

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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OFFICE OF SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

In the Matter of)

DOMINION NUCLEAR NORTH ANNA, LLC)

(Early Site Permit for North Anna ESP Site))

Docket No. 52-008

ASLBP No. 04-822-02-ESP

DOMINION'S ANSWER TO PETITIONERS' CONTENTIONS

I. INTRODUCTION

Dominion Nuclear North Anna, LLC, ("Dominion") hereby answers the 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 (May 3, 2004) (hereinafter cited as "Pet. Contentions"). Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, and Public Citizen ("Petitioners") have offered no admissible contentions. Therefore, their contentions should be rejected, and their petition for leave to intervene in this proceeding should be denied.

II. BACKGROUND

This proceeding pertains to Dominion's application, dated September 25, 2003, for an early site permit ("ESP") for a location in central Virginia identified as the North Anna ESP site. The North Anna ESP site is a parcel of land on the North Anna Power Station ("NAPS") site in Louisa County, Virginia, approximately 40 miles north-northwest of Richmond. NAPS Units 1 and 2, and an independent spent fuel storage installation ("ISFSI") are already located on the NAPS site. The ESP site would be adjacent to, and generally west of the existing units.

Dominion's application seeks the NRC's approval of the North Anna ESP site as suitable for two new nuclear units. Each new unit could consist of multiple modules or reactors with a total capacity per unit not exceeding 4,300 MW thermal. Dominion's application does not seek any approval to build or operate these units. Such authorization would be sought separately, in a combined construction permit and operating license ("combined license" or "COL") proceeding, if Dominion decides in the future to proceed with the development of the new reactors. In addition, Dominion's application does not seek approval of the site as suitable for any specific reactor design, but instead seeks a determination that the site is suitable for units with characteristics bounded by a plant parameter envelope.¹ The plant parameter envelope and its derivation are described in section 1.3 of the Site Safety Analysis Report ("SSAR").

Dominion's application and this proceeding are governed by 10 C.F.R. Part 52, Subpart A, which sets out the requirements and procedures applicable to the issuance of an ESP separate from the filing of an application for a construction permit or combined license. Early site permitting, along with process for issuance of design certifications and combined licenses, was established with the promulgation of 10 C.F.R. Part 52 in 1989 "to achieve the early resolution of licensing issues, thereby enhancing the safety and reliability of nuclear power plants, and reducing the complexity and uncertainty of the license process." 53 Fed. Reg. 32,060, 32,061 (1988).

Part 52 is intended to improve the licensing of nuclear power plants by the use of three procedural innovations. . . . Subpart A of

¹ As explained in the application,

. . . Dominion has not selected a particular reactor design to be constructed at the ESP site. Thus, in order to provide sufficient design information to enable the NRC to determine that the proposed site is suitable for new units, a surrogate design has been provided as part of the application. The surrogate plant is in the form of a set of bounding plant parameters termed the plant parameters envelope....

North Anna Early Site Permit Application, Part 1, § 1.2.1.

Part 52 formalizes the early site permit process, allowing a prospective applicant to obtain a permit for one or more pre-approved sites on which future nuclear power stations can be located. Subpart B carries forward the standard design approval process . . . in much the same way, allowing a prospective applicant, vendor, or other interested party to obtain Commission approval of a design of a complete nuclear power plant or a major portion of such a plant. Subpart C establishes procedures for the issuance of a combined construction permit and conditional operating license. . . .

This structure reveals the overall purpose of Part 52: to improve reactor safety and to streamline the licensing process by encouraging the use of standard designs and by permitting early resolution of environmental and safety issues related to the reactor site and design.

Id. at 32,062.

The Commission's intent with this rulemaking is . . . to have a sensible and stable procedural framework in place for the consideration of future designs, and to make it possible to resolve safety and environmental issues before plants are built, rather than after.

54 Fed. Reg. 15,372, 15,373 (1989).

Under the 10 C.F.R. Part 52, Subpart A rules, an applicant for an ESP must submit a description and safety assessment of the site on which the facility is to be located. 10 C.F.R. § 52.17(a)(1). In the hearing on the ESP application, the presiding officer must "determine 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." 10 C.F.R. § 52.21.² Thus, with respect to the safety assessment, the focus of this proceeding is whether the site meets

² The Notice of Hearing in this proceeding identifies two safety issues for consideration in this proceeding: (1) whether issuance of the ESP will be inimical to the common defense and security or to the health and safety of the public; and (2) whether, taking into consideration the site criteria contained in 10 CFR part 100, a reactor, or reactors, having characteristics that fall within site parameters can be constructed and operated without undue risk to the health and safety of the public. 68 Fed. Reg. 67,489 (2003). The first issue is the finding that the NRC must make under the Atomic Energy Act to support issuance of any license. The second is the more specific finding reflecting the focus on site suitability in the ESP proceeding.

certain NRC siting criteria that would allow a plant with postulated characteristics to be constructed and operated safely.³

An ESP proceeding is not intended to resolve design issues or approve the construction or operation of new facilities. Rather, design parameters are postulated by the applicant, and the ESP proceeding then determines whether the site is suitable for one or more reactors falling within the bounds of those postulated characteristics.⁴ This approach is reflected in the NRR Review Standard RS-002, "Processing Applications for Early Site Permits" (May 3, 2004), which the NRC staff issued with the Commission's approval.⁵ Review standard RS-002 allows an applicant to use a plant parameter envelope ("PPE") as a surrogate for facility design information and explains:

A PPE is a set of values of plant design parameters that an ESP applicant expects will bound the design characteristics of a reactor or reactors that might be constructed at a given site, and it serves as a surrogate for actual reactor design information. Use of this approach allows an ESP applicant to defer the decision on what to build to the COL stage. . . .

Given that PPE values do not reflect a specific design and will not be reviewed by the NRC staff for correctness, the granting of an ESP by the NRC does not indicate NRC approval of the site for any specific plant or type of plant. . . .

The combination of site characteristics and PPE values will comprise the bases that will be the focus for comparison should a COL application be submitted for

³ At the COL stage, the applicant must "demonstrate that the design of the facility falls within the parameters specified in the early site permit." 10 C.F.R. § 52.79(a)(1).

⁴ The Part 52 regulations formalized an early site approval process that had been in partial use for a number of years before the regulations were adopted. 53 Fed. Reg. at 32,062. In establishing early site review procedures in the mid-1970's, the Commission explained:

[T]he conduct of an early review of one or more site suitability issues will require a "decoupling" of site suitability issues from issues concerning the detailed facility design. However, some information about the nature of the proposed facility will clearly be required for the conduct of the review. Accordingly, some facility design parameters (or reasonable range of facility design parameters) must be postulated for purposes of review.

41 Fed. Reg. 16,835 (1976).

⁵ See Memorandum from Annette L. Vietti-Cook to William D. Travers, "Staff Requirements - SECY-03-0227 - Review Standard RS-002, 'Processing Applications for Early Site Permits'" (Mar. 15, 2004).

the site. COL applicants who reference an ESP bear the risk that the design ultimately selected for the approved site might fall outside of the terms and conditions of the ESP.

RS-002 at 16.

Similarly, under the 10 C.F.R. Part 52, Subpart A rules, an ESP applicant must submit an environmental report "focus[ing] on the environmental effects of construction and operation of a reactor or reactors which have characteristics that fall within the postulated site parameters. . . ." 10 C.F.R. § 52.17(a)(2). "Although the specific type and design of the plant may not be known at the time of the ESP review, 10 CFR Part 52.17 requires the applicant to submit information (in an Environmental Report) that the staff can use to place an upper bound on the environmental effect of the plant's operation." SECY-91-041, "Early Site Permit Review Readiness," at 5. If the hearing is contested, the Licensing Board will consider "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.

III. STANDARDS FOR ADMISSIBILITY OF CONTENTIONS

A. Contentions Must Be Within the Scope of the Proceeding and May Not Challenge NRC's Rules

As a fundamental requirement, a contention is only admissible if it addresses matters within the scope of the proceeding and does not seek to attack the NRC's regulations governing the proceeding. This fundamental limitation is particularly important in an early site permit proceeding, because the Commission has limited the scope of that proceeding to site suitability issues, decoupled from the resolution of design and operational issues that would be addressed separately in design certification and combined license proceedings.

10 C.F.R. § 2.309(f)(iii)-(iv)⁶ requires a petitioner to demonstrate that the issue raised by each of its contentions is within the scope of the proceeding and material to the findings that the NRC must make. Licensing boards "are delegates of the Commission" and, as such, they may "exercise only those powers which the Commission has given [them]." Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 N.R.C. 167, 170 (1976); accord Portland General Electric Co. (Trojan Nuclear Plant), ALAB-534, 9 N.R.C. 287, 289-90 n.6 (1979). Accordingly, it is well established that a contention is not cognizable unless it is material to a matter that falls within the scope of the proceeding for which the licensing board has been delegated jurisdiction as set forth in the Commission's Notice of Opportunity for Hearing. Id.; see also Commonwealth Edison Co. (Zion Station, Units 1 and 2), ALAB-616, 12 N.R.C. 419, 426-27 (1980); Commonwealth Edison Co. (Carroll County Site), ALAB-601, 12 N.R.C. 18, 24 (1980).

It is also well established that a petitioner may not demand an adjudicatory hearing to attack generic NRC requirements or regulations. Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2 and 3), CLI-99-11, 49 N.R.C. 328, 334 (1999). "[A] licensing proceeding . . . is plainly not the proper forum for an attack on applicable statutory requirements or for challenges to the basic structure of the Commission's regulatory process." Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 A.E.C. 13, 20, aff'd in part on other grounds, CLI-74-32, 8 A.E.C. 217 (1974). Thus, a contention which collaterally attacks a

⁶ The Commission has decided that the new 10 C.F.R. Part 2 rules, as issued on January 14, 2004 (69 Fed. Reg. 2,182 (2004)), shall govern this proceeding. Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), CLI-04-08, 59 N.R.C. ___ (slip op. Mar. 2, 2004). Dominion's answer therefore cites to the new Part 2 rules, and in particular the standards for admitting contentions in new section 2.309. However, with respect to the admissibility of contentions, the new rules "incorporate the longstanding contention support requirements of former § 2.714." 69 Fed. Reg. 2,182, 2,221 (2004). Consequently, the case law interpreting the standards for admitting contentions under former section 2.714 remains applicable to the admissibility of contentions under new section 2.309.

Commission rule or regulation is not appropriate for litigation and must be rejected. 10 C.F.R. § 2.758; Potomac Electric Power Co. (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 A.E.C. 79, 89 (1974). A contention which "advocate[s] stricter requirements than those imposed by the regulations" is "an impermissible collateral attack on the Commission's rules" and must be rejected. Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-106, 16 N.R.C. 1649, 1656 (1982); see also Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), LBP-91-19, 33 N.R.C. 397, 410, aff'd in part and rev'd in part on other grounds, CLI-91-12, 34 N.R.C. 149 (1991). Likewise, a contention that seeks to litigate a generic determination established by Commission rulemaking is "barred as a matter of law." Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plants, Units 1 and 2), LBP-93-1, 37 N.R.C. 5, 30 (1993).

B. Contentions Must Be Specific and Supporting By a Basis Demonstrating a Genuine, Material Dispute

In addition to the requirement to address issues within the scope of the proceeding and material to the NRC's findings, a contention is admissible only if it provides:

- a "specific statement of the issue of law or fact to be raised or controverted," accompanied by
- (i) a "brief explanation of the basis for the contention;"
- (ii) a "concise statement of the alleged facts or expert opinion" supporting the contention together with references to "specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue;" and
- (iii) "[s]ufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact," which showing must include "references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting

reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief."

10 C.F.R. § 2.309(f)(1)(i), (ii), (v) and (vi). The failure of a contention to comply with any one of these requirements is grounds for dismissing the contention. Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 N.R.C. 149, 155-56 (1991).

These pleading standards governing the admissibility of contentions are the result of a 1989 amendment to 10 C.F.R. § 2.714, now § 2.309, which was intended "to raise the threshold for admission of contentions." 54 Fed. Reg. 33,168 (1989); see also Oconee, CLI-99-11, 49 N.R.C. at 334; Palo Verde, CLI-91-12, 34 N.R.C. at 155-56. The Commission has stated that the "contention rule is strict by design," having been "toughened . . . in 1989 because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'" Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 N.R.C. 349, 358 (2001) (citation omitted). The pleading standards are to be enforced rigorously. "If any one . . . is not met, a contention must be rejected." Palo Verde, CLI-91-12, 34 N.R.C. at 155. A licensing board is not to overlook a deficiency in a contention or assume the existence of missing information. Id.

The Commission has explained that this "strict contention rule" serves multiple purposes, which include putting other parties on notice of the specific grievances and assuring that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions. Oconee, CLI-99-11, 49 N.R.C. at 334. By raising the threshold for admission of contentions, the NRC intended to obviate lengthy hearing delays caused in the past by poorly defined or supported contentions. Id. As the Commission reiterated in incorporating these same standards into the new Part 2 rules, "the threshold standard

is necessary to ensure that hearing cover only genuine and pertinent issues of concern and that issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues.” 69 Fed. Reg. at 2,189-90.

Under these standards, a petitioner is obligated "to provide the [technical] analyses and expert opinion" or other information "showing why its bases support its contention." Georgia Institute of Technology (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 N.R.C. 281, 305, vacated in part and remanded on other grounds, CLI-95-10, 42 N.R.C. 1, aff'd in part, CLI-95-12, 42 N.R.C. 111 (1995). Where a petitioner has failed to do so, "the [Licensing] Board may not make factual inferences on [the] petitioner's behalf." Id., citing Palo Verde, CLI-91-12, 34 N.R.C. 149.

Further, admissible contentions "must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]." Millstone, CLI-01-24, 54 N.R.C. at 359-60. In particular, this explanation must demonstrate that the contention is "material" to the NRC's findings and that a genuine dispute on a material issue of law or fact exists. 10 C.F.R. § 2.309(f)(1)(iv), (vi) (emphasis added). The Commission has defined a "material" issue as meaning one where "resolution of the dispute would make a difference in the outcome of the licensing proceeding." 54 Fed. Reg. at 33,172 (emphasis added).

As observed by the Commission, this threshold requirement is consistent with judicial decisions, such as Conn. Bankers Ass'n v. Bd. of Governors, 627 F.2d 245, 251 (D.C. Cir. 1980), which held that:

[A] protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that . . . a dispute exists. The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an "inquiry in depth" is appropriate.

Id. (footnote omitted); see also Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 N.R.C. 39, 41 (1998) ("It is the responsibility of the Petitioner to provide the necessary information to satisfy the basis requirement for the admission of its contentions"). A contention, therefore, is not to be admitted "where an intervenor has no facts to support its position and where the intervenor contemplates using discovery or cross-examination as a fishing expedition which might produce relevant supporting facts." 54 Fed. Reg. at 33,171.⁷

Therefore, under the Rules of Practice, a statement "that simply alleges that some matter ought to be considered" does not provide a sufficient basis for an admissible contention. Sacramento Municipal Utility District (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 N.R.C. 200, 246 (1993), review declined, CLI-94-02, 39 N.R.C. 91 (1994). Similarly, a mere reference to documents does not provide an adequate basis for a contention. Baltimore Gas & Electric Co. (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-26, 48 N.R.C. 325, 348 (1998).

Rather, NRC's pleading standards require a petitioner to read the pertinent portions of the license application, including the Safety Analysis Report and the Environmental Report, state the applicant's position and the petitioner's opposing view, and explain why it has a disagreement with the applicant. 54 Fed. Reg. at 33,170; Millstone, CLI-01-24, 54 N.R.C. at 358. If the petitioner does not believe these materials address a relevant issue, the petitioner is "to explain

⁷ See also Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 N.R.C. 460, 468 (1982), vacated in part on other grounds, CLI-83-19, 17 N.R.C. 1041 (1983) ("[A]n intervention petitioner has an ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable [the petitioner] to uncover any information that could serve as the foundation for a specific contention. Stated otherwise, neither Section 189a of the Act nor Section 2.714 [now 2.309] of the Rules of Practice permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or staff.").

why the application is deficient." 54 Fed. Reg. at 33,170; Palo Verde, CLI-91-12, 34 N.R.C. at 156. A contention that does not directly controvert a position taken by the applicant in the license application is subject to dismissal. See Texas Utilities Electric Co. (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 N.R.C. 370, 384 (1992). An allegation that some aspect of a license application is "inadequate" or "unacceptable" does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect. Florida Power and Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 N.R.C. 509, 521 and n.12 (1990).

IV. INADMISSIBILITY OF PETITIONERS' CONTENTIONS

A. Contention 2.1

Contention 2.1 is inadmissible because it lacks any legal and factual basis, and seeks to raise design issues outside the scope of the ESP rule. In essence, Contention 2.1 asserts that Dominion's application "fails to comply with 10 C.F.R. § 52.17" because the safety assessment does not include a "comprehensive evaluation and analysis" of the "interaction" between "the old and new plants under accident conditions." Pet. Contentions at 2-3. As explained below, the NRC's rules do not require such an evaluation at the ESP stage. Further, Petitioners' basis for this contention is that the application "does not adequately consider the relationship between the design of the proposed new reactors and the design of the existing reactors." Id. at 4 (emphasis added). Petitioners refer to control room design and environmental qualification of electrical equipment as examples. Id. at 5-7. As discussed below, it is clear from this discussion that Petitioners seek to raise design issues that have no bearing on site suitability.

Contention 2.1 is predicated on Petitioners' misinterpretation of 10 C.F.R. § 52.17(a)(1), which requires an ESP application to provide a "safety assessment of the site" containing "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 10 C.F.R. § 50.34(a)(1).” Petitioners quote the design requirements in 10 C.F.R. § 50.34(a)(1) (see Pet. Contentions at 3 n.1), but simply ignore the only portion of section 50.34(a)(1) called out in ESP rule – “the radiological consequence evaluation factors identified 10 C.F.R. § 50.34(a)(1).” Indeed, Petitioners’ quotation of 10 C.F.R. § 50.34(a)(1) conveniently ends just before this portion of the rule.

The pertinent section of 10 C.F.R. § 50.34(a)(1) establishes the following radiological consequence evaluation factors:

- (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).
- (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)(ii)(1)(D)(1)-(2) (footnote omitted). These factors establish dose limits at the exclusion area boundary (“EAB”) and low population zone (“LPZ”). Thus, under 10 C.F.R. § 52.17(a), the application must address the major systems, structures and components that bear on the ability to meet the dose limits at the EAB and LPZ boundary. 10 C.F.R. § 52.17(a) does not require an ESP application to evaluate the sufficiency of the control room design to protect workers (see Pet. Contentions at 5-6) or the environmental conditions against which electrical equipment must be qualified (see id. at 6-7). In the same vein, the EAB and LPZ dose limits have nothing to do with the issues that Petitioners seek to raise under this contention – protecting

the control room operators and environmental qualification of electrical equipment. Therefore, Contention 2.1 is beyond the scope of the ESP rules.

The scope of the requirements established in 10 C.F.R. § 52.17(a), which reference the radiological consequences evaluation factors in 10 C.F.R. § 50.34(a)(1), is reflected in Chapter 15 of NRR Review Standard RS-002. Chapter 15 of that standard specifically refers to these provisions in describing the area of review, and states:

This review standard applies to postulated design basis accident (DBA) radiological consequences for the exclusion area boundary (EAB) and low population zone (LPZ). Radiological consequences related to control room personnel will be evaluated as part of the combined license (COL) review.

RS-002, Att. 2, at 15.0-1 (emphasis added).⁸

Nowhere in 10 C.F.R. §§ 52.17 or 50.34(a)(1), or in RS-002, is there any requirement to perform an assessment of “reactor interaction,” or to address control room habitability or environmental qualification of electrical equipment. RS-002 specifically identifies which portions of the Standard Review Plan, NUREG-0800 (“SRP”), are within the scope of an ESP application. RS-002, Att. 2, 1-4. RS-002 does not contain sections on control room habitability issues (SRP section 6.4) or equipment qualification issues (SRP section 3.11). *Id.* Thus, the NRR Review Standard issued with the Commission approval indicates that neither of Petitioners’ design issues are within the scope of an ESP application. Rather, the adequacy of the control room design and the qualification of electrical equipment are topics that would be addressed in design certification or COL proceedings.

Chapter 15 of the SSAR provides Dominion’s evaluation demonstrating compliance with the radiological consequences evaluation factors in 10 C.F.R. § 50.34(a)(1). Consistent with the

⁸ As previously noted, the issuance of NRR Review Standard RS-002 was approved by the Commissioners. See note 5 *supra*.

guidance in RS-002, Dominion's evaluation refers to the design certification for the AP-1000 and ABWR⁹ as providing details for the credited mitigation features (i.e., the features affecting the dose at the EAB and LPZ). SSAR at 2-15-6. Dominion's SSAR provides the dose consequences at both the EAB and LPZ boundary. SSAR Table 15.4.1. Petitioners do not discuss any of this information or identify any deficiency in it.

Moreover, Petitioners provide no basis to suggest that information on control room design or environmental qualification is necessary to determine whether the North Anna ESP site is suitable for additional reactors. Petitioners offer no basis demonstrating that a sufficiently protective control room could not be designed and constructed for any new units (and clearly, Petitioners' discussion of existing multi-unit sites¹⁰ recognizes that sufficiently protective control room designs already exist). Similarly, Petitioners offer no basis demonstrating that electrical equipment would not be properly qualified (or that a design basis accident has any realistic potential of affecting the qualification of equipment at new units¹¹). Petitioners provide no expert opinion or references to documents, as required by 10 C.F.R. § 2.309(f)(v), showing that the existing units would preclude safe operation of new units.¹² Instead, all they offer is

⁹ The AP-1000 and ABWR are viewed as bounding the other designs from which its PPE was formulated. ER, § 15.3.

¹⁰ See Pet. Contentions at 5.

¹¹ Petitioners appear to be assuming that the environmental and radiological conditions experienced by a new reactor at the ESP site would be similar to those experienced inside the older unit during a design basis accident. It is unclear, and Petitioners failed to explain, how such extreme internal conditions could exist external to the new facility located hundreds of yards away. Further, to the extent that Petitioners' examples require those same extreme conditions to occur inside the new reactor facility, it is even more unclear what transport mechanism could produce such a result.

¹² The Declaration of David A. Lochbaum, Nuclear Safety Engineer, In Support of Petitioners' Contentions, ("Lochbaum Declaration") cited by Petitioners as its sole support for this contention, is not cited a single time in the basis discussion. Moreover, the Lochbaum Declaration itself contains no specific factual declaration, only that unspecified "technical factual assertions" in unspecified contentions are true and correct.

It should also be noted that a safety assessment under 10 C.F.R. § 50.34 (a)(1) does not assume containment failure, but instead uses "the expected demonstrable containment leak rate" crediting any fission product cleanup systems intended to mitigate accident consequences. See 10 C.F.R. § 50.34 (a)(1)(ii)(D). Similarly, Review Standard RS-

speculation that “the control room design for new reactors may not adequately protect workers,” and that “electrical equipment in the new plants at the North Anna site may not be qualified.” Pet. Contentions at 5, 7 (emphasis added). Such speculation is insufficient to support admission of the contention. See Rancho Seco, LBP-93-23, 38 N.R.C. at 246 (simply alleging “that some matter ought to be considered” is not a sufficient basis for admission).

In the end, Petitioners’ contention boils down to an assumption that Dominion would not comply with appropriate design criteria in its new plants – such as 10 C.F.R. Part 50, App. A, general design criteria 19 (“GDC 19”) for control room design and 10 C.F.R. Part 50, App. A, general design criteria 4 (“GDC 4”) for equipment qualification.¹³ An unsupported assumption that a licensee will contravene NRC’s regulations is not an adequate basis for a contention. GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 N.R.C. 193, 207 (2000). Further, Petitioners’ facile assumption would disqualify every site with an existing reactor from being a potential site for a new plant, unless detailed design information had been developed. This would frustrate a fundamental objective of the rule – to allow for an early determination of siting issues before large sums are expended on reactor design and construction.

In sum, Petitioners have proffered a contention that is outside the scope of the ESP rule and is based on an assumption of future violations of Commission regulations, without any legal or factual support. For each of these reasons, the Board should not admit Contention 2.1.

002 makes it clear that the radiological consequence evaluation factors in 10 C.F.R. § 50.34(a)(1) apply to design basis accidents. RS-002, Att. 2, Ch. 15. Therefore, Petitioners’ reference to “severe accidents” (Pet. Contentions at 6) is misplaced.

¹³ Petitioners themselves identify existing design requirement regulations as applicable to the design issues that they raised. See Pet. Contentions at 5, 6 (GDC 19 for the control room; 10 C.F.R. § 50.49 and GDC 4 for equipment qualification). To the extent Petitioners are attempting to challenge the adequacy of the existing design requirements, such challenges to Commission rules are, of course, prohibited in this proceeding. See e.g., Oconee, CLI-99-11, 49 N.R.C. at 334; Peach Bottom, ALAB-216, 8 A.E.C. at 20.

B. Contention 2.2

Contention 2.2, which alleges that the SSAR “is inadequate because it does not evaluate the suitability of the site to locate the reactor containment below grade-level” (Pet. Contentions at 7), must be dismissed as an impermissible collateral attack on NRC regulations because it asserts requirements beyond those established by the regulations in two respects. See Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-12, 53 N.R.C. 459, 470 (2001). First, it asserts the need for design and security requirements beyond those specified in the regulations. Second, it seeks to place limits on the plant parameters an applicant can choose in an early site permit application beyond those specified in the regulations.

Contention 2.2 should also be dismissed for failure 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 contention neglects the fact that the plant parameters envelope used in Dominion’s application encompasses reactors with below-grade containments. Therefore, the contention fails to address and directly controvert the application. Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 N.R.C. 142, 181 (1998).

1. Impermissible Assertion of Security Requirements Beyond Those in the Regulations

Contention 2.2 is an impermissible collateral attack on NRC regulations because nowhere do those regulations require the location of reactor containments to be below grade to protect against terrorist attacks or sabotage. There is no requirement that the SSAR evaluate the suitability of the North Anna site for locating new reactor containments below-grade. The requirements for protection against radiological sabotage at nuclear power reactors are established in 10 C.F.R. § 73.55. That regulation requires a reactor’s physical protection system to be designed, as a general performance objective, to protect against the “design basis threat” of

radiological sabotage set forth in 10 C.F.R. § 73.1(a). 10 C.F.R. § 73.55(a). Section 73.55, sections (b) through (h), also establishes specific requirements for meeting the general performance objective of protecting against the design basis threat. Id. None of those requirements calls for reactor containments to be located below-grade.

The NRC's regulations define the design basis threat as: (i) "[a] determined violent external assault, attack by stealth, or deceptive actions, of several persons" that is assumed to be well trained, assisted by an insider, possessing of automatic weapons, hand carried equipment, explosives, and "a four-wheel drive land vehicle" to transport the attackers and their equipment; (ii) an internal threat from an insider; and (iii) "A four-wheel drive land vehicle bomb." 10 C.F.R. § 73.1(a)(1). Notably, the design basis threat does not include an attack employing a crashing aircraft. See also Riverkeeper, Inc. v. Collins, 359 F.3d 156, 160 (2d Cir. 2004) (citing Energys Nuclear Operations, Inc. (Indian Point, Units 1, 2, and 3), DD-02-6, 56 N.R.C. 296 (2002)). Thus, one cannot infer a requirement to protect against the impact of a crashing aircraft by locating the reactor containment below-grade. Furthermore, none of the specific physical protection requirements established to protect against the design basis threat calls for the containment to be located below-grade. See 10 C.F.R. §§ 73.55(b) through (h).

Since September 11, 2001, the Commission has also issued compensatory security orders to operating reactor licensees to modify the design basis threat and impose further specific security requirements to protect against terrorism. See Riverkeeper, 359 F.3d at 160-61, 168-69 (citing requirements and orders); Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 N.R.C. 340, 343-44, 356-57 (2002) (same). While the details of the orders are not publicly accessible, because they apply to existing reactors, they obviously do not require reactor containments to be located below-grade.

To the extent that the contention is read as an assertion that the Commission should do even more to protect against potential terrorist attacks than what section 73.55 or the interim compensatory security orders require, the contention should be rejected as a collateral attack on 10 C.F.R. § 50.13. That regulation states that:

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

10 C.F.R. § 50.13.¹⁴ The fact that the attacks might be conducted by individual terrorists rather than by a foreign government does not differentiate them from enemy attacks. In Consolidated Edison Co. of New York, Inc. (Indian Point Station, Unit No. 2), ALAB-202, 7 A.E.C. 825, 829-30 (1974), the Appeal Board held that an attack by “an armed band of trained saboteurs” would constitute an enemy attack under 10 C.F.R. § 50.13 regardless of the actual nature or allegiance of the attackers. Therefore, “an applicant should be entitled to rely on settled and traditional governmental assistance in handling [the] attack.” *Id.* at 830. See also Private Fuel Storage, LBP-01-37, 54 N.R.C. at 486 (“There seems little doubt that the terrorist attacks of September 11, 2001, constituted acts by an enemy or enemies of the United States.”). Thus, Petitioners are barred from asserting that the NRC should impose security-related design requirements, such as locating containments below-grade, to protect against terrorist attacks.

That Petitioners may not urge the NRC to impose additional security requirements on licensees, however, does not mean that nothing is being done to protect the public from potential

¹⁴ “Attacks and destructive acts” are those above and beyond the threats against which the reactor’s physical protection system must defend under the Commission’s specific security requirements in 10 C.F.R. Part 73. Commonwealth Edison Co. (Braidwood Nuclear Power Station, Units 1 and 2), LBP-85-27, 22 N.R.C. 126, 136-37 (1985); see Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-01-37, 54 N.R.C. 476, 486-87 (2001).

acts of terrorism. With respect to potential attacks involving the deliberate crash of an aircraft, similar to the attacks conducted on September 11, 2001, the NRC is relying on increased aviation security measures provided by other federal agencies to ensure that the public health and safety remain adequately protected. The NRC has explicitly recognized that other federal agencies have taken steps to improve aviation security and “minimize the threat of terrorists using airplanes to damage facilities critical to our nation’s infrastructure.” Riverkeeper, 359 F.3d at 169 (quoting Entergy Nuclear, DD-02-6, 56 N.R.C. at 309). “The Commission views that the efforts associated with protecting our nation from terrorist attacks by air should be directed toward enhancing security at airports and on airplanes.” Id. Thus, the Commission endorsed measures taken by Congress and the Federal Aviation Administration to strengthen aviation security; and it recognized that the U.S. intelligence community, federal law enforcement agencies, and the Department of Defense have taken steps to identify potential terrorists and prevent potential attacks before they occur. Id. (citing the temporary imposition of “no-fly” zones over nuclear plants). The NRC’s approach to security against airborne terrorism was upheld by the federal courts against a challenge that the NRC’s failure to do more amounted to an “abdication” of its statutory duty under the [Atomic Energy Act] to insure that the public health and safety is adequately protected.” Id. at 170. Therefore, the Dominion early site permit application need not evaluate the suitability of the North Anna site for locating new reactor containments below-grade.

2. Impermissible Assertion of Plant Parameter Limits Beyond Those in the Regulations

Contention 2.2 is also inadmissible as a collateral attack on NRC regulations because it seeks to limit the plant parameters in a manner that would usurp the applicant’s choice of designs. Contrary to the Petitioners’ contention that would limit containment characteristics to

below-grade designs, the ESP rules allow the applicant, not intervenors, to select the plant parameters (and hence the range of possible designs) on which site suitability will be determined. A petitioner may not force an applicant to consider a reactor design, or types of reactor designs, that the applicant did not include in the application or, conversely, preclude an applicant from considering reactor designs that are not otherwise barred by the regulations. Here, the plant parameters envelope that Dominion developed for the application to bound the potential reactor designs for which the site is being evaluated is not required to include reactor designs with below-grade containments. Thus, because the rules do not otherwise require or limit applicants to the consideration or use of designs with below-grade containments, the Petitioners' contention cannot do so.

The Commission's ESP regulations state that "the application should describe . . . (i) [t]he number, type, and thermal power level of the facilities for which the site may be used; [and] (iii) [t]he proposed general location of each facility on the site." 10 C.F.R. § 52.17(a)(1). The site 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, . . ." 10 C.F.R. § 52.17(a)(2). These provisions give the applicant the discretion to choose the bounds of the reactor designs for which the site will be evaluated. As described in the Review Standard for Processing Applications for Early Site Permits, "[a] [plant parameter envelope] is a set of values of plant design parameters that an ESP applicant expects will bound the design characteristics of a reactor or reactors that might be constructed at a given site, . . ." RS-002 at 16 (emphasis added).

In its application, Dominion uses a plant parameters envelope, consisting of a list of specific plant parameters, to define the plant-site interface. Application at 2-1-9. The plant

parameters envelope was developed based on data from seven selected reactor designs of two broader reactor types—light water-cooled reactors and helium-cooled reactors. Id.; see id. Table 1.3-1. The plant parameters envelope is intended to provide sufficient design information to support NRC evaluation of the early site permit application. Id. at 2-1-9. The envelope is not intended to be limited to the actual reactor designs used to develop it, but rather to provide a broad outline of a design concept that could potentially include other designs falling within the envelope. Id. At the time of reactor licensing, the proposed reactor will be reviewed to ensure that the design fits within the envelope. Id.

Pertinent to this contention, the height of the tallest power block structure at the site (excluding cooling towers) for the plant parameters envelope was chosen to be 234 feet above finished grade, id. at 2-1-14, which was derived from the AP-1000 pressurized water reactor, id. at 2-1-35. Thus, Dominion established the envelope to include the potential for building reactors with containments above-grade and is seeking an NRC determination that the site could accommodate such a reactor. This was Dominion's choice to make; contrary to what the contention implies, there is simply no requirement for the envelope to include or be limited to reactors with containments below-grade. Furthermore, whether the design of the AP-1000 or other reactors with above-grade containments meet NRC safety standards is a matter to be decided in the design certifications for those reactors, or in COL proceedings if an applicant proposed to construct such a reactor without a design certification. These design issues are beyond the scope of this ESP proceeding. Therefore, the contention should be dismissed.

3. Failure to Directly Controvert the Application

Finally, Contention 2.2 is also deficient for failing to directly controvert Dominion's application, in that it neglects the fact that one could build a reactor containment below grade but

still within the application's plant parameters envelope. The foundation embedment for the plant parameters envelope, i.e., the depth from finished grade to the bottom of the basemat for the most deeply embedded power block structure, is 140 feet, Application at 2-1-14, which was derived from the GT-MHR modular helium-cooled reactor, *id.* at 2-1-35. This reactor was specifically designed for below-grade installation. Thus, the PPE encompasses a below-grade containment design and bounds reactors with structures as deep as 140 feet. As also noted above, while the plant parameters envelope was developed from data taken from several reactor designs, it is not limited to a choice of one of those designs. *Id.* at 2-1-9. Rather, it is to provide a broad outline of a design concept that could potentially include other designs falling within the envelope. *Id.* Since there is no minimum height specified in the plant parameters envelope, the envelope would encompass reactors with containments located entirely below grade, so long as they were no deeper than 140 feet. Therefore, when the contention asserts that the SSAR "does not evaluate the suitability of the site to locate the reactor containment below grade-level" (Pet. Contentions at 7), it is simply wrong and thus should be dismissed as failing to address or controvert information in the application.

C. Contention 3.1

Contention 3.1 is inadmissible because it lacks any basis demonstrating the existence of a genuine dispute over any material issue, and mischaracterizes the contents of the Dominion's Environmental Report ("ER"). Contention 3.1 alleges that Dominion's¹⁵ "ER's discussion of severe accident [sic] is inadequate, because it relies on the findings and conclusions of the Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants (1996) ("NUREG-1437" or "GEIS") without providing specific design information that would justify

¹⁵ Petitioners mistakenly refer to "SERI" in several places, reflecting the fact that this contention was cut and pasted from the Grand Gulf contentions without particular care. *See* Pet. Contentions at 12, 15.

the applicability of the NUREG.” Pet. Contentions at 12 (emphasis added). Citing correspondence between NRC Staff and industry representatives,¹⁶ Petitioners assert that such justification is required because “the NRC Staff has set limits on the use of NUREG-1437 to support or substitute for the severe accident analysis required of an ESP application.” Id. However, reliance on existing studies of severe accident risk is not precluded by any regulation or guidance document. Dominion’s application contains a detailed justification for its reliance on the severe accident risk assessed in NUREG-1437. Petitioners make no showing that this assessment is wrong, or that it fails to bound plants with characteristics specified by the PPE, and Petitioners therefore fail to demonstrate any genuine, material dispute.

At the outset, there is no basis for Petitioners’ assertion in the contention that Dominion must provide “specific design information” to justify the applicability of its evaluation of severe accidents. 10 C.F.R. § 52.17(a)(2) requires an applicant’s environmental report to focus on the environmental effects of construction and operation of reactors “that have characteristics that fall within the postulated parameters.” Thus, the NRC’s rules do not require specific design information. Attachment 3 (Scope and Associated Review Criteria for Environmental Report) of NRC’s Review Standard RS-002, issued with the Commission’s approval, make this clear.

Site-specific parameters (such as meteorology, demography, and hydrology) should be provided in any ESP application. However, detailed design information pertaining to structures, systems and components called for in the [Environmental Standard Review Plan] need not be submitted by an applicant in an ESP application employing the PPE approach.

RS-002, Att. 3, at 2.

¹⁶ Letter from Dr. Ronald L. Simard, NEI, to James E. Lyons, NRC (Feb. 6, 2003); Letter from James E. Lyons, NRC, to Dr. Ronald L. Simard, NEI (Apr. 1, 2003); Letter from James E. Lyons, NRC, to Dr. Ronald L. Simard, NEI (Jun. 25, 2003).

Because Dominion is not seeking approval of the site for any specific design, it has looked to the results of existing studies to bound severe accident risk. Dominion provides an extensive justification for this approach in section 7.2 of its ER. As explained in the ER, Dominion utilized NUREG-1437 because “methodologies are developed therein to evaluate each of the dose pathways by which a severe accident may result in adverse environmental impacts and to estimate the off-site costs of severe accidents.” ER, § 7.2. Dominion examined this assessment and methodology and found it “broadly applicable.” Id.

The GEIS evaluations and conclusions are based on existing assessments of severe accident impacts presented in numerous Final Environmental Statements (FES) published after 1980 and for a representative set of U.S. plants and sites in NUREG-1150. . . .

Detailed evaluations of severe accident consequences such as early and latent fatalities and total dose are not available for all plants considered in the GEIS. Therefore, a predictor for these consequences is developed using correlations based upon the calculated results from the existing FES severe accident analyses. This predictor is then used to infer the future consequence level of all individual nuclear plants. Correlations are developed using two environmental parameters that are available for all plants. This correlation process is well described in NUREG-1437.

Id. Further, in section 7.2.4 of the ER, Dominion provided the basis for its conclusion that the severe accident risk estimated for all plants by this method would bound the risk for future plants – “that the designs certified in accordance with 10 CFR 52 are expected to exhibit a higher standard of severe accident safety performance than prior designs.”

Petitioners challenge the sufficiency of Dominion’s justification for using NUREG-1437, but fail to demonstrate that there is a genuine dispute over a material issue – one that might affect the outcome of the proceeding. In particular, Petitioners challenge Dominion’s justification because it does not contain a characterization “of the spectrum of credible releases from candidate future plant designs, in terms of representative source terms and their respective

frequencies.” Pet. Contentions at 14. Petitioners provide no information suggesting that future plant designs are expected to have source terms or release frequencies that exceed those postulated for the current generation of plants in NUREG-1437. They identify no references or expert opinion establishing any basis for such an expectation. Quite the opposite, Petitioners acknowledge that the reactor designs on which Dominion’s PPE is based “contain features that lessen the likelihood of an accident and . . . also the severity of an accident.” Pet. Contentions at 4. Petitioners also acknowledge that the source terms from these reactors are significantly less severe than for the existing reactors. Id. Consequently, assessing severe accident risk using specific design information for future plants would merely reduce the estimated risk. Such a reduction in the estimated severe accident risk would have no bearing on the suitability of the site, and therefore is immaterial to the findings that the NRC must make in this proceeding.

Petitioners also challenge the sufficiency of Dominion’s justification for the use of the NUREG-1437 methodology because it does not contain a characterization of the “release characteristics in conjunction with site-specific population and meteorology. . .” Id. at 14. Here, Petitioners simply mischaracterize and fail to address information in Dominion’s ER. The ER states that “[t]he site-specific significant factors of demography and meteorology are considered in the evaluation of the atmospheric exposure pathway for new units at the ESP site.” ER § 7.2.2.1, at 3-7-32. Dominion’s ER explains that NUREG-1437 calculated a site-specific Exposure Index for each site based on site-specific information on population distribution and wind.¹⁷ ER, § 7.2.1, at 3-7-31, and § 7.2.2.1. Dominion determined that “the site meteorology would not be significantly different for the ESP site than that considered in NUREG-1437 for the

¹⁷ Other site-specific parameters were indirectly considered in the prediction of future risks and were reflected in the uncertainty bounds generated by the regression of the FES risk values. ER, § 7.2.1, at 3-7-31. See also NUREG-1437, § 5.3.3.2.1.

[North Anna] site and only population can significantly affect the resulting risk in any given year of reactor operation.” ER at 3-7-33. Based “on the new population projection,” Dominion determined that the exposure index values for the ESP site “are expected to be about 90 percent higher than those established in NUREG-1437.” Id. (emphasis added). Dominion also identified that environmental parameters related to atmospheric fallout onto open bodies of water identified in NUREG-1437 for the North Anna site “are applicable for new units at the ESP site” because “no major changes have been identified that would impact these parameters.” Id. at 3-7-35. Similarly, for the evaluation of potential releases to groundwater, Dominion concluded that the relevant “environmental parameters have been identified in the GEIS for” the North Anna site and no “major changes have been identified that would impact these parameters” in the ESP case. Id. at 3-7-36. Dominion concluded:

Evaluation of site-specific factors for purposes of this application have shown that the ESP site is within the range of sites considered in the GEIS. Thus, the GEIS conclusion is applicable to the ESP site.

Use of pertinent site specific information to confirm the applicability of existing generic analyses is consistent with NRC staff plans for addressing severe accident environmental impacts at the ESP, as identified in SECY-91-041.

ER, § 7.2.5.¹⁸ Petitioners fail to address any of this information and thus fail to show that there is any deficiency in Dominion’s analysis or any genuine dispute over a material issue.

Petitioners’ citations to the correspondence between NEI and the NRC Staff also provide no basis for this contention. The April 1, 2003 letter from the NRC Staff to NEI was not focused on severe accident analysis and merely cautioned that reliance on information in NUREG-1437

¹⁸ In SECY-91-041, the NRC Staff stated, “The staff’s analysis will evaluate population data and other information for the candidate site in light of that used in level 3 probabilistic risk analyses (PRAs) performed for reference nuclear power plants. Studies such as those documented in NUREG-1150, “Severe Accident Risks: An Assessment for five U.S. Nuclear Power Plants” (June 1989) could be used for such comparisons, thus providing assurance that the environmental impact of the severe accident would be sufficiently characterized (nature and magnitude of environmental effects) for use in an EIS at the ESP stage.” SECY-91-041 at 5.

should be justified. As discussed above, Dominion provided such a justification in section 7.2 of the ER. The June 25, 2003 letter from the NRC Staff to NEI simply described an approach that “could” be taken. The letter stated that release characteristics “could be” developed through a survey of analyses “for previously certified ALWRs and/or operating reactors.” (Emphasis added.) This statement does not preclude reliance on the analyses for operating reactors contained in NUREG-1437. Similarly, the June 25, 2003 letter stated that “[r]isk impacts could be assessed using the same metrics used in previous plant-specific and generic EIS, such as . . . NUREG-1437.” This is exactly what Dominion has done.

Moreover, in response to a request for additional information (“RAI”) from the NRC Staff, Dominion has provided a site-specific analysis of severe accident risk using a level 3 PRA consequence code (MACCS2) with source term and release frequency information from the ABWR and AP-1000, and site-specific population and meteorological data.¹⁹ Thus, the information that Petitioners claim is necessary is already on the docket. This evaluation shows that the severe accident risk evaluated by this method for new designs is smaller than the previous risk estimates for existing units.²⁰ This RAI response not only moots Contention 3.1, but demonstrates that the analysis in Dominion’s ER is bounding and that no genuine, material dispute exists.

In sum, Contention 3.1 provides no basis to assume that Dominion’s ER fails to bound the severe accident risk of plants that fall within the bounds of the PPE. Petitioners provide no references or expert opinion suggesting that Dominion has underestimated such risk.

¹⁹ Letter from E. Grecheck to NRC, “Dominion Nuclear North Anna, LLC, North Anna Early Site Permit Application, Response to Request for Additional Information Regarding Environmental Portion of ESP Application” (May 17, 2004), Encl. 1 at 70-82 (response to RAI E7.2-4).

²⁰ Id. at 82-83 (response to RAI 7.2-5).

Consequently, Petitioners have not shown that there is any genuine dispute over a material issue, and their Contention 3.1 must therefore be dismissed.

D. Contention 3.2

Contention 3.2, entitled “Waste Confidence,” simply refers to two additional contentions – Contentions 3.2.1 and 3.2.2 discussed below – and provides no additional information or bases. Accordingly, Contention 3.2 by itself identifies no litigable issue and should be dismissed. As discussed below, Contentions 3.2.1 and 3.2.2 must also be dismissed as impermissible challenges to 10 C.F.R. § 51.23 (the “Waste Confidence Rule”).

1. Contention 3.2.1

Contention 3.2.1 must be rejected as a direct challenge to the NRC’s Waste Confidence Rule. Contention 3.2.1 alleges that the Environmental Report (“ER”) “is deficient because it fails to discuss the environmental implications of the lack of options for permanent disposal of the [spent] fuel that will be generated by the proposed reactors if they are built and operated.” Pet. Contentions at 15. The Waste Confidence Rule makes a generic finding that a geologic repository will be available beyond the operating life of any reactor to dispose of its spent nuclear fuel (10 C.F.R. § 51.23(a)) and hence bars this issue.

In essence, the contention incorrectly asserts that Dominion cannot rely on NRC’s Waste Confidence Decision (49 Fed. Reg. 34,688 (1984), as amended, 55 Fed. Reg. 38,747 (1990)) “because it concerns plants that are currently operating, not new plants.” *Id.* at 16. Petitioners are just wrong in claiming that the Waste Confidence Decision, on which this rule is based, does not apply to new reactors. The express language of Waste Confidence Rule, the NRC findings in the Waste Confidence Decision, and the record in that proceeding all refute Petitioners’ claim.

By its express terms, 10 C.F.R. 51.23 applies to “any reactor.”

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

10 C.F.R. § 51.23(a) (emphasis added). The phrase “any reactor” is unambiguous, and encompasses both existing and future reactors. Indeed, when the NRC promulgated this rule, it explained, “in licensing actions involving (a) the storage of spent fuel in new or existing facilities, or (b) the expansion of storage capacity at existing facilities, the NRC will continue to require consideration of reasonably foreseeable safety and environmental impacts of spent fuel storage only for the period of the license applied for.” 49 Fed. Reg. at 34,689 (emphasis added).

Petitioners argue that “as amended in 1999,”²¹ the second finding of the Waste Confidence Decision “clearly . . . applies to any existing reactor, including reactors whose licenses are revised or renewed.” Pet. Contentions at 16 (emphasis added).²² Contrary to

²¹ Petitioners are mistaken in describing the second finding of the Waste Confidence Decision as having been amended in 1999. Pet. Contention at 16. In fact, the original Waste Confidence Decision (49 Fed. Reg. 34,658 (Aug. 31, 1984)) was amended in 1990 (55 Fed. Reg. 38,474 (Sept. 18, 1990)). In 1999, the Commission decided that a comprehensive evaluation of the Waste Confidence Decision was unnecessary, and that experience and developments since 1990 confirmed the 1990 findings and no modification to those findings was necessary. 64 Fed. Reg. 68,005 (Dec. 6, 1999).

²² Petitioners provide no support for their assertion that the Commission’s current finding applies only to existing reactors, not new reactors. In a January 7, 2003 letter to the NRC Staff, Petitioners cited 55 Fed. Reg. 38,474 (1990) in support of the assertion that “the Waste Confidence Rule applies only to waste generated by ‘existing facility licenses.’” Letter from D. Curran to Chief, Rules and Directives Branch, “NEPA Scoping Comments by Blue Ridge Environmental Defense League, Nuclear Information and Resource Service, Public Citizen, Regarding North Anna Early Site Permit Application, Docket No. 52-008” (Jan. 9, 2004). On the cited Federal Register page, the NRC described the purpose of the 1984 Waste Confidence Proceeding as being “to assess generically the degree of assurance now available that radioactive waste can be safely disposed or, to determine when such disposal or offsite storage will be available, and to determine whether radioactive waste can be stored past the expiration of existing facility licenses until offsite disposal or storage is available.” Petitioners apparently read this statement as indicating that the proceeding applied only to facilities in existence at the time of the decision, but the better reading is that the proceeding addressed the Commission’s confidence that spent fuel could be stored safely and without environmental

Petitioners' insinuation, the second finding does not refer to and is in no way limited to "existing reactors." Rather, like the Waste Confidence Rule itself, the second finding (quoted by Petitioners) applies to "any reactor."

Further, the record for the 1990 revision of the second finding could not be more clear in its consideration and inclusion of new reactors. In that record, the Commission addressed relevant issues that had arisen since its original Waste Confidence Decision in 1984. 55 Fed. Reg. at 38,500. The Commission identified one of those issues as:

Is there sufficient uncertainty in total spent fuel projections (e.g., from extension-of-life license amendments, renewal of operating licenses for an additional 20 to 30 years, or a new generation of reactor designs) that this Waste Confidence review should consider the institutional uncertainties arising from having to restart a second repository program.

55 Fed. Reg. at 38,501 (emphasis added). Just as the issue presented clearly addressed new reactors, so did the Commission's response:

Assuming for the sake of establishing a conservative upper bound that the Commission does grant 30-year license renewals, the total operating life of some reactors would be 70 years, so that the spent fuel initially generated in them would have to be stored for about 100 years if a repository were not available until 30 years after the expiration of their last OLS.

Even under the conservative bounding assumption of 30-year license renewals for all reactors, however, if a repository were available within the first quarter of the twenty-first century, the oldest spent fuel could be shipped off the sites of all currently operating reactors well before the spent fuel initially generated in them reached beyond the age of 100 years. Thus, a second repository, or additional capacity at the first, would be needed only to accommodate the additional quantity of spent fuel generated during the later years of these reactors' operating lives. The availability of a second repository would permit spent fuel to be shipped offsite well within 30 years after expiration of these reactors' OLS. The same would be true of the spent fuel discharged from any new generation of reactor designs.

impact at any reactor in existence prior to the availability of a repository. The latter is clearly the correct interpretation, because the Commission specifically considered whether "sufficient repository capacity will be available within 30 years beyond expiration of any reactor operating license of existing commercial high level waste and spent fuel originating in such reactor and generated up to that time." 55 Fed. Reg. at 38,501 (emphasis added).

In sum, although some uncertainty in total spent fuel projections does arise from such developments as utilities' planning renewal of OLS for an additional 20 to 30 years, the Commission believes that this Waste Confidence review need not at this time consider the institutional uncertainties arising from having to restart a second repository program. Even if work on the second repository program is not begun until 2010 as contemplated under current law, there is sufficient assurance that a second repository will be available in a timeframe that would not constrain the removal of spent fuel from any reactor within 30 years of its licensed life for operation.

55 Fed. Reg. at 38,503-04 (emphasis added). As the above statement demonstrates, the Commission fully considered the possibility of additional spent nuclear fuel generation stemming from both the renewal of existing licenses and the licensing of new reactors. Therefore, any assertion that the Waste Confidence Decision does not apply to new reactors must be rejected.

Moreover, this same record of the 1990 Waste Confidence review belies Petitioners' arguments that the Commission "backtracked" from its original Waste Confidence Decision and no longer has confidence that more than one repository will open. See Pet. Contentions at 17.²³ As quoted above, the Commission stated that "there is sufficient assurance that a second repository will be available in a timeframe that would not constrain the removal of spent fuel from any reactor within 30 years of its licensed life for operation." 55 Fed. Reg. at 38,503-04.

For the same reason, Petitioners' concern about the limitation on the capacity of the first repository is irrelevant. The Commission considered this limitation in its 1990 review and concluded,

The Commission believes that if the need for an additional repository is established, Congress will provide the needed institutional support and funding, as it has for the first repository.

²³ Petitioners base this argument on the 1990 amendment to the second finding, from assurance that "one or more" repositories would be available by years 2007 to 2009, to assurance that "at least one" repository would be available by the first quarter of the twenty-first century. Pet. Contentions at 17.

55 Fed. Reg. at 38,502.

Contention 3.2.1 goes further, without support, to state that no indication is given that the Commission “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.” Pet. Contention at 16-17. To the contrary, the Commission could not have been more clear in its 1999 Status Report on the Review of the Waste Confidence Decision (64 Fed. Reg. 68,005 (1999)) reaffirming, without qualification, its 1990 findings. Referring to the ongoing repository development and spent fuel storage activities, the Commission stated:

These considerations confirm and strengthen the Commission’s 1990 findings and lead the Commission to conclude that no significant and unexpected events have occurred – no major shifts in national policy, no major unexpected institutional developments, no unexpected technical information – that would cast doubt on the Commission’s Waste Confidence findings or warrant a detailed reevaluation at this time.

64 Fed. Reg. at 68,007 (emphasis added). Not only did the Commission decide not to review its 1990 Waste Confidence findings in 1999, the Commission found events since then had only served to strengthen the 1990 findings, which expressly include consideration of new reactors.

In sum, Contention 3.2.1 is a direct challenge to Commission regulation 10 C.F.R. § 51.23 and must be rejected. The regulation’s precise language and the statement of considerations for the findings demonstrate that the Commission fully considered new reactors in this generic rulemaking. As § 51.23 applies to new reactors, any contention to the contrary in this proceeding must be rejected as an impermissible challenge to NRC’s regulations.

2. Contention 3.2.2

Contention 3.2.2, which argues that the Waste Confidence Decision should be reconsidered because the increased threat of terrorist attack raises doubt about its continuing

validity (Pet. Contention at 20), must be rejected because it fails to meet the requirements of 10 C.F.R. § 2.335 for waiver of a rule. Further, the contention sets forth no substantive basis that would require the Commission to even consider granting a waiver or exception to the rule for this proceeding.

10 C.F.R. § 2.335 states that “[e]xcept as provided in paragraphs (b), (c), and (d) of this section, no rule or regulation of the Commission . . . is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding subject to this part.” 10 C.F.R. § 2.335(a). 10 C.F.R. § 2.335(b)-(d) establishes the procedure by which a party may petition that a Commission rule “be waived or an exception made for the particular proceeding” and the showing that must be made. 10 C.F.R. § 2.335(b). Petitioners have not met any of these requirements.

First, Petitioners have not requested a waiver or exception. Rather, Petitioners “request that the Commission reconsider this policy” in light of the September 11, 2001 terrorist attacks. Pet. Contentions at 22 (emphasis added). Thus, Petitioners’ request appears more in the nature of a petition for rulemaking – a matter beyond the Board’s authority.²⁴

Second, the contention fails to meet the standard for a waiver. In this regard, 10 C.F.R. § 2.335(b) provides:

The 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 (or a provision of it) would not serve the purposes for which the rule or regulation was adopted.

10 C.F.R. 2.335(b) (emphasis added). The “special circumstances” required cannot be merely alleged and must be set forth “with particularity.” Carolina Power & Light Co. (Shearon Harris

²⁴ Pursuant to 10 C.F.R. § 2.802, rulemaking petitions are directed to the Commission and must be addressed to the Office of the Secretary.

Nuclear Power Plant, Units 1 and 2), LBP-82-119A, 16 N.R.C. 2069, 2073 (1982). In order to establish special circumstances that would support a waiver, the petitioner “must allege facts not in common with a large class of facilities that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding for the rule sought to be waived.” Private Fuel Storage, LBP-98-7, 47 N.R.C. at 238 (citing Public Service Co. of New Hampshire (Seabrook Station Units 1 and 2), CLI-89-20, 30 N.R.C. 231, 235 (1989)) (emphasis added). Here, Petitioners’ contention refers to: “U.S. facilities” (Pet. Contention at 20); “commercial reactors” (id. at 21); “Independent Spent Fuel Storage Installations” (id.); transportation of spent nuclear fuel (id.); the phase-out of nuclear power (id.); “fuel storage pools” (id. at 22); and “dry storage facilities” (id.). Nowhere in Contention 3.2.2 do Petitioners refer to any special circumstances that might exist with respect to the proposed reactors at the North Anna site, which are the subject of this ESP proceeding. See Pet. Contention 20-23. The contention seeks reconsideration of the Waste Confidence Decision as it pertains to all spent nuclear fuel, wherever it might or will be produced and stored and is “nothing more than a generalization regarding [petitioners’] views of what applicable policies ought to be.” Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), LBP-82-76, 16 N.R.C. 1029, 1035 (1982) (citing Philadelphia Electric Co. (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 A.E.C. 13, 20-21 (1974)). Such a broad petition for a waiver does not meet the standard in 10 C.F.R. § 2.335.

Similarly, Petitioners have failed to demonstrate that “the circumstances involved are ‘unusual and compelling’ such that...a waiver is necessary to address the merits of a ‘significant safety problem’” with such significance being “viewed in the context of any other protective measures that are in place to prevent safety problems.” Private Fuel Storage, LBP-98-7, 47 NRC

at 239. Petitioners acknowledge many of the steps taken by the NRC since September 11, 2001 to address security concerns,²⁵ but only to conclude that a review of the Waste Confidence decision would be another appropriate step for the Commission to take. Pet. Contention at 22. But such an assertion falls far short of demonstrating “a significant safety problem.” Petitioners provide no information suggesting that the Commission’s security regulations and additional measures taken since September 11, 2001, are inadequate to protect against a design basis threat.²⁶ To the extent that Petitioners may be implying that NRC’s requirements do not provide reasonable assurance that spent fuel can be stored safely, its contention should be viewed as an impermissible challenge to the regulations in 10 C.F.R. Part 73. To the extent that Petitioners may be suggesting that spent fuel storage is unsafe without protection against an attack by an enemy of the state, its contention is barred by 10 C.F.R. § 50.13.

Petitioners also fail to show, within the context of NEPA, that there are special circumstances that would cause the rule not to serve its purpose. The NRC’s Waste Confidence Decision considered the remoteness of terrorist attacks and their radiological consequences. 49 Fed. Reg. at 34,685. In its 1990 review of the Waste Confidence findings, the Commission stated:

²⁵ Since September 11, 2001, the Commission has reexamined and improved many aspects of nuclear facility security, including “guard force size, physical barriers, access control, detection systems, alarm stations, response strategies, security exercises, clearance requirements and background investigations for key employees, and fitness for duty requirements.” Private Fuel Storage, CLI-02-25, 56 N.R.C. at 343; see also Riverkeeper, 359 F.3d at 160-62. New safeguards measures implemented since September 11th – which go beyond the measures required by Commission regulation – include more patrols, more security personnel, and physical and vehicle barrier modifications. These requirements will stay in place until the threat environment changes. 56 N.R.C. at 344.

²⁶ 10 C.F.R. § 73.1 requires licensees to employ certain design basis threats to protect against acts of radiological sabotage, which is defined as a determined violent external assault, attack by stealth, or deceptive actions, of several persons who are well trained, have inside assistance, possess suitable weapons and hand carried equipment and a four-wheeled drive land vehicle. Indeed, the attacks of September 11th have prompted the NRC to change its Design Basis Threat. See Press Release, Nuclear Regulatory Commission, NRC Approves Changes to the Design Basis Threat and Issues Orders For Nuclear Power Plants to Further Enhance Security, No. 03-053 (Apr. 29, 2003).

[N]o considerations have arisen to affect the Commission's confidence since 1984 that the possibility of a major accident or sabotage with off site radiological impacts at a spent-fuel storage facility is extremely remote.

55 Fed. Reg. at 38,512 (emphasis added). Subsequent to the September 11 events, the Commission has held that an attack on a fuel storage facility "is speculative and simply too far removed from the natural or expected consequences of agency action to require a study under NEPA." Private Fuel Storage, CLI-02-25, 56 N.R.C. at 349.²⁷ The Commission has also held:

[A]n EIS is not an appropriate format to address the challenges of terrorism. The purpose of an EIS is to inform the decisionmaking agency and the public of a broad range of environmental impacts that will result, with a fair degree of likelihood, from a proposed project, rather than speculate about "worst case scenarios" and how to prevent them.

Id. at 347. NEPA's mandate "is to consider a broad range of environmental effects that are reasonably likely to ensue as a result of a major agency action, not to engage in speculation about what might happen as a result of criminal terrorist activities." Id. at 352. The Waste Confidence Decision reflects the NRC's judgment that spent fuel can be stored safely and without significant environmental impact from the expiration of a reactor's facility operating license until a repository is available. Consistent with the Commission's recent rulings,²⁸ the Commission's analysis need not include speculation about potential consequences of terrorism on fuel

²⁷ While the Commission has indicated that likelihood of a terrorist attack cannot be ascertained with confidence by any state-of-the-art methodology, it has added:

If we were to speculate on the probability of the scenario . . . [of] a hijacked jumbo jet hitting the PFS facility and causing catastrophic effects – our guess is that the probability is actually miniscule.

56 N.R.C. at 351.

²⁸ The Commission has ruled in several contexts that NEPA does not require it to conduct a terrorism analysis. See Private Fuel Storage, CLI-02-25, 56 N.R.C. 340 (2002); Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility) CLI-02-24, 56 N.R.C. 335 (2002) (construction permit); Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 N.R.C. 358 (2002) (license renewal); Dominion Nuclear Connecticut, Inc. (Millstone Power Station, Unit 3), CLI-02-27, 56 N.R.C. 367 (2002) (license amendment proceeding to expand spent fuel pool storage capacity).

temporarily stored at the site of new reactors after the end of their licensed life.²⁹ In this context, Contention 3.2.2 is nothing more than a back-door attempt to circumvent the Commission's recent rulings that terrorism is not a proper subject for NEPA analysis.

Finally, Contention 3.2.2 fails to meet the affidavit requirement in section 2.335:

The petition must be accompanied by an affidavit that identifies the specific aspect or aspects of the subject matter of the proceeding as to which the application of the rule or regulation (or provision of it) would not serve the purposes for which the rule or regulation was adopted. The affidavit must state with particularity the special circumstances alleged to justify the waiver or exception requested.

10 C.F.R. § 2.335(b). This affidavit should contain enough proof for the Licensing Board to determine if the petitioner has made a *prima facie* showing for a waiver. Shearon Harris, LBP-82-119A, 16 N.R.C. at 2073. Further, “[i]ntervenors should be aware that as a practical matter, in most cases, a petition for a waiver of a rule under [§ 2.335] will involve a substantial investment in time and effort.” Id. No affidavit with any such specificity or proof was provided to support a waiver in this ESP proceeding. In sum, Contention 3.2.2 satisfies none of the standards for a waiver.

E. Contention 3.3

Contention 3.3 broadly alleges that the ER for the North Anna ESP application “fails to adequately address the environmental impacts of proposed new reactor(s) on Lake Anna and associated water bodies.” Pet. Contentions at 23. The contention consists of four subparts, designated as Contentions 3.3.1 through 3.3.3 and 3.4.

²⁹ Taking into account the design, licensing and construction period, a forty-year licensed life, and potential 20 year license renewals, this period of storage for new units would not even occur until near the end of the century. The suggestion that the NRC should attempt to evaluate terrorist risk at this point in the future is truly absurd.

The general allegation in Contention 3.3 appears to be merely a pointer³⁰ to its subparts, Contentions 3.3.1 through 3.3.3 and Contention 3.4. By itself, Contention 3.3 is too vague to be admissible. Therefore, the Board should dismiss it and consider for potential admission only those of its subparts that the Board may determine meet Commission requirements. Washington Public Power Supply System (WPPSS Nuclear Project No. 1), LBP-83-66, 18 N.R.C. 780, 798 (1983); see also Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), LBP-79-34, 10 N.R.C. 828, 838 (1979).

The substantive subparts of Contention 3.3 rely exclusively on comments provided to Dominion by the United States Fish and Wildlife Service ("FWS") on an unrelated matter (the relicensing of North Anna Units 1 and 2, see Pet. Exh. 3.3-2 and 3.3-3) and on preliminary comments by the Virginia Department of Environmental Quality ("VDEQ") on a consistency certification filed by Dominion under the Coastal Zone Management Act (16 U.S.C. § 1456(c)(3)(A)).³¹ See Pet. Exh. 3.3-4 and 3.3-5. As will be further discussed below, the comments contained in these sources are either irrelevant to the proposed contentions, have been misconstrued by Petitioners, or have become moot.³²

Petitioners assert that Contention 3.3 and its subparts are supported by the "expert Declaration of Barry Sulkin," attached as Pet. Exh. 3.3-1, but Mr. Sulkin's Declaration sets forth no facts or other information that support the proposed contentions. Mr. Sulkin's declaration

³⁰ At the bottom of page 23, after referring to Contentions 3.3.1 through 3.3.4, Contention 3.3 asserts that the ER fails to address conflicts between use of Lake Anna for plant cooling and laws that protect those waters. This assertion is part of Contention 3.3.3. See Pet. Contentions at 42-44. Thus, the general Contention 3.3 contains no particular assertion beyond the allegations in the subparts.

³¹ Petitioners state that Dominion withdrew this certification, implying that the certification was inadequate. Dominion withdrew its consistency certification at the request of the State, so that a six-month clock for the State's concurrence with this certification would not begin until after the NRC publishes its draft EIS. See January 12, 2004 letter from Dominion to VDEQ, Exhibit A hereto.

³² Many of VDEQ's preliminary comments referred to the potential need to identify an external source of cooling water for Unit 4 – an issue that has now been mooted.

merely states that “[t]he technical factual assertions in those contentions are true and correct to the best of my knowledge, and all expressions of technical opinion therein are based on my best professional judgment.” Pet. Exh. 3.3-1 at ¶5. Thus, Mr. Sulkin’s Declaration is vague and conclusory, and provides no specific basis for any allegation.

1. Contention 3.3.1

Contention 3.3.1, which alleges that Dominion’s ER does not sufficiently assess the adequacy of water supplies required for new units (Pet. Contentions at 26), is not admissible. The gravamen of Contention 3.3.1 is that Dominion’s ER fails to identify the supplementary external water source for Unit 4 (*id.*), but that issue has been mooted by a commitment to employ dry cooling towers. Further, none of the allegations in Contention 3.3.1 is supported by a sufficient basis establishing a genuine dispute on a material issue.

a. Alleged Insufficiency of ER to Address Water Supplies and Identification of the Unit 4 Cooling Sources

Contrary to Petitioners’ allegation in Contention 3.3.1, the ER provides a comprehensive assessment of the water supply from Lake Anna. The ER provides the data and information necessary to assess water-related impacts as identified in NUREG-1555, Environmental Standard Review Plan, including sections 5.2, Water-Related Impacts; 5.2.1, Hydrologic Alterations and Plant Water Supply; and 5.2.2, Water-Use Impacts. ER §§ 3.3, 3.4, 4.2, 5.2. The ER compares the plant water needs to the available water supplies. ER § 5.2.1.4. The ER concludes that the available water supply is adequate to meet the plant water needs for the existing units plus Unit 3 alone, or the existing units plus new Units 3 and 4 on a long-term average basis.³³ ER § 5.2.1.5.

³³ This conclusion applies to a Unit 3 using once-through cooling and a Unit 4 using mechanical draft or natural draft cooling towers.

The assessment shows that minimum release requirements established by the State for lake elevations at or above 248 feet msl would be met. ER §§ 5.2.1.2 and 5.2.1.4, Table 5.2-1.

Petitioners' Contention 3.3.1 does not controvert or provide any basis to dispute the adequacy of Lake Anna to supply Unit 3 cooling water.³⁴ It identifies no error in Dominion's assessment of either the amount of water required for Unit 3 or the amount of water that could be provided by Lake Anna while maintaining the minimum dam-release requirements established by the State. Petitioners do not claim that the water quantity from Lake Anna would be either more severely impacted or impacted in a different way than discussed in the ER from the operations of Unit 3. Thus, Petitioners establish no issue of material fact pertaining to the adequacy of the water supply for Unit 3.

With respect to the adequacy of the water supply for Unit 4, Petitioners' complaint is that the additional source of supplemental water that might be needed (as the make-up for evaporative losses from wet cooling towers) for that unit during drought conditions has not been identified. Petitioners state that "it must be assumed for the purposes of impact evaluation that the proposed expansion of additional units at NAPS would result in all needed cooling water coming from the same source of Lake Anna." Pet. Contentions at 30. The assumption that Lake Anna would be the sole source of cooling water for a Unit 4 with wet cooling towers is simply inconsistent with the proposal in Dominion's application and therefore does not establish a genuine, material dispute. Moreover, Petitioners provide no basis for that assumption.³⁵ Thus,

³⁴ Petitioners state that "the addition of two new reactors would increase the amount of water withdrawn from Lake Anna by more than 60% when the lake level is 250 ft msl, which would be insufficient to protect state standards and thus contrary to the CWA." Pet. Contentions at 28-29 (emphasis added). Petitioners make no such allegation concerning the operation of Unit 3 alone.

³⁵ Petitioners refer to VDEQ comments that groundwater or nearby surface water might not be capable of providing the amount of water that would be needed for Unit 4 [if wet cooling towers were used] Pet. Contentions at 29 n.17.

Petitioners have failed to establish the existence of any genuine dispute over a material issue of fact.

In addition, any question about the source of a supplemental supply of cooling water for Unit 4 is now moot. In a March 31, 2004 letter, attached as Exhibit B hereto, Dominion committed to a revised approach to Unit 4 heat dissipation using closed-cycle cooling with dry towers. This approach eliminates the use of Lake Anna as a source of make-up water for Unit 4,³⁶ as well as any need to rely on an external source of water during drought conditions. Id.

b. Downstream River Flows

Petitioners also allege without support that the ER does not adequately account for the impacts of river flow (the frequency of reduced river flow) downstream of the dam. Pet. Contentions at 30-32. Petitioners refer to Dominion's calculated frequency for low flow conditions with Unit 3 operating (Pet. Contentions at 31, referring to the estimate in ER Table 5.2-3), but they do not identify any error in that assessment or identify any Unit 3 impact that has not been properly evaluated in the ER. The ER analyzes and assesses the impacts of Unit 3 on downstream river flows using a water balance model. ER § 5.2.2. The ER presents the modeling results and quantifies the impact to downstream releases that would occur with the addition of Unit 3 including predicted releases from the dam and the results of an outflow frequency analysis. ER § 5.2.2.2; Figure 5.2-2; Table 5.2-3. Petitioners do not controvert any of this information. Thus, Contention 3.3.1 does not establish any genuine dispute over a material issue related to Unit 3's impact on downstream flow.

Even if this is true, Petitioners provide no information to suggest that water could not be piped in from other locations.

³⁶ With no need for cooling tower make-up, Unit 4 would consume about 2 cfs for miscellaneous plant services during normal operation. ER at 3-3-43. This small use would be addressed in accordance with Virginia water use law. ER § 5.2.2.5.

The revised approach to Unit 4 cooling moots Petitioners' concern that Dominion has not calculated the frequency of drought downstream flow with the addition of a fourth reactor. See Pet. Contentions at 30-31. Closed-cycle cooling with dry cooling towers would cause no evaporative loss. Therefore, Unit 4 cooling would not affect the frequency of low downstream flow.

In sum, Contention 3.3.1 fails to establish a genuine dispute concerning a material issue. Petitioners provide no basis to question the adequacy of the water supply for Unit 3, and their concern regarding the water source for Unit 4 has been mooted by Dominion's commitment to employ dry cooling towers. Contention 3.3.1 should therefore be rejected.

2. Contention 3.3.2

Contention 3.3.2 should not be admitted, because Petitioners have not demonstrated the existence of any genuine dispute over a material issue of law or fact. Contention 3.3.2 alleges that the ER does not adequately consider certain impacts (thermal impacts, impingement, entrainment, and reduced downstream flow) on fish and other aquatic life in Lake Anna and the North Anna River. Pet. Contentions at 32. Petitioners, however, do not identify any impacts that are different in scope or intensity from those discussed in the ER.

a. Thermal Impacts

Petitioners' contention regarding thermal impacts is largely limited to the effect of increased water temperature on striped bass. Pet. Contentions at 34. Striped bass is a non-indigenous species that is not able to spawn³⁷ but is stocked annually in Lake Anna by the

³⁷ Streams, including the North Anna River, that flow into the North Anna Reservoir, lack the flow, depth and length to support striped bass spawning runs. ER at 3-2-73.

Virginia Department of Game and Inland Fisheries ("VDGIF") to support recreational fishing. ER at 3-2-73, 3-5-55, 3-5-57.

In essence, the issue that Petitioners seek to raise is whether a potential impact on a non-indigenous species introduced into Lake Anna for recreational purposes constitutes a violation of the Clean Water Act ("CWA"), 33 U.S.C. §§ 1251 et seq. Petitioners state that the section 316(a) of the CWA, 33 U.S.C. § 1326(a), requires there to be no adverse impacts from thermal discharges; therefore, they argue that "clearly additional thermal pollution could not be permitted." Pet. Contentions at 35. However, contrary to Petitioners' assertions that CWA § 316(a) allows "no adverse impacts," section 316(a) in fact only requires a finding that there is assurance of "the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on that body of water." 33 U.S.C. § 1326(a) (emphasis added). There is no dispute that the only species in question, striped bass, is not native to Lake Anna, would not be present were it not for the reservoir, and is sustained only by annual stocking by VDGIF. ER at 3-5-55; Pet. Contentions at 33. Thus, the potential adverse effect of operation of Units 3 and 4 on the striped bass does not constitute a violation of the CWA and does not raise a litigable contention.

Likewise, Petitioners fail to establish any genuine factual dispute with the evaluation in Dominion's ER of the potential impact on striped bass. Petitioners provide no meaningful discussion of the information presented in the ER. They refer to a couple of statements by the VDEQ and VDGIF indicating that the lake is a marginal habitat for striped bass (Pet. Contentions at 34), but these statements do not controvert the ER. The ER acknowledges that striped bass have been introduced into marginal habitat at Lake Anna (i.e., it is a non-native, cool-water species stocked in a warm-water habitat) and that the lower lake is not a viable habitat

for this species in some summer drought conditions. ER § 2.4.2.2; ER at 3-5-56. The ER acknowledges that striped bass are a thermally-sensitive species and that the additional heat load may adversely affect the physiology of striped bass in the lake. ER at 3-5-55. The ER states that striped bass are subject to late-summer habitat restrictions [due to temperature] and that they may lose weight and show a decline in condition but that they nonetheless provide a substantial recreational fishery. ER at 3-5-56. This last point is also made by the VDGIF in a statement that the Petitioners mischaracterize by incompletely quoting:

Adult striped bass [in Lake Anna] grow slowly, exhibit reduced fitness (condition), and have low maximum sizes as a result of marginal habitat conditions now present, but an important recreational fishery within this habitat capacity has developed.”

Compare Pet. Contentions at 34 and VDGIF letter of January 27, 2004 (Pet. Exhibit 3.3-5) at 3.

The ER acknowledges that striped bass die-offs have occurred in some southern reservoirs that exhibit late-summer habitat squeeze. ER at 3-5-57. The ER’s assessment is that thermal impacts on striped bass would be moderate, meaning “sufficient to alter noticeably, but not to destabilize important attributes of the resource.” 10 C.F.R. Part 51, App. B, Table B-1 n.3. VDGIF’s comment that increased lake temperature could “perhaps” jeopardize the striped bass fishery (Pet. Contentions at 35, quoting Pet. Exh. 3.3-5 at 3) does not controvert this conclusion. It provides no specific facts that would call Dominion’s assessment into question, and therefore provides no basis demonstrating the existence of a genuine, material dispute. A “generalized suspicion” that some greater impact perhaps might occur is not a sufficient basis for a contention. See Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 N.R.C. 419, 424 (2003) (NRC rules bar contentions where petitioners have what amounts to only generalized suspicions).

Petitioners also assert, even more generally, that the increase in lake water temperature due to the operation of Units 3 and 4 “would result in additional impacts that prevent the existence of a healthy and balanced population of aquatic communities as required by the CWA, and specifically prohibited by Section 316(a) of the act.” Pet. Contentions at 35. Petitioners do not identify what impacts would occur on what other species or how such impacts would “prevent the existence of a healthy, balanced, indigenous population of shellfish, fish and wildlife.” 33 U.S.C. 1326 (a). In contrast, section 5.3.2.1 of the ER models the temperature increase that would occur from operation of additional units, and section 5.3.2.2 evaluates the potential thermal impact on fish. This evaluation shows that the thermal impacts on native, warm-water species in Lake Anna would be small. ER at 3-5-58. Petitioners provide no meaningful discussion of any of this information. Petitioners provide no facts or expert opinion identifying any deficiency in Dominion’s assessment of the thermal impact on indigenous fish.

Moreover, Petitioners’ contention presupposes a violation of section 316(a) of the Clean Water Act, 33 U.S.C. 1326(a). Since section 316(a) requires effluent limitations assuring the protection and propagation of a balanced, indigenous population of fish, the thermal limits that would be established by the State in the NPDES permit for any new units would preclude the type of impact posited without basis by Petitioners. There is no basis to presuppose that adequate thermal effluent limitations will not be established by the State and met by Dominion.

Petitioners’ allegations fail to show any deficiency in the assessment in the ER of the potential thermal effects of operating two new units. Accordingly, Contention 3.3.2 as it pertains to thermal impacts must be rejected.

b. Impingement and Entrainment

Petitioners allege that the ER does not adequately assess the impacts from impingement and entrainment of fish. Pet. Contentions at 36.³⁸ Petitioners state, “In Section 5.3.1.2.2 and Section 5.3.1.2.4, the ER recognizes that adding an additional reactor or two will increase the number of impinged and entrained fish, but fails to adequately consider adverse impacts of increased impingement and entrainment of fish and other aquatic life in the NAPS water intake system with the addition of one or two new units.” Id.

Despite this broad allegation, the only specific deficiency alleged by Petitioners, is that the ER “fails to discuss the size and age distribution of the impinged fish.” Id. However, Petitioners provide no explanation of the significance of this purported failure or why it raises a material issue that requires adjudication in this proceeding. A mere assertion that some matter ought to be considered does not provide a sufficient basis for a contention. Rancho Seco, LBP-93-23, 38 N.R.C. at 246; Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 N.R.C. 403, 463 (2001).

Petitioners identify no other alleged deficiency in the detailed analysis of impacts of impingement in section 5.3.1.2 of the ER. The ER identifies conservative assumptions for the operation of an additional once-through unit. ER at 3-5-29. The ER describes a bounding analysis that shows a potential to double the number of fish impinged. ER at 3-5-31. However, because of the large size of the populations of fish in Lake Anna (as evidenced by recent

³⁸ Petitioners define impingement as “the accumulation of fish and other aquatic life caught against the cooling water intake screen” and entrainment as “the forced influx of aquatic life into the cooling system through the cooling water intake screen, resulting in the death of the aquatic life.” Pet. Contentions at 32 n. 25. More accurately, impingement “means the entrapment of all life stages of fish and shellfish on the outer part of an intake structure or against a screening device during periods of intake water withdrawal” and entrainment “means the incorporation of all life stages of fish and shellfish with intake water flow entering and passing through a cooling water intake structure and into a cooling water system.” 40 C.F.R. § 125.83. As defined by the regulations, neither impingement nor entrainment is necessarily fatal to the biota.

sampling data), the fecundity of fish, and the ability of aquatic populations to accommodate environmental perturbations, the ER concludes that doubling the estimated number of impinged fish would not have a noticeable effect on the fish community in Lake Anna. ER 3-5-32. Petitioners do not question any of this information and therefore raise no litigable issues with regard to impingement.

Petitioners similarly identify no disagreement with the ER analysis of entrainment in section 5.3.1.2.3 of the ER. Petitioners quote the ER statement “that the number of entrained fish larvae would increase to about 297 million per year with an additional Unit 3 using once-through cooling system. ER § 5.3.1.2.3.” Pet. Contentions at 37. Petitioners quote the ER estimate that for four units operating, the ER states that the number of entrained larvae would increase to 300 million.³⁹ Id. All questions about entrainment from Unit 4 operations have been mooted by Dominion’s commitment to use closed-cycle cooling with dry towers for Unit 4 heat-dissipation. See Exhibit B. With this change, no additional impingement or entrainment would occur as a result of operation of Unit 4. Id., Encl. 2.

Petitioners also cite the January 27, 2004 VDGIF letter as indicating that, even with improved technology on the intake system, the fish would not be expected to be fully protected (Pet. Contentions at 37), but this statement creates no material dispute. However, Dominion’s ER does not claim that fish would be “fully protected” from entrainment. Rather, consistent with the VDGIF letter, the ER evaluates use of a curtain wall to reduce the velocity in the intake canal to between 0.25 and 0.5 fps to mitigate entrainment. ER at 3-5-38. The ER also evaluates uses

³⁹ Petitioners also cite a VDGIF letter as stating that the increase would be to 468 million annually. Pet. Contentions at 37, citing Pet. Exh. 3.3-5 at 1. The Petitioners do not claim that there is any significance to the difference between the entrainment estimates, which appear to be based on differing assumptions. The ER assumes Unit 4 uses cooling towers with make-up from Lake Anna. ER at 3-5-36. While the basis is not explicitly stated, VDGIF apparently assumes all four units would use once-through cooling in calculating its entrainment estimate. Pet. Exh. 3.3-5 at 4.

of a submerged intake structure as a mitigation measure. Id. Petitioners do not identify any deficiency in Dominion's consideration of these potential mitigation options.

In any event, any intake structures will have to be approved by the State under section 316(b) of the CWA, 33 U.S.C. § 1326(b), which requires the location, design, construction and capacity of the intake to reflect best technology available for minimizing adverse environmental impacts. The State will make a determination whether the best technology available is being used when Dominion applies for the appropriate permits, which will occur after Dominion decides to develop new units is made. The State's determination will be based on the actual intake design presented at that time. By contrast, the only issue for consideration in this ESP proceeding is whether the potential impacts of construction and operation are properly bounded. Where a bounding analysis of potential CWA impacts is adequate, the NRC can make a site suitability decision based on that analysis. See Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-77-8, 5 N.R.C. 503, 544-545 (1977) (relying on a bounding analysis of once-through cooling impacts in a construction permit proceeding). Any subsequent decisions by Dominion and the State on additional measures that may be required as "best technology available" will only reduce the amount of potential impingement and entrainment from the bounding estimates provided in the ER.

Petitioners assert that the estimated doubling of the number of entrained fish larvae in the event Units 3 and 4 become operational would violate section 316(b) of the CWA. Pet. Contentions at 37. However, with regard to cooling water intake structures, the CWA does not prohibit any increase in entrainment, but only requires that cooling water intakes use the best technology available for minimizing adverse environmental impacts. 33 U.S.C. § 1326(b). The ER states that the new units would comply with all applicable water use and water quality

regulations, and specifically that withdrawals of cooling water would meet all CWA § 316(b) regulations. ER § 5.2.2.5. Petitioners provide no basis to suggest that the regulation under the Clean Water Act would be ineffective.

Petitioners also allege that current operation violates section 316(b) of the CWA, because Dominion has not yet incorporated certain mitigation measures recommended by FWS or VDGIF with respect to Units 1 and 2. Pet. Contentions at 38. Aside from being wrong,⁴⁰ Petitioners' allegation is irrelevant because the compliance of the existing units with the Clean Water Act is outside the scope of this proceeding. Also, section 511(c)(2) of the CWA, 33 U.S.C. § 1371(c)(2), prohibits the NRC from review of requirements imposed under the CWA. To the extent Petitioners are endeavoring to question the adequacy of the NPDES permit for Units 1 and 2, that issue is outside the scope this proceeding and beyond NRC's jurisdiction.⁴¹

Again, Petitioners fail to show that there is any deficiency in the assessment of fish impingement and entrainment in the ER. They also provide no basis to for requiring that mitigation actions to reduce impingement and entrainment be litigated in a site suitability proceeding. Petitioners' assertion that the CWA would bar the impacts discussed in the ER is not supported by the provisions that Petitioners cite. Therefore, Contention 3.3.2 as it pertains to impingement and entrainment must be rejected.

⁴⁰ The Petitioners fail to distinguish between the regulatory agencies responsible for setting standards under and ensuring compliance with CWA regulations, and other agencies responsible for resource protection. The standard setting and enforcing agencies for the CWA regulations are the EPA at the Federal level and the VDEQ at the state level. As interested agencies, FWS and VDGIF can make recommendations to the regulatory agency and the applicant, but these recommendations are not binding unless incorporated in the CWA permit.

⁴¹ The NRC addressed the compliance of the existing units with section 316(b) of the Clean Water Act in its supplemental EIS supporting renewal of the operating licenses for the existing units. NUREG-1437, Supp. 7, at 4-11, 4-13. The NRC also found that the potential impact of entrainment and impingement from the existing units is small and warrants no additional mitigation. *Id.* at 4-13, 4-15. The NRC specifically considered the FWS comments in reaching the conclusion that further mitigation measures are not warranted. *Id.* at A-46, A-47.

c. Downstream Flow

Contention 3.3.2 as it pertains to downstream flow impacts⁴² should not be admitted because it lacks any factual or legal basis. Further, as discussed below, seeks to raise issues relating to the effects of the existing dam rather than any impact resulting from the deployment of additional units.

First, Petitioners allege, that the current minimum flows from the dam are “inadequate for a healthy aquatic habitat.” Pet. Contentions at 39. Petitioners state: “According to VDEQ the current evaporation rate and withdrawal for the existing two reactors reduce the flow of the North Anna River downstream of the dam to 10% or less ‘much of the time.’” Pet. Contentions at 39. In fact, VDEQ states that “The typical recommendation that we receive from the Department of Game and Inland Fisheries is not to allow cumulative consumptive use to exceed 10% of the river flow. The lake’s current evaporation rate and the existing two units already surpass that mark much of the time.” VDEQ memo to E. Irons of January 15, 2004, Pet. Exh. 3.3-6, at 3. VDEQ’s statement that consumptive use (plus evaporation) exceeds 10% of the river’s flow much of the time has been mischaracterized by the Petitioners as a statement that use exceeds 90% of the river flow much of the time. Moreover, the VDEQ memorandum nowhere states that flows are inadequate for a healthy aquatic habitat, but merely that “granting of additional [consumptive] withdrawals even with prescriptive conditions, cannot be guaranteed.” Id. Petitioners’ assertion that current minimum flows are inadequate for a healthy aquatic habitat downstream of the dam therefore lacks any factual basis.

Second, Petitioners allege that an additional unit would potentially impact Spring spawning downriver, and cite in support a November 2001 FWS letter to Dominion on the

⁴² Petitioners allege that the ER fails to adequately evaluate the adverse impact on aquatic species of the increased frequency of reduced stream flow downstream of the Lake Anna dam. Pet. Contentions at 38-39.

license renewal for Units 1 and 2. Pet. Contentions at 39. The FWS letter (Pet. Exh. 3.3-3), does not address the impact of proposed new units, but the potential spawning impacts that arose from construction of the dam in 1972. FWS states:

The water flow in the North Anna River System changed drastically when the impoundment was created. The reduction in river flow during the Spring spawning migration may limit the range of anadromous and riverine species of fish in the river. . . . Before 1972, when the river was impounded, flows varied considerably (1 to 24,000 cfs) from year to year and water quality was degraded by acid mine drainage from Contrary Creek. After 1972, fluctuations were moderated (40 to 16,000 cfs from 1972 through 1985) and water quality was improved as a result of reclamation activities at the Contrary Creek mine site and the acid-neutralizing effect of Lake Anna's waters.

Id. at 3. The impoundment of the North Anna River occurred long ago, and any impacts from the moderated river flow caused by the existence of the dam are not within the scope of this proceeding.⁴³

The ER discusses the relatively small increase in consumptive use from Unit 3 of no more than 40 cfs.⁴⁴ This small consumptive use is insignificant compared to the Spring spawning flows of 16,000 or 24,000 cfs discussed by FWS. Furthermore, both the ER and the Virginia agencies agree the potential reduction of flow from the dam that might arise from operation of Unit 3 occurs in the Fall, not the Spring when most spawning occurs. ER at 3-5-13, Figure 5.2-2; Pet. Exh. 3.3-6 at 3; Pet. Exh. 3.3-4 at 13. Therefore, Petitioners' assertion that impacts on Spring spawning need be addressed should be rejected not only because it seeks to

⁴³ As noted in the FWS letter quoted above and as discussed in the supplemental EIS supporting renewal of the operating licenses for the existing units, the presence of the dam improved the downstream water quality. Prior to impoundment, sedimentation and mine runoff had reduced the density and diversity of the fish in the North Anna River. NUREG-1437, Supp. 7, at 2-19.

⁴⁴ The ER estimates an increase in evaporative losses of 29 cfs due to operation of Unit 3. ER at 3-5-5. In addition, Unit 3 uses about 2 cfs for miscellaneous plant services during normal operation. ER at 3-3-42. Intermittent use up to 11 cfs during upset or abnormal conditions is possible. ER at 3-5-23.

raise an issue related to the impact of the dam – an issue outside the scope of this proceeding – but also because it lacks any basis.

Third, Petitioners allege that the “ER also fails to address the question of aquatic species passage through the North Anna Dam.” Pet. Contentions at 40. Again, Petitioners refer to a letter from the FWS letter commenting on license renewal of the existing units and seek to raise an issue related to the existing station rather than to new units. *Id.*, citing Pet. Exh. 3.3-3. Construction of the dam was completed in December 1971. Dominion ESP Application at 2-2-104. Any impacts from the presence of the dam are not within the scope of this proceeding. Since Petitioners do not provide any discussion linking fish passage around the dam to this proceeding, Contention 3.3.2 as it pertains to fish passage around the dam must be rejected.⁴⁵

Last, Petitioners’ allege that a new intake structure for Units 3 and 4 would cause additional, unspecified impacts that would violate the Clean Water Act. Pet. Contentions at 40. Petitioners, however, identify no water quality standards that would be violated or the nature of the alleged violation. Therefore, their claim is impermissibly vague.

Consequently, with respect to downstream impacts, Petitioners fail to show any deficiency in Dominion’s ER or provide any basis to suggest that Dominion has ignored any material downstream impact that might affect the NRC’s findings. Accordingly, Contention 3.3.2 as it pertains to downstream flow must be rejected.

⁴⁵ The NRC considered this comment in the supplemental EIS supporting renewal of the operating licenses for the existing units. The NRC found that there is currently no evidence of significant fish migration in the vicinity of the dam. NUREG-1437, Supp. 7, at A-48. See also *id.* at A-46. Thus, in addition to being outside the scope of the proceeding, Petitioners’ concerns with the absence of a fish passage lack basis.

3. Contention 3.3.3

Contention 3.3.3 alleges that the ER “does not contain a complete or adequate assessment of the potential impacts of the proposed expansion of the NAPS or water-based recreational uses of Lake Anna and on homeowners who live around the lake.” Pet. Contentions at 41. Petitioners offer two purported bases for this contention (relating to the impacts of reduced lake levels, and alleged conflict between private and public use), but neither establishes an admissible issue.

a. Reduced Lake Level

Petitioners first allege that the ER fails to evaluate the adverse impact of reduced lake levels on the water-based recreational uses of Lake Anna. Pet. Contentions at 41. Petitioners refer to a VDEQ letter stating that decreased water levels would adversely affect lake access (Pet. Contentions at 42, citing Pet. Exh. 3.3-4 at 11), but that statement creates no controversy, because Dominion’s ER also states that additional drawdowns during drought years could adversely affect recreational use. ER at 3-5-14. Table 5.2-4 of the ER identifies the low water level frequency. Petitioners do not dispute these predictions.

Petitioners also assert that the VDEQ criticizes the ER for failing to fully analyze the impact of increased drawdowns, and they refer to a VDEQ letter indicating that when the lake level dropped to 245 feet msl during the 2002 drought, most boat ramps could not support launches. Pet. Exh. 3.3-4 at 11. Table 5.2-4 of the ER estimates that the lake level would drop below 246 feet msl approximately 3% of the time. The VDEQ questions what time of year these low levels might occur, but VDEQ’s own letters indicate that these impacts would presumably occur during the fall. *Id.* at 12; Pet. Exh. 3.3-6 at 5. This information is in fact provided in the ER and is uncontroverted. Figure 5.2-7 provides predicted lake levels as a function of time and indicates that the maximum annual drawdown typically occurs near the end of the water year in

September. ER at 3-5-13. These are very minor comments, and not ones that create genuine, material disputes likely to affect the NRC's findings. Even if one were to assume that low lake levels would occur exclusively during peak recreational periods, Petitioners provide no basis demonstrating that a 3% frequency of low lake levels would have a significant impact on recreational use. Certainly, there is nothing that would prevent the extension of boat ramps if low lake levels were to become an inconvenience, mitigating any impact entirely. Thus, Petitioners make no showing that VDEQ's comments are material to the NRC's findings, and hence make no showing that there is any genuine controversy.

b. Alleged Conflict Between Public and Private Use

Petitioners next allege that the ER fails to address the conflict between using Lake Anna for cooling and providing public access to the lake as a navigable waterway, because the public is not allowed full access to the Waste Heat Treatment Facility ("WHTF") portion of the lake. Pet. Contentions at 43. Petitioners assert, without any basis, that the WHTF constitutes navigable waters that are protected for the public by the Clean Water Act for all legitimate public uses. Id. These assertions are unsupported and wrong, both factually and as a matter of law. They establish no genuine dispute or admissible issue in this proceeding.

First, the WHTF does not constitute navigable waters but rather is a part of the NAPS facility. Under the Clean Water Act, the term "navigable waters" means the waters of the United States, including territorial seas. Under the EPA regulations defining waters of the United States,

Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

40 C.F.R. § 122.2.⁴⁶ It should be noted that the EPA has withdrawn the definition of cooling pond in 40 C.F.R. § 423.11(m), and permitting authorities determine whether cooling ponds constitute a waters of the United States on a case-by-case basis.⁴⁷ Consistent with the EPA regulations, Virginia's State Water Control Board considers the WHTF as NAPS's treatment system, and not as surface waters.⁴⁸

Second, nothing in the CWA creates a public right of access to any body of water. The objective of the Clean Water Act is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Thus, the purpose of the Clean Water Act is to maintain water quality, not to create any right of access. None of the provisions cited by Petitioners establishes any right of access.⁴⁹

⁴⁶ 40 C.F.R. § 122.2 states.

This exclusion applies only to manmade bodies of water which neither were originally created in waters of the United States (such as disposal area in wetlands) nor resulted from the impoundment of waters of the United States.

However, note 1 to this rule states,

At 45 FR 48620, July 21, 1980, the Environmental Protection Agency suspended until further notice in Sec. 122.2, the last sentence, beginning "This exclusion applies . . ." in the definition of "Waters of the United States." This revision continues that suspension.

Therefore, waste treatment facilities are not waters of the United States even if they resulted from impoundment.

⁴⁷ See EPA Memorandum from R. Perciasepe, Ass't Administrator, to W. Cunningham, Director, Water Management Division, "Waters of the United States" Determination for a Proposed Cooling Pond Site in Polk County, Florida" (Dec. 13, 1993), attached as Exhibit C hereto.

⁴⁸ Letter from R. Burton, State Water Control Board, to J. Bertron, Lake Anna Civic Ass'n (Feb. 21, 1992), attached as Exhibit D hereto.

⁴⁹ Petitioners refer to CWA sections 101, 302, and 402 (33 U.S.C. §§ 1251, 1312, 1342), and 40 C.F.R. § 130.3, as stating "that all navigable waters are protected for the public for all legitimate uses." Pet. Contentions at 43. None of these sections contain such a statement. Section 302 of the CWA does require the establishment to water-quality related effluent limitations if discharges of pollutants from a point source would interfere the maintenance of that water quality which, inter alia, allows recreational activities (see 33 U.S.C. § 1312); and 40 C.F.R. § 130.3 provides for the establishment of water quality standards for bodies of waters that take into consideration their use. These provisions relate to the establishment of effluent limitations and standards, and do not create any public access rights. Thus, Petitioners provide no legal basis for their contention. Moreover, NAPS holds an VPDES permit issued by the State establishing the conditions which it must meet to assure compliance with the CWA. See ER at 3-2-33; NUREG-1437, Supp. 7, at 2-17. The NRC is barred by section 511(c) of the Clean Water Act from reviewing, pursuant to NEPA, any limitation or requirement established under the CWA. 33 U.S.C. § 1371(c). Therefore, any question concerning the sufficiency of the VPDES permit for the existing station is beyond the NRC's authority.

Finally, whether there is any public right of access to the WHTF is an issue that is outside of the scope of this proceeding, because it does not relate to any impact related to the construction or operation of new units. The WHTF is an existing facility established to support NAPS Units 1 and 2. The addition of new units would not expand the WHTF, affect its status as a treatment facility considered part of NAPS, or in any way alter public access. Consequently, there is no nexus between the construction and operation of new units and any impact on access to the WHTF.⁵⁰

F. Contention 3.4

Contention 3.4 alleges, incorrectly, that the ER fails to satisfy 10 C.F.R. § 51.45(b)(3) because it does not consider alternatives to the use of Lake Anna water for cooling Units 3 and 4, nor does it consider the no-action alternative. Pet. Contention at 44. This contention is inadmissible because it mischaracterizes and fails to address the information in Dominion's environmental report, is not supported by any basis, and fails to demonstrate the existence of a genuine dispute over a material issue.

In the basis, Petitioners state "the ER does not evaluate any alternatives for Unit 3 other than a once-through cooling system." *Id.* This assertion is clearly incorrect. Alternative heat dissipation systems are addressed in section 9.4.1 of the Environmental Report. As discussed in that section, the "base case" (i.e., Dominion's preferred approach) for Unit 3 cooling is a once-through system with its intake and pumping station on the North Anna Reservoir, and discharges to the head of the existing discharge canal. Section 9.4.1 compares this base case with and evaluates the following alternative heat dissipation systems for Unit 3: once-through system

⁵⁰ NEPA does not require evaluation of effects that will be unaffected by the proposal. Burbank Anti-Noise Group v. Goldschmidt, 623 F.2d 115, 116-17 (9th Cir. 1980), *cert. denied*, 450 U.S. 965 (1981). See also Virginia Electric and Power Co. (North Anna Power Station, Units 3 and 4), LBP-74-56, 8 A.E.C. 126, 169-170 (1974).

with a helper tower, natural draft cooling tower system, mechanical draft cooling tower system, spray ponds, and air cooled condensers. ER at page 3-9-13. The comparison of these alternatives is summarized in Tables 9.4-1 through 9.4-3 of the environmental report.⁵¹ A similar range of alternatives is considered for Unit 4 cooling (see ER at 3-9-13) and is summarized in Tables 9.4-4 through 9.4-6 of the Environmental Report).

Where, as here, a contention simply mischaracterizes the application and ignores information in the application directly responsive to the contention, the contention must be dismissed.⁵² In such a case, Petitioners have made no showing that there is any genuine dispute.⁵³ They have provided no documentation, expert opinion, or other references indicating any deficiency in Dominion's evaluation of alternative heat dissipation systems.

Petitioners' basis also asserts that the no-action alternative of no additional in-stream treatment and no expansion of NAPS must be considered. Petitioners' "no-action" alternative is akin to the consideration of need for power and alternative energy sources in connection with the deployment of new plants.⁵⁴ The Commission's rules do not require need for power or alternative energy sources to be addressed at the ESP stage. 10 C.F.R. § 52.17(a)(2) states that

⁵¹ The Environmental Report also evaluates thermal impact and water level enhancements (ER, § 9.4.1.1.3), alternatives to the intake system (ER, § 9.4.2.1) and alternatives to the discharge system (ER, § 9.4.2.2).

⁵² Private Fuel Storage, LBP-98-7, 47 NRC at 181. See also Duke Power Co. (Catawba Nuclear Power Station, Units 1 and 2), LBP-82-107A, 16 N.R.C. 1791, 1804 (1982) (rejecting a contention mischaracterizing the DES); Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-85-49, 22 N.R.C. 899, 913 (1985) (where a contention mischaracterizes the very document on which it rests, it must be rejected).

⁵³ In the basis for Contention 3.4, Petitioners assert that consideration of alternatives is also required by virtue of provisions in the Clean Water Act. Since Dominion's Environmental Report considers alternatives, this assertion is irrelevant. Moreover, there is no dispute that the intake for new units and the thermal discharge would have to comply the requirements and limitations established by Virginia pursuant to sections 316(a) and (b) of the Clean Water Act, 33 U.S.C. § 1326(a), (b).

⁵⁴ Need for power considers whether the environmental impacts of a new nuclear plant should be avoided because the power is not needed. Consideration of alternative energy sources consists of examining whether the environmental impacts of a new nuclear plant should be avoided because there is a better means of providing the power.

the environmental report for an ESP application is not required to address the benefits of the facility or need for power. The Commission has also explained that consideration of alternative energy sources may be deferred under the current ESP rules rule, because this topic does not address the environmental effects of construction and operation of the reactor, which is the focus of the environmental report for an ESP. 68 Fed. Reg. at 40,029.

The exclusion of these issues at the ESP stage is clearly appropriate, because they do not relate to whether a proposed site is suitable (the focus of the ESP proceeding), but to whether a new nuclear plant should be built (a matter appropriately considered when there is a proposal to build). Stated another way, “no expansion of NAPS” is not the no-action alternative at the ESP stage, because “expansion of NAPS” is not the proposed action. The Commission has made it clear that the “proposed action of issuing an ESP is not the same as the ‘proposed action’ of constructing and operating a nuclear power plant.” 68 Fed. Reg. at 40,029.⁵⁵

In sum, Petitioners’ assertion that “no NAPS expansion” must be considered in the Environmental Report is an attempt to introduce an issue beyond the scope of the proceeding and must accordingly be rejected.

⁵⁵ No-action on a proposed ESP is non-issuance of that permit (i.e., declining to determine whether a proposed site is suitable for new nuclear plants). In this context, no-action would accomplish none of the benefits intended by the ESP process (early resolution of siting issues before large sums are invested in new plant design and construction, early resolution of issues on the environmental impact of construction and operation of reactors that fall with the site parameters, and the ability to bank sites on which nuclear plants may be located.) See 68 Fed. Reg. at 40,029. This no-action alternative would also avoid no significant environmental impacts, because no such impacts are caused by a site suitability determination. Consequently, no-action in the context of an ESP application is not a material issue.

V. SELECTION OF HEARING PROCEDURES

The Initial Prehearing Order in this proceeding granted Petitioners the opportunity to address the selection of hearing procedures in accord with 10 C.F.R. § 2.309(g). Pursuant to 10 C.F.R. § 2.309(g), a petitioner who relies on 10 C.F.R. § 2.310(d) – i.e., a petitioner seeking to have a proceeding conducted under the Subpart G procedures – has the burden of demonstrating “by reference to the contentions and bases provided and the specific procedures in Subpart G of this Part, that resolution of the contention necessitates resolution of material issues of fact which may be best determined through the use of the identified procedures.”

Petitioners have not addressed the selection of hearing procedures, presumably reflecting their recognition the 10 C.F.R. Part 2, Subpart L procedures are appropriate. Clearly, Petitioners have not met their burden of demonstrating that the procedures are appropriate. Moreover, none of the contentions would necessitate “resolution of issues of material fact relating to the occurrence of a past activity, where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness material to the resolution of the contested matter.” See 10 C.F.R. § 2.310(d). Accordingly, if any contention is admitted, the hearing on such contention should be governed entirely by the procedures of Subpart L.

VI. CONCLUSION

For all of the above stated reasons, Petitioners' contentions should be rejected. Further, because Petitioners have failed to advance at least one admissible contention, their Petition to Intervene should be denied.

Respectfully submitted,



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Counsel for Dominion Nuclear North Anna, LLC

Dated: May 25, 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
)	
(Early Site Permit for North Anna ESP Site))	ASLBP No. 04-822-02-ESP

CERTIFICATE OF SERVICE

I hereby certify that copies of "Dominion's Answer to Petitioners' Contentions," dated May 25, 2004, were served on the persons listed below by deposit in the U.S. mail, first class, postage prepaid, and where indicated by an asterisk by electronic mail, this 25th day of May, 2004.

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David R. Lewis


Dominion

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January 12, 2004

Ms. Ellie Irons
 Program Manager
 Office of Environmental Impact Review
 Virginia Department of Environmental Quality
 629 East Maine Street, 6th Floor
 Richmond, VA 23219

52-0008

**Re: Federal Consistency Certification Under Coastal Zone Management Act
 Virginia Coastal Resources Management Program
 North Anna Early Site Permit Application**

Dear Ms. Irons:

Thank you for discussing the Federal Consistency Certification for North Anna's Early Site Permit with us and the NRC staff on January 7, 2004. The certification, which we submitted to your office on November 6, 2003, was for the Commonwealth's review and concurrence.

Based on this discussion, we understand that the Commonwealth would prefer to await NRC's issuance of the draft environmental impact statement (DEIS) before deciding whether to concur with our consistency certification under the Coastal Zone Management Act. Accordingly, Dominion Nuclear North Anna has agreed to withdraw its certification and to resubmit it upon issuance of the DEIS. As we have agreed, and as permitted by 15 C.F.R. § 930.60(a)(3), the time-clock for the State's review of the consistency determination will not commence until this re-submittal. Pursuant to this agreement, Dominion Nuclear North Anna hereby withdraws its certification.

The withdrawal of the certification does not affect the NRC's request for comments on the scope of the DEIS. In addition, we would at any time welcome comments that you may have either on the environmental report included as part of the Early Site Permit Application before the NRC, or any informal comments that you may have based on your initial review of the Coastal Zone Management Act certification before it was withdrawn.

If you have any comments, or if we can be of any other assistance, please contact Jud White at (804) 273-2948 or Tony Banks at (804) 273-2170.

Sincerely,

Pamela F. Faggert

cc: Michael Murphy - VDEQ
 → Andy Kugler - NRC

DO74

Dominion Nuclear North Anna, LLC
5000 Dominion Boulevard, Glen Allen, VA 23060



March 31, 2004

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Serial No. 04-194
ESP/JDH
Docket No. 52-008

DOMINION NUCLEAR NORTH ANNA, LLC
NORTH ANNA EARLY SITE PERMIT APPLICATION
REVISED APPROACH FOR UNIT 4 NORMAL PLANT COOLING

During a February 18, 2004 conference call, Dominion Nuclear North Anna, LLC (Dominion) advised Mr. A. Kugler, NRC Environmental Project Manager for Dominion's North Anna Early Site Permit application, of Dominion's intent to limit the plant cooling options for a potential Unit 4 at the North Anna ESP site to closed-cycle cooling employing dry towers. This letter confirms Dominion's decision. This more restrictive approach eliminates the use of Lake Anna as a source of make-up water for Unit 4 cooling as well as the potential need to rely on external water sources during drought conditions. Enclosure 2 to this letter summarizes the changes in the environmental impacts resulting from this more restrictive approach.

The original approach to providing plant cooling is described in the North Anna ESP application's Environmental Report, Section 3.4.1.1, Normal Plant Cooling. The section describes the use of Lake Anna as the cooling water supply (using the North Anna Reservoir portion of Lake Anna) and the primary heat sink (using the Waste Heat Treatment Facility portion of Lake Anna) for Unit 3, and the use of a closed-cycle cooling system such as wet cooling towers for Unit 4. Make-up water for the closed-cycle Unit 4 system is described as potentially coming from the North Anna Reservoir, and supplemented by an unspecified external source under certain drought conditions.

Going forward, the base case for heat dissipation for Unit 4 is revised from an approach that relies on the use of wet cooling towers to one that relies on the use of dry towers. This revision eliminates the need for obtaining make-up water from Lake Anna or from another external source.

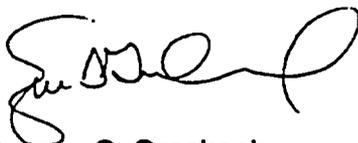
The Unit 3 approach and source of normal cooling water as described in the ESP application is unaffected by this decision.

It was deemed appropriate to provide notice of our revised approach at this time so that its implications could be factored into NRC's ongoing review activities. The North Anna ESP application will be revised to reflect the change and a revision submitted.

Serial No. 04-194

If you have any questions or require additional information, please contact us.

Very truly yours,



Eugene S. Grecheck
Vice President—Nuclear Support Services

Enclosures:

1. NRC Correspondence Affirmation Form
2. Revised Approach for Unit 4 Normal Plant Cooling

Commitments made in this letter:

Revise the North Anna ESP application to reflect the revised approach to Unit 4 normal plant cooling.

c w/enclosures:

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Mr. M. T. Widmann
NRC Senior Resident Inspector
North Anna Power Station

Ms. Ellie Irons
Virginia Department of Environmental Quality
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P.O. Box 10009
Richmond, VA 23240

Serial No. 04-194
Enclosure 1
NRC Correspondence Affirmation

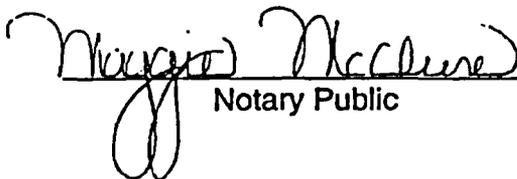
COMMONWEALTH OF VIRGINIA

COUNTY OF HENRICO

The foregoing document was acknowledged before me, in and for the County and Commonwealth aforesaid, today by Eugene S. Grecheck, who is Vice President, Nuclear Support Services of Dominion Nuclear North Anna, LLC. He has affirmed before me that he is duly authorized to execute and file the foregoing document on behalf of Dominion Nuclear North Anna, LLC, and that the statements in the document are true to the best of his knowledge and belief.

Acknowledged before me this 31st day of March, 2008

My Commission expires: 3-31-08



Notary Public

(SEAL)

Serial No. 04-194

Enclosure 2

Revised Approach for Unit 4 Normal Plant Cooling

Serial No. 04-194
Enclosure 2

REVISED APPROACH FOR UNIT 4 NORMAL PLANT COOLING

The Environmental Report section 3.4.1.1, Normal Plant Cooling, currently states the following:

"A once-through cooling system that uses the North Anna Reservoir as the cooling water supply and the WHTF as the primary heat sink would be used for the normal plant cooling of the new Unit 3, a closed-cycle cooling system would be used for the new Unit 4. The Unit 4 system would use mechanical or natural draft towers for heat dissipation, and makeup water could potentially come from the North Anna Reservoir supplemented by an external source."

This section goes on to state:

"...the net inflows to the lake may not be able to sustain both the supply of makeup water to the Unit 4 cooling towers and the circulating water to the once-through units (Units 1, 2 and 3). If both the existing units and the new units were to continue operation through the critical flow periods, an external water source would be required to temporarily supplement the makeup water supply for Unit 4. The requirement of the external water supply and the environmental impact of bringing this water to Unit 4 would be assessed during detailed engineering and described in the COL application. A dry cooling system for Unit 4 would also be evaluated. Since there would be minimal makeup water requirement and no blowdown discharge to the WHTF from a dry cooling system, impacts to Lake Anna would be minimal."

Dominion has decided to revise the application to eliminate uncertainty concerning the adequacy of the Unit 4 makeup sources. The base case for heat dissipation for Unit 4 will be changed from wet cooling towers to dry towers.

Under this approach, exhaust from the plant's steam turbines would be directed to a surface condenser inside the power block. The surface condenser would be cooled by a closed loop of circulating water that is pumped to the dry towers located to the west of the power block within the ESP site. The closed loop of circulating water would be cooled by ambient air in dry towers (finned fan coolers) that use electric motor driven fans to dissipate heat from the closed loop circulating water to the atmosphere. This approach eliminates the need for makeup water from the North Anna Reservoir or from an external source. There is also no continuous blowdown to the WHTF from a dry tower system.

Serial No. 04-194
Enclosure 2

Environmental Impacts of Dry Towers for Unit 4 -

The September 25, 2003 North Anna ESP application was reviewed to identify any changes in the environmental impacts described in the original application due to the decision to use dry towers as the base case for Unit 4 cooling. Changes in environmental impacts were identified in the areas of water use, land use, noise, aesthetics, terrestrial ecology, and aquatic ecology. A summary of the environmental impacts in each of those areas is provided below.

Water Use –

The dry tower system has no evaporative water losses, requires no makeup water, and has no blowdown discharge compared to mechanical draft (or natural draft) cooling towers. Makeup water from Lake Anna Reservoir or an external source would not be required. The volume of water available for release from the North Anna dam would be greater and the lake levels would be less affected during periods of extended drought. Further, the ambient levels of total dissolved solids and temperatures in the lake would be unaffected by blowdown. Impacts on water use, water users, and water quality are therefore small.

Land Use –

The dry tower system would be situated within the confines of the existing site so the impacts are considered to be small to none. Using a conservative basis, the footprint of the dry tower system would be approximately 960 feet wide and 1060 feet long occupying 1,017,600 square feet or 23.4 acres (9.45 hectares). This footprint is less than the area that would be occupied by the power blocks for Units 3 and 4 (43.7 acres or 17.7 hectares). For comparison, the NAPS property comprises 1803 acres, of which about 760 acres are covered by water.

Noise –

The dry tower system would generate operational noise from fan operation. The noise contribution from a dry tower system would produce impacts below the NRC-defined significance levels (65dBA) at the exclusion area boundary. Construction noise-related impacts would be small.

Aesthetics –

The dry tower system would be wholly situated on the existing NAPS site and its primary external impact would be the discharge of heated air and noise to the atmosphere. Each of the several structures in the dry tower system could be up to 150 feet tall. The visual impact would be small since it would be located adjacent to the power block with large structures that would be approximately the same height or taller.

Serial No. 04-194
Enclosure 2

Terrestrial Ecology –

The dry tower system uses air, rather than water, for cooling. The system is sized to fit within the existing construction footprint of the ESP site, so there would be no additional impacts to terrestrial ecosystems on site beyond those already evaluated. Fogging, icing, or salt deposition on vegetation would not occur with the dry tower system. The towers would be about 150 feet tall, and would produce operational noise and air movement. At this height and with fan noise and air deterrents, bird collision impacts would be small to none. While bird and wildlife use of the area in the immediate vicinity of the facilities is expected to be minimal, as the noise levels drop with distance from the fans, wildlife populations would be unaffected.

Aquatic Ecology –

A dry cooling tower for Unit 4 would require no water from Lake Anna. No impingement or entrainment of fish would occur as a result of the operation of Unit 4 with dry cooling, and no adverse impacts would result.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 13 1993

OFFICE OF
WATER

MEMORANDUM

SUBJECT: "Waters of the United States" Determination for A
Proposed Cooling Pond Site in Polk County, Florida

FROM: Robert Perciasepe
Assistant Administrator *RP Perciasepe*

TO: W. Ray Cunningham, Director
Water Management Division

This memorandum responds to your March 5, 1993, request for assistance in making the decision whether a cooling pond proposed for construction in Polk County, Florida, by the Florida Power Corporation (FPC), will be a "water of the United States" and thus subject to the Clean Water Act (CWA), including National Pollutant Discharge Elimination System (NPDES) requirements.¹ After reviewing this question, I have concluded that due to ambiguities in the existing regulation and apparent lack of national consistency, EPA should begin rulemaking development to air the policy issues and clarify the jurisdictional status of steam electric cooling ponds. In the interim, EPA Region IV may continue to conform its permitting decisions to its past practice.

In the last six months, EPA Headquarters and Region IV have held a series of meetings on this topic. We have gathered information concerning the proposed FPC cooling pond as well as EPA's jurisdictional treatment of cooling ponds across the Regions. We also received additional information and expressions of interest in this matter from the State of Florida, the utility industry, selected environmental groups, and members of the public. This information, however limited, has suggested a need to clarify the jurisdictional status of steam electric cooling ponds through rulemaking development and input from all interested persons.

¹A second smaller cooling pond is also proposed for construction in Polk County, Florida, by the Tampa Electric Company (TECO). EPA Headquarters' information on this cooling pond is limited; however, the directions provided in this memorandum would also apply to the TECO cooling pond.

Proposed FPC Cooling Pond

Based upon the information currently available, it appears that the Florida Power Corporation proposes to construct a 3000-megawatt steam electric generation plant in Polk County, Florida, on 8000 acres currently used for phosphate mining operations. The plant site will include a proposed four-square mile (2600-acre) steam electric cooling pond which will likely be established partially on existing wetlands that are located within clay treatment ponds currently used for mining operations. The proposed site was selected over other possible sites through a consensus approach including local environmental groups.

The mining companies presently operating the proposed site have requested State approval of a reclamation plan under which approximately 80% of mining operation areas would be reclaimed to uplands; the remainder would include wetlands. Our latest information is that the utility company has requested modification of the reclamation plan under which 100% of the site could be converted to uplands. Once mining use ceases, EPA and the Corps must decide whether to assert jurisdiction over existing wetlands and whether a CWA section 404 permit may be needed for discharges associated with construction of the cooling pond, among other activities.

Florida Power plans to design the cooling pond to allow no point source discharges from the pond to other surface waters of the U.S. The power company represents that the cooling pond will be an isolated artificial water body that will not be open for any recreational purposes. The company also indicates that construction of a steam electric cooling pond rather than a cooling tower will consume less water and may be significantly less costly for the utility.

Make-up water for the proposed steam electric cooling pond is expected to include cooling water blowdown of approximately four MGD and commercial wastewater (including probable effluent from citrus growers) of approximately two MGD. The proposed steam electric cooling pond is also expected to receive approximately 20,000 gallons of secondary sewage effluent and three million gallons of tertiary-treated municipal effluent daily from local publicly owned treatment works.

Polk County contains many wetlands. This part of the State is inhabited by endangered species and is regarded as a pathway for migratory bird overflights. An EPA wetlands biologist and a Corps field inspector have observed the presence of endangered species, vegetated wetlands, and migratory waterfowl on the proposed plant site. Areas adjacent to the proposed cooling pond site may also attract birds/species and contain wetlands. The Endangered Species Act and the Migratory Bird Treaty Act may also

provide some environmental protection for the birds and other species in the area.

Relevant NFDOS Regulations

40 C.F.R §122.2 establishes criteria for determining whether a given waterbody is a "water of the United States." For example, paragraph (c) of §122.2 provides that "[a]ll other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, 'wetlands,' sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce . . ." are "waters of the United States." Since 1980, §122.2 has excluded from the definition of "waters of the United States" "[w]aste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) . . . (emphasis supplied)."

Thus, under the definition of "waters of the United States" as revised in 1980, steam electric cooling ponds as defined under §423.11(m) that met the requirements of §122.2 were "waters of the United States" and could not be considered to be excluded waste treatment systems. In making the decision as to whether a given steam electric cooling pond is a "water of the United States," the permitting authority, however, determined on a case-by-case basis whether the §423.11(m) steam electric cooling pond otherwise met the definition of "waters of the United States." Under paragraph (c) of §122.2, for example, a permitting authority could determine that the use of the cooling pond would or could affect interstate commerce. There were, and are, various ways to establish a nexus to interstate commerce. Such findings can be highly fact-specific.³

In 1982, when the national effluent limitations guidelines for steam electric generating facilities were revised, the

³For example, based on Commerce Clause authority, EPA may extend CWA jurisdiction to waters used by migratory birds and endangered species, including the habitat which is essential to maintaining them. Last summer, in Hoffman Homes, Inc. v. Administrator, No. 90-3810, slip op. at 8-10 (July 19, 1993), for example, the Seventh Circuit upheld the validity of the migratory bird nexus for asserting CWA jurisdiction over isolated waters. Though disagreeing with EPA on the application of the particular facts under this standard, the court agreed that EPA could reasonably interpret the definition of "water of the United States" to include waters based on potential connection to interstate commerce. The court also agreed that bird use could provide the connection between a water and interstate commerce.

definition of "cooling pond" at 40 C.F.R. 5423.11(m) was deleted. EPA did not, however, revise the regulatory definition at 40 C.F.R. §122.2, with the cross reference to §423.11(m) steam electric cooling ponds.

Jurisdictional Treatment of Existing Cooling Ponds

EPA's Regional Offices recently provided us with readily available information concerning the jurisdictional treatment of steam electric cooling ponds. This limited information suggests that many steam electric cooling ponds are not currently considered to be "waters of the United States." We believe this result could be due to several factors. On a case-by-case basis, the Regions may have made the determination that specific steam electric cooling ponds do not meet the criteria for a "water of the United States" as required under §122.2. It also appears, however, that this result could reflect the age of the cooling ponds relative to the evolving definition of "waters of the United States" (some cooling ponds were first permitted in the early 1970's before EPA revised the definition of "waters of the United States" to provide the steam electric cooling pond exception to the waste treatment system exclusion); or confusion over the continuing validity of the cooling pond exception to the waste treatment exclusion due to the deletion of the definition of "cooling pond" at 40 C.F.R. §423.11(m).

Additional Considerations for the Rulemaking Proceeding

Through a rulemaking proceeding designed to clarify the definition of "waters of the United States," EPA may also obtain the public's views as to whether policy or technical factors should affect the jurisdictional status of steam electric cooling ponds. A rulemaking proceeding may also facilitate consideration of whether any changes to the CWA are necessary to address such concerns. EPA may also consider whether it is appropriate to "grandfather" the status of existing cooling ponds. In addition, EPA may wish to consider whether other clarifications to the regulatory definition of "waters of the United States" are necessary.

Interim NPDES Permitting Determinations

Developing a rule which clarifies the jurisdictional status of cooling ponds will take time. In the meanwhile, given the deletion of the definition of steam electric cooling ponds from EPA's regulations, the past practice in Region IV, and the ambiguity in the regulation as reflected in the apparently inconsistent national practices, you have some discretion in instances where you have to make NPDES decisions concerning particular facilities. Specifically, while it would be appropriate to regulate as "waters of the United States" a steam electric cooling pond based on an actual or potential connection

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to interstate commerce, you also have the option, given the deletion of the steam electric cooling pond definition, of interpreting the waste treatment system exclusion as encompassing all steam electric cooling ponds or of taking into account the fact that a particular pond has a dual purpose of cooling and of treatment of other wastes.³ When additional rulemaking is completed, permitting authorities such as Region IV will need to consider what effect the new regulation has upon existing steam electric cooling ponds. Finally, you should also continue to conform all interim permitting decisions to the requirements of section 404 of the CWA, where applicable.

I would be happy to discuss this matter further with you. In the meantime, my staff is available to work with your office, on any aspect of this issue that would be helpful.

cc: Water Management Division Directors, Regions I-III, V-X
Water Permits Branch Chiefs, Regions I-X
Michael Cook
Robert Wayland
Tudor Davies
Susan Lepow

³Based on the available facts regarding the proposed FPC steam electric cooling pond, it would appear that this particular cooling pond, once created, may meet one or more of the current criteria for demonstrating an actual or potential connection to interstate commerce, e.g., since it would or could be used as habitat by migratory birds and/or endangered species. However, given the current ambiguity regarding the applicability of the waste treatment system exclusion to steam electric cooling ponds, the Region would have the discretion ultimately to determine that NPDES permitting requirements do not apply to the FPC pond based on the application of such exclusion.



COMMONWEALTH of VIRGINIA
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FEB 21 1992

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Mr. Jack R. Bertron
President
Lake Anna Civic Association, Inc.
P. O. Box 217
Mineral, Virginia 23117

Dear Mr. Bertron:

Thank you for your letter of February 9, 1992, regarding the Board's regulatory requirements for the Virginia Power waste heat treatment lagoons at Lake Anna.

Our permit regulation requires that point source discharges to surface waters must obtain a Virginia Pollutant Discharge Elimination System (VPDES) permit. Waste treatment systems, including treatment ponds or lagoons, are not considered as surface waters. Regarding the Virginia Power situation, we have issued a VPDES permit for the discharge from the waste heat treatment lagoons to Lake Anna. Thus, we consider the waste heat treatment lagoons as their treatment system and not as surface waters. The permit sets forth requirements that the discharge from the waste heat treatment lagoons must achieve to meet the water quality standards for Lake Anna.

If you need further information or assistance, please contact me or Brad Chewing of our Valley Regional Office (VRO). Mr. Chewing may be reached at (703) 828-4016.

Sincerely,


Richard N. Burton
Executive Director

cc: Mr. R. Bradley Chewing, Regional Director, VRO
Mr. Larry G. Lawson, Director
Office of Water Resources Management, SWCB