability issues, and will not extend to the reactor design issues Petitioners seek to litigate. The Petitioners did not include any matter related to the requirements of § 52.17(a)(1)(vii) or § 100.21(e) in Proposed Contention 2.1, and that proposed contention is limited to its terms. See *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 & 2), ALAB-947, 33 NRC 299, 371-72 n.310 (1991).

²⁴ To the extent the Petitioners seek to raise any issue with a specific design identified in SSAR § 1.3.2, the appropriate forum for doing so is (or was) the design certification rule making proceeding on that design, or, if the design is not certified, in a COL proceeding in which an applicant seeks to construct and operate such a design. See 10 C.F.R. §§ 52.51, 52.54 and 52.63 (for design certification); 10 C.F.R. §§ 52.85, 52.93, and 52.97 (for COLs).

²⁵ In the footnote, Petitioners refer to the SSAR as indicating that "the proposed plant site border is within 570 feet of the Unit 1 containment building."

scope of this proceeding, as discussed above; Petitioners do not assert any error in the application in Proposed Contention 2.1. Therefore, Petitioners fail to include “references to specific portions of the application . . . that the petitioner disputes,” as required by 10 C.F.R. § 2.309(f)(1)(v).²⁶ Accordingly, the Petitioners fail to raise a genuine dispute with the Applicant on a material issue of law or fact, as required by § 2.309(f)(1)(vi), and the Board should reject Proposed Contention 2.1.

B. PROPOSED CONTENTION 2.2: Failure to Evaluate Site Suitability for Below-Grade Placement of Reactor Containment

The Site Safety Analysis Report for the North Anna ESP is inadequate because it does not evaluate the suitability of the site to locate the reactor containment below grade-level. Below-grade construction is advisable and appropriate, if not necessary, in order to maintain an adequate level of security in the post-9/11 threat environment.

Proposed Contentions at 7.

The basis for the proposed contention is offered in three parts: a) legal requirements,²⁷ b) rationale for requiring below-grade construction of containments, and c) viability of below-grade construction.

Staff Response to Proposed Contention 2.2:

The Staff opposes the admission of Proposed Contention 2.2. As discussed below, none of the bases on which Petitioner relies provides the support required for admissibility of a contention in this proceeding. See 10 C.F.R. § 2.309(f)(1).

²⁶ The Staff construes Petitioners’ statement that the “safety assessment does not contain an adequate analysis and evaluation” in Proposed Contention 2.1 to mean that the assertedly necessary analysis and evaluation was omitted. To the extent Petitioners intend to identify any errors in the application in this regard, references to the claimed errors in the application are entirely missing from the basis for the proposed contention.

²⁷ Basis a is not discussed herein, as it provides background information and sets forth no legal or factual argument.

A. Rationale for below-grade construction

Petitioners state that the Applicant should be required to evaluate the North Anna site for below-grade construction because, in their opinion, current nuclear plants are vulnerable to terrorist attacks and sabotage. Proposed Contentions at 8. However, there is no such statutory or regulatory requirement. A contention that simply states the petitioner's views about what regulatory policy should be does not present a litigable issue. *Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 & 3)*, ALAB-216, 8 AEC 13, 20-21 n.33 (1974); 10 C.F.R. § 2.335(a). Accordingly, this basis cannot support the proposed contention.

To be admissible, a proposed contention 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). Petitioners have not identified, in basis B, a regulatory requirement which would require an ESP applicant to address below-grade construction. Thus, contrary to Petitioners' assertion that the application is inadequate for failure to evaluate the suitability of the site for below-grade construction, the omission of such information in the application is not an inadequacy where no such information is required. Accordingly, Proposed Contention 2.2 fails to state an issue material to the findings the NRC must make in this proceeding and is, thus, inadmissible. 10 C.F.R. § 2.309(f)(1)(iv).

Proposed Contention 2.2 also fails to show that a genuine dispute exists on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi). The proposed contention neglects the fact that the PPE used in Dominion's application encompasses reactors with below-grade containments. The site safety analysis report, submitted as a part of the application, offers a PPE based on seven advanced reactors as a surrogate for actual facility information. See SSAR § 1.2, "General Site Description"; and § 1.3, "Plant Parameters Envelope." It is that surrogate for which the applicant seeks an Early Site Permit conclusion of site suitability. *Id.* Proposed Contention 2.2 fails to directly controvert Dominion's application in that it neglects the fact that a reactor containment

could be built below grade within the application's PPE. The foundation embedment for the PPE, *i.e.*, the depth from finished grade to the bottom of the basemat for the most deeply embedded power block structure, is 140 feet. See SSAR Table 1.3-1. As stated in Dominion's application, the PPE values are generally based on certified design information and the best available information for as yet uncertified designs. A set of plant parameter values is developed considering the values provided by various reactor vendors and by applying appropriate conservatism where required to characterize the surrogate facility. As applicable, the most limiting (maximum or minimum) bounding value is selected. The complete set of plant parameter values describes, or envelopes, the site-facility interface. This effort is intended to provide a comprehensive list of plant parameters to accurately characterize a plant at a site, and to support development of an ESP application, including the SSAR and Environmental Report. See SSAR at 2-1-9. Two of the designs referenced in the Dominion application as contributing to the PPE, the GT-MHR and the PBMR, in fact, employ below-grade containment designs. Thus, the PPE encompasses a below-grade containment design and bounds reactors with structures as deep as 140 feet. Since the Applicant has included reactors with below-grade containment in its application, even though not required by regulation to do so, Petitioner's proposed contention that the Applicant has failed to provide such information does not raise a genuine dispute and is inadmissible on that basis. 10 C.F.R. § 2.309(f)(1)(vi).

Moreover, the statement of the contention itself constitutes an attack on the Commission's regulations in that it asserts that "below grade construction is advisable and appropriate, if not necessary, in order to maintain an adequate level of security. . ." Proposed Contentions at 7. In effect, the contention proposes that no reactor containment may be safely built on the North Anna site unless it is below grade. However, 10 C.F.R. Part 52, Appendix A reflects that the Commission has, through rulemaking, approved the design of the ABWR reactor. (This is one of the designs identified in the ESP application.) The design of the ABWR does not require below-grade

construction of the reactor containment, contrary to the assertion in the proposed contention. If the contention were admitted, it would present to the Board for determination the question of whether below-grade construction should be required. Since the Commission has approved three advanced reactor designs that do not require below-grade construction, see 10 C.F.R. Part 52, Appendices A, B and C, the proposed contention amounts to an attack on an existing regulation and may not be pursued in an adjudicatory proceeding. 10 C.F.R. § 2.335(a).

Petitioners also cite information from NUREGs and other documents in support of their proposed contention regarding the vulnerability of nuclear plants to terrorist attacks and sabotage. Proposed Contentions at 8-10. To the extent that Petitioners seek to raise security issues, *i.e.*, issues regarding the defense of any facility that might occupy the site, their Proposed Contention 2.2 is inadmissible. Although they purport to rely on 10 C.F.R. § 100.21(f), which provides: “[s]ite characteristics must be such that adequate security plans and measures can be developed,” as a basis for the contention, the Petitioners have not provided any factual information or legal argument to demonstrate the existence of a genuine dispute with regard to whether site characteristics preclude development of adequate security plans and measures. 10 C.F.R. § 2.309(f)(1)(vi). Accordingly, this basis does not support the position raised in Proposed Contention 2.2 and must be rejected.

Also, as a part of their rationale for requiring below-grade construction, Petitioners state that the new generation of reactors does not have as robust a containment as the current generation. However, the factual basis offered for this statement does not support the statement but rather contradicts it. Three current reactors are mentioned as having containments that are constructed of reinforced concrete 2.5 feet thick, while the AP600, a “new generation” reactor, is said to have a reinforced concrete containment wall 3 feet thick.²⁸ Because the Petitioners’ own factual

²⁸ The text of Petitioners’ Contentions references the AP600 as the advanced reactor on
(continued...)

assertions reflect that the “new generation” reactors will have thicker containment walls than existing reactors, Petitioners’ information fails to support the position that Petitioners urge: that the current generation of reactors is more robust than the advanced reactors that might be built at the applicant’s site. Thus, the Petitioners have failed to provide sufficient information to show a genuine dispute on a factual issue. 10 C.F.R. § 2.309(f)(1)(vi).

B. Validity of below-grade construction

The third part of the basis for Contention 2.2 asserts that below-grade construction of nuclear reactor containments is a viable design security measure. Proposed Contentions at 11. The only support for the claim that below-grade construction is “viable” is a letter from Edward Teller to the Joint Committee on Atomic Energy written in 1953. Dr. Teller’s concern in the passage cited is not security from terrorist attacks but “the danger that a reactor might malfunction and release its radioactive poison.” In response to the concern regarding such releases, he states that “underground location or particularly thoughtfully constructed safety devices *might be considered.*” Letter from Dr. Edward Teller to the Honorable Sterling Cole, Chairman on the Joint Committee of Atomic Energy, United States Congress (July 23, 1953)(Petitioners’ Exhibit 2.2-6); see Proposed Contentions at 11 (emphasis added). This basis does not support the proposed contention. “A document put forth by an intervenor as supporting a basis for a contention is subject to scrutiny both for what it does and does not show.” *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). Here, while the contention is directed at a security concern, the document addresses operational safety—not security. Therefore, the document fails to provide the requisite support to allow a conclusion that a genuine dispute on a material issue exists. 10 C.F.R. § 2.309(f)(1)(vi).

²⁸ (...continued)

which it relies for the comparison with current reactors. However, the Declaration of Paul V. Gunter references the AP1000 reactor.

For the reasons discussed, proposed Contention 2.2 is not an admissible contention and should be rejected.

C. PROPOSED CONTENTION 3.1: Inadequate Discussion of Severe Accident Impacts

The ER's discussion of severe accident[s] is inadequate, because it relies on the findings and conclusions of NUREG-1437, Vol. 1, the Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants (1996) ("NUREG-1437"), without providing specific design information that would justify the applicability of the NUREG.

Proposed Contentions at 12.

As a basis for the proposed contention, Petitioners assert that the ER is deficient because it incorporates the findings and conclusions of the "Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants," NUREG-1437 (1996)("NUREG-1437"), which contains a generic evaluation of the impacts of severe accidents based on plant-specific data (see NUREG-1437, § 5.3.3), without justifying its applicability. Proposed Contentions at 12. In explaining this argument, Petitioners refer to informal Staff guidance in two letters from James E. Lyons, NRC, to Dr. Ronald Simard, Nuclear Energy Institute ("NEI"), dated April 1, 2003, and June 25, 2003 (Petitioners' Exhibit 3.1-2 and Exhibit 3.1-3, respectively)("Staff letters"). See Proposed Contentions at 13-14. The Staff letters set forth the Staff's views on how an applicant for an ESP should treat in an ER previous generic and plant-specific environmental impact statements ("EISs"), such as NUREG-1437 or NUREG-0974, "Limerick 1 and 2 Operating License," assessing the impacts of severe accidents. See Petitioners' Exhibit 3.1-2 at 2; Petitioners' Exhibit 3.1-3 at 2. Petitioners complain that the application does not follow the guidance in the Staff letters on how an applicant should treat the evaluation of severe accidents in the context of a request for an ESP. See Proposed Contentions at 12-14. In addition, Petitioners protest that the application "fails to justify the use of NUREG-1437" at all. *Id.* at 14. For these reasons, Petitioners conclude that "SERI's [*sic*, Dominion's] severe accident analysis is fatally deficient." *Id.* at 15.

Staff Response to Proposed Contention 3.1:

The Staff opposes admission of the proposed contention because, as explained below, (1) the guidance in the Staff letters is not binding, and merely describes one method for complying with NRC requirements, and (2) the basis for the proposed contention is flawed, in that Petitioners fail to identify a genuine dispute with the information the Applicant does provide in the ER explaining why it relies on NUREG-1437 in its severe accident analysis.

1. Failure to follow NRC guidance does not equate to failure to meet NRC requirements.

Petitioners' complaint that the Applicant has failed to justify the applicability of the severe accident analysis in NUREG-1437 to its application because it assertedly did not follow the guidance in the Staff letters on how to do so flies in the face of settled NRC case law as follows: NRC guidance documents are not legally binding regulations. See *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-22, 54 NRC 255, 264 (2001) ("PFS"). A guidance document is advisory in nature, and does not itself impose legal requirements on either the Commission or an applicant. See *Curators of the University of Missouri* (TRUMP-S Project), CLI-95-8, 41 NRC 386, 397 (1995). A licensee is free either to rely on NRC guidance or to "take alternative approaches to meet legal requirements (as long as those approaches have the approval of the Commission or NRC Staff)." *Id.*, 41 NRC at 397. Accordingly, the Applicant's asserted failure to follow the guidance in the Staff letters with respect to the applicability of the severe accident analysis in NUREG-1437 to the ESP application does not establish that the Applicant has failed to demonstrate such applicability of NUREG-1437. Therefore, Petitioners have not demonstrated that a genuine dispute exists with the Applicant on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(vi).

2. The basis for the proposed contention lacks specificity, since it does not dispute specific information set forth in the application that is material to the proposed contention.

As set forth above, the Petitioner must “read the pertinent portions of the license application, . . . [and] state the applicant’s position and the petitioner’s opposing view.” *Millstone*, CLI-01-24, 54 NRC at 358. In an attempt to address this requirement, the Petitioners cite ER Section 7.2.2 as providing “only broad generalizations in support of the applicability of NUREG-1437, related to the characteristics of the site, whether regulatory controls can be assumed to work, and whether plant lifetime has an effect on risk.” Proposed Contentions at 14. Petitioners then outline the portions of the NRC guidance they cite and believe have not been met, but fail to identify any specific statement in the ER, much less dispute it. *Id.* at 14-15. The Applicant’s ER, however, does set forth a framework for applying the severe accident analysis in NUREG-1437 to the ESP application, as set forth below.

The Staff summarizes the rationale set forth in the ER as follows: first, the ER indicates that the method for measuring severe accident risk used in NUREG-1437 also applies in the context of an ESP. Specifically, the ER states that “[t]he GEIS [Generic Environmental Impact Statement, NUREG-1437] use of severe accident risk per reactor-year of operation as the principal metric for evaluating severe accident environmental impacts and the assumption that this risk remains constant over the life of the plant are equally applicable and appropriate in the license renewal context as in the ESP and COL contexts.” ER, § 7.2.1 at 3-7-31. The Applicant connects this measure to an ESP review through the “Policy Statement on Severe Reactor Accidents Regarding Future Designs and Existing Plants,” 50 Fed. Reg. 32,138 (Aug. 8, 1985) (“Severe Accident Policy Statement”), which stated the Commission’s expectation that new plants would achieve a higher standard of severe accident safety performance than prior designs. See ER, § 7.2.4 at 3-7-37. The Applicant refers to NRC staff findings on the Advanced Boiling Water Reactor, System 80+, and AP600 designs, which are design certifications codified as Appendices A, B, and C to

10 C.F.R. Part 52, as evidence that the Commission's expectations set forth in its Severe Accident Policy Statement have been borne out. *See id.*, at 3-7-38.

Second, the Applicant states in the ER that it recognizes that "the changing environment around the plant is not subject to regulatory controls" but states that this is addressed since the "site-specific environmental considerations (population and meteorology) are evaluated in the GEIS" as further described in the ER. *Id.*, § 7.2.1 at 3-7-32. As set forth in the ER, the Applicant, using future population estimates, then evaluates the atmospheric exposure pathway. *See id.*, § 7.2.2.1. Specifically, the Applicant calculates the exposure index ("EI") defined in NUREG-1437 for a new power plant at the proposed North Anna ESP site, and compares this EI with the EI's for the existing North Anna units and other current plants that are documented in NUREG-1437. *See id.*, § 7.2.2.1 at 3-7-33. Next, the Applicant evaluates the atmospheric fallout onto surface water and groundwater exposure pathways. *See id.*, §§ 7.2.2.2, 7.2.2.3. The Applicant reasons that the values of pertinent environmental parameters "have been identified in the GEIS for the [North Anna site]" and that "these parameters are applicable for new units at the ESP site, since [they] are generally constant for a given site, and no major changes have been identified that would impact [them]." *Id.* at 3-7-35 and 3-7-36. Finally, the Applicant summarizes the results of the evaluation of economic impacts of severe accidents in NUREG-1437, and argues that "this evaluation and conclusion are broadly applicable beyond the license renewal context" as are the other aspects of NUREG-1437. *Id.*, § 7.2.3 at 3-7-37.

Based on the foregoing rationale, the Applicant claimed that the severe accident risk of any new plant that might be built on site will be equivalent to or lower than that of the existing North Anna units, and bounded by the evaluation in NUREG-1437. Petitioners, however, do not specifically mention, much less dispute, any one of these statements in the ER. Accordingly, Petitioners fail to "state the applicant's position and the petitioner's opposing view," as required by *Millstone*, 54 NRC at 358. Petitioners, therefore, fail to provide sufficient information to show that

a genuine dispute exists with the Applicant on a material issue of law or fact with respect to Proposed Contention 3.1, and the Board should reject it.²⁹

D. PROPOSED CONTENTION 3.2. The Waste Confidence Decision

Proposed Contention 3.2 consists of two sub-contentions pertaining to the Waste Confidence Decision, discussed below.

1. PROPOSED CONTENTION 3.2.1: Failure to Evaluate Whether and in What Time Frame Spent Fuel Generated by Proposed Reactors Can Be Safely Disposed Of

The ER for the North Anna ESP is deficient because it fails to discuss the environmental implications of the lack of options for permanent disposal of the irradiated (*i.e.*, "spent") fuel that will be generated by the proposed reactors if they are built and operated. Nor has the NRC made an assessment on which Dominion can rely regarding the degree of assurance now available that radioactive waste generated by the proposed reactors "can be safely disposed of [and] when such disposal or off-site storage will be available." Final Waste Confidence Decision, 49 Fed. Reg. 34,658 (August 31, 1984), citing *State of Minnesota v. NRC*, 602 F.2d 412 (D.C. Cir. 1979). Accordingly, the ER fails to provide a sufficient discussion of the environmental impacts of the proposed new nuclear reactors.

Proposed Contentions at 15-16.

2. PROPOSED CONTENTION 3.2.2: Even if the Waste Confidence Decision Applies to This Proceeding, It Should be Reconsidered.

Even if the Waste Confidence Decision applies to this proceeding, it should be reconsidered, in light of significant and pertinent unexpected events that raise substantial doubt about its continuing validity, *i.e.*, the increased threat of terrorist attacks against U.S. facilities.

Proposed Contentions at 20.

²⁹ The Staff has summarized the ER only to show that Petitioners have not met their burden to demonstrate the admissibility of Proposed Contention 3.1. The Staff is evaluating the ER, and has made no determination on the validity or acceptability of Applicant's statements therein, including the Applicant's rationale summarized above in the Staff response to Proposed Contention 3.1.

Staff Response to Proposed Contentions 3.2.1 and 3.2.2

Petitioners' proposed contentions are inadmissible. Proposed Contention 3.2.1 constitutes an impermissible challenge to the Commission's regulations. See 10 C.F.R. § 2.335(a) (generally prohibiting attack on Commission regulations in adjudicatory proceedings).³⁰ This is because the contention is based on concerns associated with the ultimate disposal of spent fuel. These concerns have been generically addressed by the Commission through rulemaking. See 10 C.F.R. § 51.23 (a). Since the Commission has decided to generically address matters related to the ultimate disposal of spent fuel through rulemaking, Petitioners cannot, in an adjudicatory proceeding, attack the pertinent rule. See 10 C.F.R. § 2.335(a) (“[N]o rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding subject to this part.”).

As basis for Contention 3.2.1, the Petitioners make several assertions.³¹ First, the Petitioners argue that Dominion's ER is “fatally deficient” because it does not address ultimate disposal of spent fuel. Proposed Contentions at 16 (citing *Minnesota v. NRC*, 602 F.2d 412, 416-17 (D.C. Cir. 1979)).³² Additionally, Petitioners argue that the Commission's determinations

³⁰ The narrow circumstances under which regulations may be waived during an adjudication are addressed *infra*.

³¹ Notably, the Petitioners fail to address at all the Commission's rule resolving waste disposal matters generally, 10 C.F.R. § 51.23.

³² Although the Petitioners cite *Minnesota v. NRC* to support their argument that Dominion's ER is fatally flawed for failing to address ultimate disposal of spent reactor fuel, the reference is inapposite. In *Minnesota v. NRC*, the Court of Appeals for the D.C. Circuit remanded to the Commission the issue of ultimate disposal of spent fuel in a case involving two license amendments. *Minnesota*, 602 F.2d at 419. The D.C. Circuit, however, did not reverse the agency's determination that the amendments should be issued. *Id.* at 418. Rather, the court held that the petitioners were not entitled to an adjudicatory proceeding on issues related to the disposal of spent fuel and that the NRC “could properly consider the complex issue of nuclear waste disposal in a ‘generic’ proceeding such as a rulemaking, and then apply its determinations in subsequent adjudicatory proceedings.” *Id.* at 416. Since the NRC has engaged in the rulemaking envisioned by the D.C. Circuit in the *State of Minnesota* decision, the reference to the case by the
(continued...)

regarding ultimate disposal of spent fuel are “inapplicable because [they] concern[] plants that are currently operating, not new plants.” Proposed Contentions at 16. Further, the Petitioners argue that “[t]he Commission gives no indication that it has confidence that repository space can be found for spent fuel and other high-level radioactive waste from new reactors licensed after December of 1999.” *Id.* at 16-17. Lastly, the Petitioners assert that the Commission has not expressed confidence that additional repository space will be made available for the ultimate disposal of waste generated by a new generation of reactors. *See id.* at 17-20.

None of the bases advanced by the Petitioners regarding the ultimate disposal of spent fuel addresses the Commission’s controlling regulations regarding ultimate disposal of spent fuel and high-level waste. However, the Commission’s regulations clearly state that:

The Commission has made a generic determination that, if necessary, spent fuel generated in *any* reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation . . . of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of *any* reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

10 C.F.R. § 51.23(a) (emphasis added). As stated in the regulation, the Commission does not qualify its ultimate finding on the disposal of spent fuel. In fact, the Commission states that it has confidence that waste generated by “any” reactor will be safely disposed of. *See id.* The word “any” suggests no limitation of time or kind. Thus, the distinctions advanced by the Petitioners (*i.e.*, that the Commission’s consideration of ultimate disposal solely addressed the current fleet of reactors and not a new generation of reactors) are simply incorrect. The regulation does not reflect

³² (...continued)

Petitioners is misplaced. In fact, the case envisions that the NRC would apply 10 C.F.R. § 51.23(a) in future proceedings such as the instant adjudicatory proceeding.

that the Commission's findings regarding ultimate disposal of high-level waste and spent fuel from "any" reactor was intended to exclude new reactors. Therefore, in light of the plain language of the rule,³³ the Petitioners' argument that new reactors are not covered by the Commission's finding is without merit.

In the alternative, the Petitioners argue that, if the Board rules that the Commission's determination regarding waste confidence applies in this proceeding, the rule's validity should be reconsidered. See Proposed Contentions at 20. As a basis for their proposition that the current rule is no longer viable, the Petitioners refer to statements made by the Secretary of Energy regarding the Department of Energy's ("DOE") proposed Yucca Mountain repository.³⁴ *Id.* at 21-22.

³³ In addition to the Commission's plain language in the rule (*i.e.*, that it has confidence that "any" reactor's spent fuel will be disposed of safely), an examination of the Commission's statements made at the time it issued its most recent amendments to 10 C.F.R. § 51.23(a) provides further evidence that the Petitioners' assertions are inaccurate. Even though the Petitioners argue that the Commission's findings (and, by inference, the regulations) did not address new plants and failed to address additional repository space for spent fuel generated by new reactors, the Commission's "Review and Final Revision of Waste Confidence Decision" clearly reflects the contrary. See 55 Fed. Reg. 38,474, 38,501, 38,502, 38,503-04 (1990). For example, while performing its review of the Waste Confidence Decision, the Commission stated:

The availability of a second repository would permit spent fuel to be shipped offsite well within 30 years after expiration of [the current fleet of] reactors' OLS. The same would be true of the spent fuel discharged from *any new generation of reactor designs*.

Id. at 38,504 (emphasis added). In light of the Commission's statements cited above, it is evident that, contrary to Petitioners' blanket assertions, the Commission did consider the disposal of spent fuel from a new generation of operating reactors when it amended 10 C.F.R. § 51.23(a). Thus, the Petitioners have failed to provide legitimate bases for their allegations that Dominion's ER is deficient.

³⁴ Petitioners' reference to the Secretary of Energy's statements as a basis for their assertion that the Board should reconsider the current validity of the Commission's regulation is unavailing. See *Yankee Rowe*, LBP-96-2, 43 NRC at 90 ("A document put forth by an intervenor as the basis for a contention is subject to scrutiny both for what it does and does not show."). Although the Petitioners rely on statements made by the Secretary of Energy to support their assertion that the Commission's waste confidence findings should be revisited, an examination of those statements, however, reveals that the statements support the Commission's finding that the federal government will endeavor to provide for the ultimate disposal of spent fuel and high level
(continued...)

Additionally, the Petitioners assert that the terrorist attacks of 9/11 should cause the Board to revisit the validity of the Commission's rule and "whether nuclear power should be phased out as quickly as possible." *Id.* at 20-21.

The Petitioners' alternative contention likewise is inadmissible. As discussed above, under the Commission's regulations the Board is without authority to consider, as the Petitioners have proposed, the validity of a regulation promulgated by the Commission. See 10 C.F.R. § 2.335. This is the case whether a petitioner's attack on the regulations is based on concerns related to 9/11 or any other concerns.

The Commission has provided litigants in an adjudicatory proceeding subject to 10 C.F.R. Part 2 the opportunity to request that a Commission rule or regulation "be waived or an exception made for the particular proceeding." 10 C.F.R. § 2.335(b). The Commission has specified that "[t]he sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted." *Id.* The Commission requires that any request for such waiver or exception "be accompanied by an affidavit that identifies . . . the subject matter of the proceeding as to which application of the rule or regulation . . . would not serve the purposes for which the rule or regulation was adopted." *Id.* Additionally, "[t]he affidavit must state with particularity the special circumstances alleged to justify the waiver or exception requested." *Id.*

³⁴ (...continued)

waste at a centrally-located repository. *Compare* Waste Confidence Decision Review: Status, 64 Fed. Reg. 68,005, 68,007 (Dec. 6, 1999) (finding that no major shifts in national policy have occurred that would cause the Commission to revisit its waste confidence findings) *with Yucca Mountain Repository Development: Hearing on S.J. Res. 34 Before the Committee on Energy and Natural Resources United States Senate*, 107th Cong. 15 (2002) (prepared statement of Spencer Abraham, Secretary of Energy) (reaffirming, on homeland security grounds, that the federal government intends to proceed with the repository program).

In the instant case, the Petitioners have failed to establish that they meet any of the requirements imposed by the Commission on litigants wishing that a rule be waived or an exception be granted.³⁵ See Proposed Contentions 20-23. They have failed to establish that application of the Waste Confidence Rule in this particular proceeding would not serve the purpose for which the rule was adopted. To the contrary, 10 C.F.R. § 51.23 reflects, on its face, that the rule was designed to dispense with the need for NRC adjudications to address the impacts associated with the ultimate disposal of spent fuel and high-level waste.

For the reasons described above, the proposed contentions relating to waste confidence issues are inadmissible.

E. PROPOSED CONTENTION 3.3: Failure to Adequately Address Environmental Impacts of Proposed Reactors on Lake Anna.

In Proposed Contention 3.3, Petitioners argue that the Environmental Report (“ER”) fails to adequately address the environmental impacts of the proposed new reactors on Lake Anna and associated water bodies. As a general legal basis for its contention, Petitioners note that the ER must describe the environmental impacts of the proposed action, including cumulative impacts. Proposed Contentions at 24. The contention consists of four sub-contentions, each discussed in turn below.

1. PROPOSED CONTENTION 3.3.1: Inadequate Discussion of Impacts on Water Quantity in Lake Anna

The ER does not contain a complete or sufficient assessment of the adequacy of water supplies required for the operation of new units at the North Anna site. In particular, the ER does not sufficiently address the adequacy of water supplies in Lake Anna for the proposed new Units 3 and 4, and fails to identify the supplementary

³⁵ Particularly, the Petitioners have failed to show any special circumstances or provide an affidavit to support a request for the rule to be set aside in the instant proceeding. See 10 C.F.R. § 2.335(b) (requiring that a party moving to suspend applicability of a rule must plead certain special circumstances and support their argument with an affidavit).

external water source for Unit 4. The ER also fails to account for the impact of an additional unit or units on the river flow downstream.

Proposed Contentions at 26.

Staff Response to Proposed Contention 3.3.1

Petitioners complain, in basis b to this contention,³⁶ that the ER fails to identify the supplementary external water source for proposed Unit 4. Specifically, Petitioners argue that failure to identify the source of cooling water for Unit 4 “makes it impossible to adequately assess the impact of the proposed expansion.” Proposed Contentions at 29-30.

This portion of the proposed contention is inadmissible because it fails to demonstrate a genuine dispute with the Applicant on a material issue of law or fact. 10 C.F.R. § 2.309(f)(1)(vi). In a supplement to the application dated March 31, 2004, Dominion memorialized a February 18, 2004, telephone conference with the Staff, in which Dominion advised the Staff of its intent to limit the plant cooling options for potential Unit 4 to closed-cycle cooling employing dry towers.³⁷ A dry cooling system would employ motor-driven fans in dry towers to dissipate heat from the closed loop circulating water into the atmosphere. The use of dry cooling involves no evaporative water losses, requires no makeup water, and has no blowdown discharge. In short, a dry cooling system significantly reduces plant water usage. Because the Applicant has identified that there will be no need for an external water source for Unit 4, there is no genuine dispute with respect to this issue.

Petitioners also argue in basis b that the ER does not sufficiently address the adequacy of water supplies in Lake Anna for the proposed Units 3 and 4. Petitioners challenge the Applicant’s statement, in ER Section 5.2.1.5, that “the available water supply from the Lake Anna watershed

³⁶ Basis a is not discussed herein, as it provides background information, and sets forth no legal or factual argument.

³⁷ See Letter, E.G. Grecheck, Dominion, to U.S. Nuclear Regulatory Commission, “Revised Approach for Unit 4 Normal Plant Cooling,” dated March 31, 2004 (ADAMS accession number ML040980485). This submission was placed on the public NRC docket on April 15, 2004.

is adequate to meet plant water needs for the existing units plus Unit 3 alone, or the existing units plus Units 3 and 4, on a long-term average basis.” Specifically, Petitioners cite to a memorandum of the Virginia Department of Environmental Quality (“VDEQ”) prepared in connection with the ESP application, which concludes, “The site is probably not suitable for the construction of two new nuclear reactors of the size proposed due to a lack of sufficient water resources.” Proposed Contentions at 29.³⁸ As discussed above, with respect to potential Unit 4, there is no genuine dispute because Dominion has revised the application to limit the plant cooling options for that unit to closed-cycle dry cooling. Thus, Petitioners have failed to show that the VDEQ letter presents a valid concern.

With respect to the adequacy of water supplies in Lake Anna for proposed Unit 3 alone, Petitioners fail to provide a basis for their contention. The citation to the VDEQ Report considers the construction of *both* Units 3 and 4, but does not opine as to the adequacy of water supply for Unit 3 alone.³⁹ Without more, Petitioners’ concern regarding Unit 3 constitutes an unsupported assertion. To trigger an adjudicatory hearing, “a petitioner must do more than submit ‘bald or conclusory’ allegations of a dispute with the applicant.” *Dominion Nuclear Conn., Inc.* (Millstone Power Station, Unit 2), CLI-03-14, 58 NRC 207, 216 (2003). This portion of the contention is likewise inadmissible pursuant to 10 C.F.R. § 2.309(f)(1)(vi).

In basis c, Petitioners argue that the ER “fails to adequately account for the impact of an additional unit or units on the river flow downstream” from the North Anna Dam. This basis also includes allegations of particular omissions from the ER. Specifically, Petitioners contend that the

³⁸ See Memorandum from J.P. Hassell, VDEQ, to Ellie Irons, VDEQ, “North Anna Early Site Permit Coastal Zone Consistency Determination” at 6 (Petitioners’ Exhibit 3.3-6) (“VDEQ Report”).

³⁹ Indeed, it appears that VDEQ is less concerned about proposed Unit 3. While VDEQ concludes that the site “is probably not suitable for the construction of two new nuclear reactors,” it concluded that the site “may be suitable for the construction of one additional unit.” VDEQ Report at 6.

ER fails to detail the water budget analysis for the levels of Lake Anna if both Units 3 and 4 are built. Proposed Contentions at 31. Petitioners also argue that Dominion fails to calculate the frequency of drought flows in its flow analysis for a potential Unit 4. *Id.*

For the reasons stated above with respect to basis b, the portion of this contention addressing Unit 4 is inadmissible for its failure to demonstrate a genuine dispute of law or fact with the Applicant. Because a potential fourth unit would utilize dry cooling, river flow downstream of the dam will be unaffected.

With respect to Unit 3, this portion of the contention does not raise a genuine dispute with the Applicant on a material issue of fact or law. In ER Section 5.2.2.2, the Applicant addresses impacts on water use associated with the operation of proposed Unit 3, including impacts on river flow downstream from the dam. The Applicant concludes (ER at 3-15-4):

Given that the minimum releases [from the North Anna Dam] would comply with the current Lake Level Contingency Plan . . . , there would be no impact on downstream water users in terms of the minimum flow rate in the North Anna River. However, the duration of the minimum flow release rates would increase with the addition of Unit 3.

Petitioners (at 31) complain of increased drought flow frequency, but fail to recognize that the ER, in fact, addresses increased drought flow frequency. Petitioners do not specifically challenge the

analysis set forth in the ER.⁴⁰ Accordingly, Petitioners have not demonstrated a genuine dispute on this portion of the contention.⁴¹

2. PROPOSED CONTENTION 3.3.2: Impacts on Fish and Other Aquatic Life in Lake Anna and Downstream

The ER does not adequately address the adverse impact of operating one or two additional reactors on fish and other aquatic life health in Lake Anna and the North Anna River. In particular, the ER does not adequately consider the four primary impacts of the proposed reactors to the fish and other aquatic life at Lake Anna and downstream: increased water temperature, impingement, entrainment, and downstream flow rates. [Footnote omitted.] In addition, the ER does not address conflicts between Dominion's proposals for water use and the requirements of the Clean Water Act ("CWA") and its implementing regulations. Finally, the ER does not address the cumulative impacts of proposed Units 3 and 4 on the already-stressed aquatic systems in Lake Anna and the North Anna River.

Proposed Contentions at 32.

⁴⁰ The Applicant has provided additional information with respect to environmental impacts downstream from the dam. In a May 17, 2004 response to a Staff request for additional information, Dominion addressed, among other things, the impact of future development downstream from the dam. Dominion concluded that "[t]he operation of Unit 3 would have no effect on the instantaneous minimum releases from Lake Anna and would not affect the minimum flows available for any future downstream development." See Letter from E.S. Grecheck, Dominion, to NRC Document Control Desk, "Response to Request for Additional Information Regarding Environmental Portion of ESP Application," dated May 17, 2004 (ADAMS accession number ML041450037).

⁴¹ With respect to the water budget analysis issue, Dominion submitted to the NRC, on March 19, 2004, four calculations involving thermal modeling of the North Anna cooling lake system, hydrothermal simulation data processing, evaporation loss modeling, and a water budget analysis and lake level assessment. Dominion requested that the calculations be withheld from public disclosure pursuant to 10 C.F.R. § 2.390(b) (which provides the criteria for withholding from public disclosure information containing privileged or confidential commercial or financial information or trade secrets). See Letter from E.S. Grecheck, Dominion, to NRC Document Control Desk, "North Anna Early Site Permit Application, Lake Anna Modeling Calculations," dated March 19, 2004 (ADAMS accession number ML040910433).

NRC Staff Response to Proposed Contention 3.3.2

This contention incorporates four bases, each discussed in turn below.⁴²

In basis b of this contention, Petitioners argue that the ER “fails to fully acknowledge the impacts of existing operations or to adequately assess the increased impacts of additional reactors on the health of fisheries on Lake Anna and downstream in the North Anna River with the addition of one or two new units.” Proposed Contentions at 33. Petitioners allege that the ER “fails to acknowledge the significant stress” placed on fish in Lake Anna and the North Anna River. *Id.* at 33. Petitioners cite as a particular example the impacts on striped bass, a thermally-sensitive fish species in the lake. *Id.* at 34. Citing a letter from the Virginia Department of Game and Inland Fisheries (“VDGIF”) to VDEQ, Petitioners state that striped bass in Lake Anna “grow slowly, exhibit reduced fitness (condition), and have low maximum sizes as a result of the marginal habitat conditions [concerning water temperature] now present.” *Id.* at 34.⁴³ Petitioners allege that increasing the heat input into the lake will force the striped bass to move to the upper portion of the lake, at least part of the time, which could further affect fish growth if they are not able to feed normally. *Id.*

This portion of the contention is inadmissible for lack of specificity, pursuant to 10 C.F.R. § 2.309(f)(1)(vi). Petitioners contend that the Applicant fails to “fully acknowledge” impacts of existing operations and additional reactors on fisheries. Petitioners, however, do not address the discussion of thermal effects on important species contained in the ER at 3-5-53 -- 3-5-58. In this discussion, the Applicant considers the effect of increased heat load on aquatic organisms, including striped bass. With respect to striped bass in particular, as stated by Petitioners, the ER

⁴² Basis a is not discussed herein, as it sets forth no legal or factual argument.

⁴³ See Letter from G. Martel, VDGIF, to E. Irons, VDEQ, dated January 27, 2004 (Petitioners’ Exhibit 3.3-5).

states, “Thermal impacts on striped bass would be moderate and could warrant mitigation.”⁴⁴ ER at 3-5-58. Although Petitioners cite to VDGIF for the proposition that a small increase in water temperature “would have a dramatic effect,” the Petitioners do not challenge specific portions of the analysis supporting the Applicant’s conclusion with which they disagree.⁴⁵ While VDGIF has characterized the information in the ER in a way that differs from the applicant’s characterization of the same information (“dramatic” versus “moderate” impacts), Petitioners do not challenge the factual underpinnings contained in the ER or offer different or additional facts or expert opinion supporting their position. It is well established that a petitioner is obliged, pursuant to § 2.309(f)(1)(v), either to “include references to the specific portions of the application (including the applicant’s environmental report. . .) that the petitioner disputes *and the supporting reasons* for each dispute,” or, if a contention alleges that an application “fails to contain information on a relevant matter as required by law,” to identify “each failure *and the supporting reasons* for the petitioner’s belief.” See *Dominion Nuclear Conn., Inc.* (Millstone Power Station, Unit 2), LBP-03-12, 58 NRC 75, 81, *aff’d*, CLI-03-14, 58 NRC 207 (2003)(emphasis added). Here, the Petitioners have set forth insufficient basis for a dispute with the information provided in the ER. Accordingly, this portion of the contention is inadmissible.

Also in basis b, the Petitioners cite Section 316(a) of the Federal Water Pollution Control Act (“Clean Water Act” or “CWA”), 33 U.S.C. § 1326(a), for the proposition that additional thermal

⁴⁴ The ER also notes that, because the striped bass population in Lake Anna does not reproduce naturally, but rather is replenished through annual stocking, reproduction would not be affected by the addition of a new unit. See ER at 3-5-57.

⁴⁵ VDGIF states, in its comments, that the maximum daily surface temperature near the dam is expected to increase by 7.2°F near the dam, and that a horizontal and vertical increase in the thermal plume “would exacerbate a currently tenuous situation.” Petitioners’ Exh. 3.3-5 at 3. This temperature increase is taken from the ER and is associated with the analysis that assumes once-through cooling for both Units 3 and 4. With one new unit on once-through cooling using Lake Anna as the heat sink, the Applicant states (ER at 3-5-46) that the maximum daily surface temperature near the dam would increase by 3.6°. In any event, however, VDGIF does not specifically challenge the information set forth in the ER.

pollution into Lake Anna, caused by the operation of additional units, “could not be permitted” under state water quality standards. Proposed Contentions at 35. This portion of the contention raises an issue beyond the scope of this proceeding. The crux of Petitioners’ argument with respect to this basis is the Applicant’s compliance with CWA requirements, as regulated by the Commonwealth of Virginia (by virtue authority delegated by the Environmental Protection Agency). NRC regulations require a discussion of compliance status with other agencies’ environmental regulations, including those arising pursuant the CWA. See 10 C.F.R. § 51.45(d).⁴⁶ However, the NRC has no jurisdiction over the regulation of nonradiological discharges pursuant to the CWA. See 10 C.F.R. § 51.10(c).⁴⁷

⁴⁶ Section 51.45(d) provides:

The environmental report shall list all Federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements. The environmental report shall also include a discussion of the status of compliance with applicable environmental quality standards and requirements including, but not limited to, applicable zoning and land-use regulations, and thermal and other water pollution limitations or requirements which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection. The discussion of alternatives in the report shall include a discussion of whether the alternatives will comply with such applicable environmental quality standards and requirements.

⁴⁷ That section provides:

The regulations in this subpart also address the limitations imposed on NRC’s authority and responsibility under [NEPA], as amended, by the Federal Water Pollution Control Act Amendments of 1972 [citation omitted]. In accordance with section 511(c)(2) of the Federal Water Pollution Control Act [citation omitted], the NRC recognizes that responsibility for Federal regulation of nonradiological pollutant discharges² into receiving waters rests by statute with the Environmental Protection Agency.

²On June 1, 1976, the U.S. Supreme Court held that “pollutants’

(continued...)

Moreover, an NRC adjudicatory proceeding is not the proper forum for litigation and resolution of controversies about other agencies' permitting authority. *Hydro Resources, Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 122 n.3 (1998). See *Consumers Power Co. (Palisades Nuclear Plant)*, LBP-79-20, 10 NRC 108, 124 (1979) ("NRC . . . has no authority to determine whether the Licensee might have to obtain a new [CWA] discharge permit for the project or whether an existing permit encompasses the discharges to be generated by the project."); cf. *Tennessee Valley Auth. (Yellow Creek Nuclear Plant, Units 1 & 2)*, ALAB-515, 8 NRC 702 (1978). Accordingly, this portion of the contention is beyond the scope of this NRC proceeding and should be denied. See 10 C.F.R. § 2.309(f)(1)(iii).⁴⁸

In basis c, Petitioners argue that the ER "fails to adequately consider adverse impacts of increased impingement and entrainment of fish and other aquatic life in the [North Anna] water intake system with the addition of one or two new units." Proposed Contentions at 36. With respect to impingement, Petitioners argue that the ER fails to discuss the size and age distributions of the impinged fish, "which is important because these distributions affect the structure and viability of a population." *Id.* Further, Petitioners challenge the Applicant's conclusion that there will be no significant impacts due to impingement, on the basis of comments made by the VDGIF that "even with improved technology on the intake system, the fish would not be expected to be fully protected." Proposed Contentions at 37.

⁴⁷ (...continued)

subject to regulation under the FWPCA [Federal Water Pollution Control Act] do not include source, byproduct, and special nuclear materials, . . ." *Train v. Colorado PIRG*, 426 U.S. 1 at 25.

⁴⁸ In any event, there are no CWA permits associated with issuance of an ESP. Necessary permits would be requested in conjunction with any subsequent application for a construction permit or COL.

Petitioners' argument regarding "size and age distributions" fails for lack of specificity and basis. Although Petitioners contend that the ER should explicitly address size and age distributions, they do not point to any error in the Applicant's analysis of environmental impacts due to impingement that results from a purported failure to account for such distributions. Moreover, Petitioners do not identify a particular legal requirement that the Applicant has failed to meet with respect to its assessment of impacts from impingement. As stated above, Petitioners must either challenge particular portions of the application that they dispute, as well as their supporting reasons for the dispute, or, if they allege an omission, identify with particularity the legal requirement the Applicant fails to address, as well as the supporting reasons for their belief. 10 C.F.R. § 2.309(f)(1)(vi); *Millstone*, LBP-03-12, 58 NRC at 81. Petitioners here have done neither. Without more, the "size and age" assertion is inadmissible pursuant to Section 2.309(f)(1)(vi).

With respect to the VDGIF comments, the agency specifically stated, with respect to impingement and entrainment:

Existing intake criteria at North Anna Power Station (velocity of 0.7 feet per second [FPS] and screen mesh of 9.5 mm) substantially exceed our current recommendations of 0.25 FPS and 1 mm mesh. Even our current recommendations are not expected to provide full resource protection but utilize current state-of-the-art technology. The existing screen would be expected to only exclude compressed fish such as sunfish larger than 50 mm and elongated fish such as stripers and largemouth bass larger than 86 mm. Thus, it seems appropriate for the applicant to further investigate the addition of a submerged intake structure (curtain wall as detailed on [ER] page 3-5-38) to reduce fish impingement and entrainment and align intake criteria with current DGIF recommendations.⁴⁹

A document put forth by an intervenor as supporting the basis for a contention is subject to scrutiny, both for what it does and does not show. *Yankee Rowe*, LBP-96-2, 43 NRC at 90. The entire contents of the document relied on are subject to scrutiny by the Licensing Board. *Id.* The VDGIF comments relied on by Petitioners do not support the proposition that the environmental

⁴⁹ See Petitioners' Exh. 3.3-5 at 1-2.

impacts due to impingement will be greater than “small.” Rather, VDGIF merely suggests that the Applicant further investigate one of the options presented in ER Section 5.3.1.2.5, a submerged intake structure, to mitigate projected increases in water temperature in Lake Anna that could affect impingement and entrainment rates. The ER states that these potential mitigation measures would be considered in any associated application for a COL. See ER at 3.5-38. Accordingly, Petitioners have not articulated a basis which demonstrates a genuine dispute with the Applicant on a material issue of fact or law.⁵⁰ See 10 C.F.R. § 2.309(f)(1)(vi).

Also in basis c, Petitioners argue that doubling the number of entrained fish larvae would violate CWA Section 316(b). As in the case of Petitioners’ allegation regarding CWA Section 316(a), discussed above, this contention is beyond the scope of the NRC’s jurisdiction, and, accordingly, beyond the scope of this proceeding pursuant to 10 C.F.R. 2.309(f)(1)(iii). See *Hydro Resources*, CLI-98-16, 48 NRC at 122 n.3; *cf. Yellow Creek*, ALAB-515, 8 NRC 702.

In basis d, Petitioners contend that the ER “fails to adequately evaluate the adverse impact of the increased frequency of reduced stream flow on the health of fish and other aquatic species downstream of the Lake Anna Dam with the addition of one or two new units.” Proposed Contentions at 38-39.⁵¹ Specifically, Petitioners argue that the ER fails to address the impacts of increased frequency and duration of low flow on the North Anna River downstream of the Lake Anna Dam on spring spawning of aquatic organisms. *Id.* at 39. Petitioners rely on a November 7, 2001 letter from the Fish and Wildlife Service (“FWS”) to the NRC for the following statement,

⁵⁰ In addition, to the extent this basis implicates impingement and entrainment resulting from the construction and operation of a potential Unit 4, Petitioners fail to demonstrate a genuine dispute for the reasons detailed above with respect to proposed contention 3.3.1.

⁵¹ As in the case of the other bases to this contention, to the extent this basis raises issues with respect to Unit 4, it does not raise a genuine dispute on a material issue of fact or law.

“The reduction in river flow from Lake Anna during the Spring spawning migration may limit the range of anadromous and riverine species of fish in the river.”⁵²

The FWS comments were made in the context of the license renewal application for the existing North Anna Units 1 and 2; however, they do not stand for the proposition cited by Petitioners. Specifically, FWS stated:

The water flow in the North Anna River System changed drastically after the impoundment [the North Anna Dam] was created. The reduction in river flow from Lake Anna during the Spring spawning migration may limit the range of anadromous and riverine species of fish in the river.

Petitioners' Exh. 3.3-3 at 3. These comments relate to impacts associated with the construction and operation of the North Anna Dam. They do not pertain to any impacts from construction or operation of existing units 1 and 2, let alone the proposed construction or operation of Unit 3. As such, the FWS comments raise an issue beyond the scope of this proceeding, and do not provide a basis for the contention. See *PFS*, LBP-98-7, 47 NRC at 181; *Yankee Rowe*, LBP-96-2, 43 NRC at 90. This portion of basis d is inadmissible pursuant to 10 C.F.R. § 2.309(f)(1)(iii) and (vi).

Also in basis d, Petitioners allege that the ER “fails to address the question of aquatic species passage through North Anna Dam.” Proposed Contentions at 40. In support of this proposed contention, Petitioners again cite to the 2001 FWS comments made in connection with North Anna’s license renewal application, as well as a February 4, 2003 letter providing FWS comments on the final Supplemental Environmental Impact Statement prepared in connection with the license renewal application.⁵³ These comments do not supply the basis for an issue within the scope of this ESP proceeding. The FWS comments pertain to construction and operation of the

⁵² See Letter from J.P. Wolflin, FWS, to A. Kugler, NRC, “Virginia Electric & Power Company, License Nos. NPF-4 and NPF-7, North Anna Power Station, Lake Anna, Spotsylvania and Louisa Counties, Virginia,” dated November 7, 2001, at 3 (Petitioners’ Exhibit 3.3-3).

⁵³ See Letter from J.P. Wolflin, FWS, to A. Kugler, NRC, “NUREG-1437, Final Supplement 7 to the Generic Environmental Impact Statement Regarding North Anna Power Station (NAPS), Units 1 and 2), dated February 4, 2003 (Petitioners’ Exhibit 3.3-2).

North Anna Dam, and not the North Anna nuclear plant. Construction and operation of the Dam is not part of the proposed action (*i.e.*, issuance of an ESP). Accordingly, the comments therefore do not provide the basis necessary for Petitioners' argument that construction and operation of a proposed Unit 3 would have impacts on fish passage between Lake Anna and the North Anna River. Accordingly, this portion of the contention is not within the scope of this proceeding, and fails for lack of basis, pursuant to 10 C.F.R. § 2.309(f)(1)(iii) and (vi).

Finally, the Petitioners complain, without further discussion, that the ER does not address "cumulative impacts" on the "aquatic systems" of Lake Anna and the North Anna River. Proposed Contentions at 32. This portion of the proposed contention fails to raise a genuine dispute with respect to a material issue. With respect to cumulative effects on aquatic systems, the ER considers as "baseline" the current and past impacts of operation of North Anna Units 1 and 2, the impoundment of Lake Anna, and impacts on users downstream of the dam on the North Anna River. To perform the cumulative effects analysis, the Staff will consider the environmental impacts upon aquatic systems of the reasonably foreseeable future use of the site -- construction and operation of potential Units 3 and 4. The environmental impacts of those proposed units are set forth in the ER (as modified by Dominion's March 31, 2004 and May 17, 2004 submissions). Petitioners have not proffered any admissible challenges to the Applicant's conclusions with respect to the stated environmental impacts; accordingly, this proposed contention does not raise an admissible issue pursuant to 10 C.F.R. § 2.309(f)(1)(vi).

3. PROPOSED CONTENTION 3.3.3: Impacts on Public and Classified Uses of Lake Anna

The ER does not contain a complete or adequate assessment of the potential impacts of the proposed expansion of [North Anna] on water-based recreational uses of Lake Anna and on homeowners who live around the lake.

Proposed Contentions at 41.

Staff Response to Proposed Contention 3.3.3

This proposed contention incorporates three bases, discussed in turn below.⁵⁴

In basis b, Petitioners contend that the ER “fails to adequately evaluate the adverse impact of reduced lake levels on water-based recreational uses of Lake Anna and on homeowners who live around the lake.” Proposed Contentions at 41. Citing VDEQ comments,⁵⁵ Petitioners argue that “permitting use of the public waters so as to adversely impact recreational uses is in conflict with the stated goals and policy of the CWA [Section 101, 33 U.S.C. § 1251]” and “the associated state law [State Water Control Law §§ 62.1-44.2⁵⁶ and 62.1-44.15:5⁵⁷].” Petitioners contend that the ER should address this conflict. This basis does not support an admissible contention. As indicated earlier, compliance by the Applicant with CWA requirements falls beyond the scope of the NRC’s jurisdiction, and, accordingly, beyond the scope of this proceeding pursuant to 10 C.F.R. § 2.309(f)(1)(iii). See 10 C.F.R. § 51.10(c); *Hydro Resources*, CLI-98-16, 48 NRC at 122 n.3; *cf. Yellow Creek*, ALAB-515, 8 NRC 702.

In basis c, Petitioners contend that the ER fails to address the “conflict” between using Lake Anna to provide cooling water for the proposed units and providing public access to the lake as a navigable waterway. Proposed Contentions at 43. First, Petitioners argue that the portion of Lake Anna that functions as the Waste Heat Treatment Facility (“WHTF”), to which the general public

⁵⁴ Basis a is not addressed because it provides background information free of factual or legal argument.

⁵⁵ See Petitioners’ Exh. 3.3-4 at 11 (“Increased drawdowns proposed to serve the new units would adversely affect lake access, and local economic conditions in the process.”); Exh. 3.3-6 at 5 (“Another instream beneficial use that has not been thoroughly addressed by the ESP [*sic*] is how the additional consumptive use will affect the water-based recreational uses of Lake Anna.”).

⁵⁶ Section 62.1-44.2 states the short title and purpose of the State Water Control Law.

⁵⁷ Section 62.1-44.15:5 governs issuance of Virginia Water Protection Permits pursuant to CWA Section 401.

has no access,⁵⁸ has been improperly declared “private” in contravention of CWA Section 101, 33 U.S.C. § 1251, and the Virginia State Water Control Law, Section 62.1-11.⁵⁹ Proposed Contentions at 43.

This basis does not support an admissible contention. Lake Anna is a man-made reservoir that was created in 1971 by erecting a dam on the main stem of the North Anna River. Virginia Power owns the land, above and below the surface, around the lake, up to the 255-foot high-water mark above mean sea level. See ER at 3-2-6. Virginia Power has granted easements to landowners abutting Lake Anna (including the WHTF) who request permission to use Virginia Power property for the erection of docks, jetties, or other recreational structures for access to the lake. *Id.* at 3-2-7. These structures require a re-approval by Virginia Power with each property ownership transaction, and all permissions are expressly revocable. *Id.* Public boaters have access to the lake, and private boaters have access to the WHTF. This scheme has been, and is currently, in place for North Anna, Units 1 and 2, and exists wholly independent of the ESP application. Petitioners have not argued that this scheme governing use of the lake that will be changed at all as a result of construction of one or more additional units. Petitioners are fundamentally raising a challenge pertaining to conditions at the existing Units 1 and 2, which falls beyond the scope of the review of this ESP application. See 10 C.F.R. § 2.309(f)(1)(iii).

In any event, however, this issue does not raise a genuine dispute within the scope of the NRC’s jurisdiction. Once again, Petitioners raise a challenge concerning compliance with the

⁵⁸ Land owners adjacent to the WHTF have access to that water body.

⁵⁹ It is not clear that this section, which prohibits “waste or unreasonable use or unreasonable method of use” of state waters, would prohibit the private use of Lake Anna.

Clean Water Act, which is plainly beyond the scope of NRC review, as discussed above with respect to basis b.⁶⁰

For the reasons set forth above, proposed contention 3.3.3 is not admissible.

4. PROPOSED CONTENTION 3.4: Failure to Provide Adequate Consideration of Alternatives for Cooling Units 3 and 4

The ER fails to satisfy 10 C.F.R. § 51.45(b)(3) because it fails to consider alternatives to the use of Lake Anna water for cooling Units 3 and 4, as well as the no-action alternative.

Proposed Contentions at 44.

NRC Staff Response to Proposed Contention 3.4

Petitioners proffer three bases for this proposed contention. First, Petitioners argue that “alternative technologies to avoid in-stream treatment have not been adequately described in the ER.” Proposed Contentions at 44. Specifically, Petitioners state that the ER does not evaluate “any alternatives for Unit 3 other than a once-through cooling system.” *Id.* This assertion is simply incorrect and, therefore, fails to raise a genuine dispute.

In ER Section 9.4.1, the Applicant states that the “base case” for heat dissipation with respect to Unit 3 is a once-through system. ER at 3-9-12. The ER goes on to consider five alternative heat dissipation systems: (1) once-through system with helper tower; (2) natural draft cooling tower system; (3) mechanical draft cooling tower system; (4) spray ponds; and (5) air-

⁶⁰ Petitioners also state, “Under the CWA, all waters must be given classified uses and those uses are protected through permits and other programs. If [North Anna] is expanded, there will be severe impacts that interfere with the legitimate and protect [*sic*] uses of boating and fishing, beyond what has already been experienced. When a state is delegated the administration of the CWA and its permit programs, the state must have the equivalent provisions in its act and state standards. The ER fails to address this conflict with the CWA.” Proposed Contentions at 43-44. This argument fails for lack of specificity; the nature of the “conflict” that Petitioners would have the Applicant address is entirely unclear. To the extent that Petitioners allege yet another dispute with application of the Clean Water Act, however, this portion of the contention is beyond the scope of NRC jurisdiction. See discussion *supra* with respect to basis b of Proposed Contention 3.3.2.

cooled condensers. See ER at 3-9-12–3-9-13. These systems are evaluated and compared in ER Tables 9-4-1, 9.4-2, and 9.4-3.

It is well established that Petitioners have an “ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable the petitioner[s] to uncover any information that could serve as the foundation for a specific contention.” *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 & 2, Catawba Nuclear Station, Units 1 & 2), CLI-02-28, 56 NRC 373, 386 (2002), citing Final Rule, “Rules of Practice for Domestic Licensing Proceedings -- Procedural Changes in the Hearing Process,” 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989). Here, Petitioners fail to challenge, or even acknowledge, the information set forth in the ER with respect to heat dissipation alternatives. Because Petitioners’ allegation is not supported by facts sufficient to demonstrate a genuine dispute on the application, this portion of the contention is inadmissible pursuant to 10 C.F.R. § 2.309(f)(1)(vi).

Second, Petitioners contend that the no-action alternative “of no additional in-stream treatment and no expansion of [North Anna] must be considered.” Petitioners correctly note that ER Section 9.1 states that the no-action alternative is not addressed in the ESP application. Appendix A to 10 C.F.R. Part 51, “Format for Presentation of Material in Environmental Impact Statements” states: “The alternative of no action will be discussed.” 10 C.F.R. § 51.45(c) states, in pertinent part, “The environmental report should contain sufficient data to aid the Commission in its development of an independent analysis.” Accordingly, the no-action alternative should be addressed in the ER. This portion of the proposed contention is admissible. However, it should be noted that, in accordance with 10 C.F.R. §§ 52.18 and 52.21, the discussion of the no-action alternative need not address the need for power where, as here, the Applicant has not elected to include that information for consideration in the context of the ESP. Dominion states in ER Section 8.1 that the need for power will be addressed in a COL application.

Third, Petitioners argue that consideration of alternatives for using Lake Anna as a source of cooling water for Units 3 and 4 is required by the CWA.⁶¹ Proposed Contentions at 44-45. Without opining on the merits of Petitioners' argument, it is clear that this portion of the contention falls beyond the scope of this proceeding. Any CWA requirements for North Anna will be addressed by the Commonwealth of Virginia under authority delegated to the state by the Environmental Protection Agency. An NRC adjudicatory proceeding is not the proper forum for litigation and resolution of controversies about other agencies' permitting authority. *Hydro Resources*, CLI-98-16, 48 NRC at 122 n.3.⁶²

For the reasons discussed above, this contention is admissible only as to the discussion of the no-action alternative.

⁶¹ Petitioners specifically cite CWA Section 102(b)(1) and an EPA National Pollutant Discharge Elimination System regulation, 40 C.F.R. § 125.3(f), which states, in pertinent part: "Technology-based treatment requirements cannot be satisfied through the use of 'non-treatment' techniques such as flow augmentation and in-stream mechanical aerators."

⁶² In addition, relative to Unit 4, the Petitioners have not raised a genuine dispute on an issue of material fact or law, in light of the Applicant's decision to pursue dry cooling for that unit. See 10 C.F.R. § 2.309(f)(1)(vi).

CONCLUSION

Based on the foregoing, Petitioners' Proposed Contentions 2.1, 2.2, 3.1, 3.2.1, 3.2.2, 3.3.1, 3.3.2, 3.3.3, and the portions of Proposed Contention 3.4 relative to heat dissipation alternatives and CWA requirements do not meet the requirements of 10 C.F.R. § 2.309(f)(1) and should not be admitted for hearing. The Staff does not challenge the admissibility of Proposed Contention 3.4 with respect to the no-action alternative.

Respectfully submitted,

/RA/

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/RA/

Brooke D. Poole
Counsel for NRC Staff

Dated at Rockville, Maryland
this 28th day of May, 2004

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)	
)	
DOMINION NUCLEAR NORTH ANNA, LLC)	Docket No. 52-008-ESP
)	
(Early Site Permit for North Anna ESP Site))	ASLBP No. 04-822-02-ESP
)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the "NRC STAFF ANSWER TO CONTENTIONS OF BLUE RIDGE ENVIRONMENTAL DEFENSE LEAGUE, NUCLEAR INFORMATION AND RESOURCE SERVICE, AND PUBLIC CITIZEN REGARDING THE EARLY SITE PERMIT APPLICATION FOR THE NORTH ANNA NUCLEAR POWER PLANT SITE" as well as a "NOTICE OF APPEARANCE" for Brooke D. Poole, in the captioned proceeding have been served on the following through electronic mail and with copies by deposit in the NRC's internal mail system, or through electronic mail with copies by deposit in the U.S. Mail, first class, as indicated by an asterisk, this 28th day of May, 2004:

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