February 8, 2007

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

NRC STAFF LEGAL BRIEF IN RESPONSE TO LICENSING BOARD'S SAFETY-RELATED QUESTIONS

INTRODUCTION

Pursuant to the Atomic Safety and Licensing Board ("Board") Order dated January 18, 2007, in this proceeding, the staff of the Nuclear Regulatory Commission ("Staff") hereby responds to the Board questions. Order (Issuing Safety-Related Questions), unpublished, January 18, 2007 ("Order"). The Board's questions generally pertain to subjects discussed in NUREG-1835, "Safety Evaluation Report for an Early Site Permit (ESP) at the North Anna ESP Site," September 2005 ("SER"). The Board questions address both technical and legal matters, and the Board instructed the parties to submit their responses to the technical questions "in exhibit form, under oath or affirmation," and to submit their answers to the legal questions "separately and individually in a single brief or legal memorandum signed by counsel[.]" Order at 2. As the Board clarified at a prehearing conference on January 25, 2007, in the event the Staff concluded that a particular question included both legal and technical elements, the Staff's response could be divided between the brief or accompanying exhibit, as appropriate. Tr. at 557-58, 568-69.

The Staff's responses to the Board's legal questions (or legal elements of technical questions) are addressed below. Attached as Exhibit A are the Staff's responses to the Board's technical questions (or technical elements of legal questions) in spreadsheet format, with the

author, subject matter experts, and key documents identified. Exhibit A also includes affidavits of the Staff witnesses identified as authors of the Staff responses, which include their statements of professional qualifications.

RESPONSES TO LEGAL QUESTIONS

Board Question 27:

> The SER states that any [combined license ("COL")] or [construction permit ("CP")] applicant referencing the SER dispersion calculations for routine releases "should verify that the specific release point characteristics, specific locations of receptors of interest used to generate the ESP routine release atmospheric dispersion site characteristics bound the actual values provided at the COL or CP stage" and makes this COL Action Item 2.3-3. The SER also states that this will be a site characteristic in any ESP. What happens if, at the COL stage, the release point characteristics or locations of receptors are not as specified in the ESP? Would a contention at the COL stage, alleging that the actual values are different from those used at the ESP stage, be admissible?

Staff Response:

If, at the COL stage, the release point characteristics or locations of receptors do not fall within those specified in the ESP, the COL applicant will need to request a variance from this element of the permit. *See* 10 C.F.R. §§ 52.39(b), 52.93(b); *see also* 10 C.F.R. § 52.79(a)(1) (the COL applicant must submit "information sufficient to demonstrate that the design of the facility falls within the parameters specified in the early site permit[.]") In determining whether the variance should be granted, the Staff must "apply the same technically relevant criteria as were applicable to the application" for the original permit. *See* 10 C.F.R. § 52.39(b). Moreover, issuance of the variance is subject to challenge during the subsequent COL proceeding "in the same manner as other issues material to those proceedings." *Id.*

Section 52.39(a) suggests that a contention could be within the scope of the COL proceeding if the contention is that the reactor is not "within" a particular site parameter in the permit, because such a claim "may be litigated in the same manner as other issues material to the proceeding." 10 C.F.R. § 52.39(a)(2)(I). However, an assertion that a reactor design value is merely "different from" a site characteristic established at the ESP stage, without more, is not

necessarily a claim that the value does not fall "within" the site characteristic specified in the permit. In addition, to be admissible, a contention proposed in a COL proceeding asserting that the reactor design does not fall within a site characteristic established in the ESP proceeding would need to satisfy all of the contention admissibility criteria set forth in 10 C.F.R. § 2.309(f).[1] *See* 10 C.F.R. § 52.39(a)(2) (at the COL stage, matters resolved in the ESP proceeding are resolved "unless a contention is admitted that the reactor does not fit within one or more of the site parameters included in the site permit[.]" (emphasis added)).[2]

Board Question 50D:

> Absent the foregoing information (concerning uncertainty in the characteristics of radionuclide migration in the subsurface at the ESP site), should an ESP be granted? How does this comport with the Commission's statement that "where adequate information is not available, early site permits will not be issued?" 54 Fed. Reg. 15372, 15378 (April 18, 1989).

Staff Response:

Imposition of a permit condition in circumstances such as exist here, can be an appropriate way of addressing some types of unavailable site information, if restrictions on the reactor design will address the safety issue to which the siting information is directed. In such circumstances, the restriction on reactor design embodied in the permit condition obviates the

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[1] These criteria include a demonstration that the issue is "material to the findings the NRC must make to support the action that is involved in the proceeding" and that there is "sufficient information to show that a genuine dispute exists with the [applicant] on a material issue of law or fact." 10 C.F.R. § 2.309(f)(1)(iv), (vi). Therefore, an admissible contention would need to do more than merely indicate that the value of a design characteristic "differs from" the site characteristic established at the ESP stage; it would need to demonstrate that the difference is material to the NRC's finding and it would need to articulate a basis sufficient to show that a genuine material dispute exists. (This circumstance assumes that the COL applicant has not requested a variance from the ESP concerning this specific element; as stated above, issuance of the variance is, by regulation, subject to litigation in the same manner as other issues material to the COL proceeding. *See* 10 C.F.R. § 52.39(b).)

[2] As distinguished from the filing of a contention that a reactor does not fit within one or more of the site parameters included in the site permit, Section 52.39(a) also authorizes the filing of a "petition" alleging that "the site is not in compliance with the terms of the early site permit." 10 C.F.R. § 52.39(a)(2), (a)(2)(ii). However, this situation refers to disputes concerning site compliance, not whether the design falls within the ESP site characteristic values.

need for the information. As indicated by the related responses in Attachment A [subsections A-C of Board Question 50], the Staff determined that adequate information was available to make a determination with respect to the suitability of the proposed North Anna ESP site because the Staff found that achievable, feasible limitations on the design, as embodied in permit conditions, would enable a CP or COL applicant to meet the necessary safety requirements. Put another way, the Staff did not identify any factors specific to the North Anna ESP site that would preclude the siting of a reactor having characteristics that fall within the characteristics of the site as described in the SER, and as subject to the additional specified permit conditions.

With reference to the specific topic of Board Question 50D, subsurface radionuclide migration, characterization of factors important to this topic, such as soil, sediment, and rock characteristics, is unnecessary if the design precludes inadvertent releases of liquid radioactive effluents during normal operation. Permit Condition 4 would impose such a requirement on the design. Accordingly, enough information is now available about the North Anna site for the Staff to conclude that the permit conditions will appropriately and adequately address the uncertainty associated with the limited information available concerning hydrological radionuclide transport.

Turning to the last portion of Board Question 50D, the Board noted that the Commission, in the Statements of Consideration for Part 52, stated that ESPs should not be issued if "adequate information is not available." Early Site Permits; Standard Design Certifications; and Combined Licenses for Nuclear Power Reactors, 54 Fed. Reg. 15,372, 15,378 (Apr. 18, 1989) ("Final Part 52 SOC"). The Commission made this statement in response to comments that the proposed twenty-year term of an ESP could not be supported by adequate information. Specifically, the comments compared the twenty-year ESP term to the five-year term of partial site suitability decisions made pursuant to 10 C.F.R. § 2.606 and

10 C.F.R. Part 52, Appendix Q. *See* Final Part 52 SOC, 54 Fed. Reg. at 15,378. In response, the Commission noted that the 5-year term for partial decisions on site suitability under § 2.606 was not a function of the reliability of available information, but rather was limited because those decisions "may only resolve isolated site issues and anticipate site utilization in the very near term." *Id*. Accordingly, the Commission's statement that ESPs should not be issued if "adequate information is not available" appears directed to the information necessary to support analysis of an ESP term up to twenty years, and should not be taken as an instruction to deny an application rather than use permit conditions to address particular issues.

In this instance, the North Anna SER and EIS contain the Staff's findings with a respect to a wide range of issues, both safety and environmental, that bear on site suitability. The Staff's conclusions with respect to the North Anna ESP application are not limited to isolated site issues, nor have any required site-suitability determinations been deferred to a later date. The Staff has concluded that all required site-suitability determinations can be made based on available information, in concert with the specified conditions on the design. Therefore, the Staff's recommendation is not inconsistent with the Commission's statement in the Final Part 52 SOC.

Board Question 77:

> Table 11.1-1 refers to the Part 50 Appendix I doses as "objectives." Please explain how these objectives are included in the proposed ESP and whether they are legally enforceable. Please explain whether it would it be a violation to exceed these objectives.

Staff Response:

The dose objectives referenced in Table 11.1-1 would not be included in the terms of the ESP because a CP or COL applicant's compliance with these objectives is already subject to by 10 C.F.R. § 50.36a. *See* 10 C.F.R. §§ 52.81, 52.83. Section 50.36a requires licensees to have technical specifications that ensure compliance with 10 C.F.R. § 20.1301 and that provide for control and reporting of effluent releases. *See* 10 C.F.R. § 50.36a(a). Section 50.36a also

requires the licensee to "exert its best efforts to keep levels of radioactive material in effluents as low as reasonably achievable" ("ALARA") and refers to Appendix I for meeting this requirement. 10 C.F.R. § 50.36a(b). Further, Appendix I itself requires the licensee to investigate and report to the Commission if any quarterly releases are such that the resulting exposure would exceed one-half the annual design objective. *See* 10 C.F.R. Part 50, Appendix I.IV.A. Accordingly, there is nothing site-specific about these objectives that would necessitate their inclusion in the terms of the permit.

A licensee's failure to meet these objectives (by failing to comply with 10 C.F.R. Part 20 and with the technical specifications) would be addressed as a violation of NRC regulations or the operating license ("OL") or COL, but not of the ESP. The purpose of analyzing these objectives in the context of the ESP is only to ensure that these objectives can be met if a reactor is ultimately constructed at the ESP site.

Board Question 78:

> Table 11.1-1 refers to the Part 50 Appendix I doses on a per unit basis. Please explain whether it is your position that, since the Dominion group of companies would have four reactors on the site, it would be allowed to quadruple the amount of radiation it can release under Appendix I?

Staff Response:

The dose limits of 10 C.F.R. Part 50, Appendix I are generally expressed in per-unit terms. *See* 10 C.F.R. Part 50, Appendix I.II ("calculated annual total quantity . . . released from each light-water-cooled nuclear power reactor."). As discussed in the Statements of Consideration for Appendix I, although the Commission considered having the Appendix I standard explicitly encompass all reactors on a site, the final rule articulated the stated value as limiting each reactor. *See* Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents, 40 Fed. Reg. 19,439, 19,440 (May 5, 1975)("Appendix I SOC"). Consequently, so long as each reactor on a particular site can comply with those per-unit objectives, the general

Appendix I objectives are satisfied. Nonetheless, as explained below, the Staff does not consider the presence of four reactors on a site as inherently authorizing a "quadrupling" of the radiation exposure allowed, even though allowing licensees to satisfy the dose objectives on a per-reactor basis would be consistent with Appendix I's terms.

In the SOC for Appendix I, the Commission commented that even though it was not adopting per-site limits, "it is expected that the dose commitment from multi light-water-cooled reactors should be less than the product of the number of reactors proposed for a site and the per-reactor design-objective guides because there are economies of scale due to the use of common radwaste systems for multi-reactor sites which are capable of reducing exposures." Appendix I SOC, 40 Fed. Reg. at 19,441. This understanding is consistent with the ALARA principle found in both Appendix I and 10 C.F.R. § 50.36a. Moreover, the presence of multiple reactors at a site does not alter the requirement for the licensee to comply with the radiation protection standards of 10 C.F.R. Part 20 (which also embodies the ALARA principle, *see* 10 C.F.R. § 20.1101(b)) and the limits of 40 C.F.R. Part 190.

In view of the foregoing, radiation releases and subsequent exposures that might result from eventual construction and operation of new reactors at North Anna will be subject to a framework of regulations and guidance designed to both limit and minimize such releases and exposures. However, for the purposes of the ESP analysis, Table 11.1-1 of the North Anna SER does not represent a cumulative analysis for operations of all reactors on the site; it is only an analysis to determine that the proposed reactors would be able to meet the dose objectives for any individual offsite pursuant to Appendix I.

Board Question 79:

> Table 11.1-1 refers to the 40 CFR Part 190 environmental dose standards. Would it be a violation to exceed these standards? How will they be incorporated into the proposed ESP?

Staff Response:

The 40 C.F.R. Part 190 dose standards referenced in Table 11.1-1 would not be included in the terms of the ESP because an CP or COL applicant's compliance with these objectives is already governed directly by that regulation and by 10 C.F.R. Part 20, which requires "a licensee subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR Part 190 [to] comply with those standards." *See* 10 C.F.R. §§ 20.1301(e), 52.81, 52.83.[3] Accordingly, there is nothing site-specific about these objectives that would necessitate their inclusion in the terms of the permit. Failing to meet these objectives would be addressed as a violation of EPA or NRC regulations or both, not as a violation of the ESP. The purpose of analyzing these objectives in the context of the ESP is only to ensure that these objectives can be met if a new reactor is ultimately constructed.

Board Question 80

> Table 11.1-1 specifies that the 40 CFR Part 190 dose limits are for the entire site and apply to all operating units. How will the Part 190 25 mrem/yr total body dose limit be allocated between the two existing reactors (Units 1 and 2) and proposed Units 3 and 4? How will compliance be monitored and measured?

Staff Response:

The provisions of 40 C.F.R. Part 190 establish dose limits on exposure to any member of the public from uranium fuel cycle operations, including operation of light-water-cooled nuclear power plants. *See* 40 C.F.R. §§ 190.2, 190.10. Neither the applicable regulations (40 C.F.R. Part 190 and 10 C.F.R. § 20.1301) nor the associated Statements of Consideration[4] allude to a need to attribute shares of the dose considered under this provision to individual

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[3] Further, the NRC has established reporting requirements for those licensees subject to 40 C.F.R. Part 190 who exceed those standards. *See* 10 C.F.R. § 20.2203(a)(4).

[4] Environmental Radiation Protection Standards for Nuclear Power Operations, 42 Fed. Reg. 2858, 2858 (Jan. 13, 1977) (40 C.F.R. Part 190); Standards for Protection Against Radiation, 56 Fed. Reg. 23,360, 23,374 (Final Rule) (May 21, 1991) (10 C.F.R. § 20.1301).

units at a multi-reactor site. Moreover, the Staff does not allocate doses considered under Part 190 among multiple reactors on the same site for any reason; rather, the dose is considered to be a cumulative dose for all operations at a given site. Consequently, the Staff would consider the cumulative contribution of the two existing reactors as well as the two proposed units in assessing compliance with the 40 C.F.R. Part 190 dose limits, but it would not assign specific proportional limits to the individual units.

The portion of the Board's question concerning how compliance will be monitored and measured is addressed by the Staff as a technical question in Exhibit A.

Board Question 84:

> 10 CFR § 20.1301(a) specifies that "each licensee" shall conduct operations so that the TEDE to individual members of the of the public from the "licensed operation" does not exceed 100 mrem per year, exclusive of background. In the case of multiple reactors at a site, would it ever be possible to multiply the maximum dose allowed by the number of units so that a four unit site could provide an exposure up to 400 mrem per year to an exposed individual? If this is ever possible, under what conditions would it be allowed?

Staff Response:

No. Pursuant to 10 C.F.R. § 20.1301(e), NRC licensees are required to comply with the dose standards of 40 C.F.R. Part 190, and these standards (under which annual total body dose to any member of the public may not exceed 25 millirem) are more restrictive than the 100 mrem/yr standard in 10 CFR § 20.1301(a). Moreover, as mentioned in the Statements of Consideration for § 20.1301, the NRC considers a demonstration of compliance with the 40 C.F.R. Part 190 limits to be sufficient to demonstrate compliance with § 20.1301 for most licensed facilities. *See* Standards for Protection Against Radiation, 56 Fed. Reg. 23,360, 23,374 (May 21, 1991).[5]

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[5] Section 20.1301(a) applies to NRC licensees other than those operating power reactors, such as persons administering nuclear materials for medical reasons, who are not subject to § 20.1301(e) and 40 C.F.R. Part 190.

Board Question 95:

> Please explain how this statement in the SER [p. 13-44] comports with 10 CFR § 52.39(a)(1) which states that the "Commission may not impose new requirements, including new emergency planning requirements, on the early site permit or the site for which it was issued, unless the Commission determines that a modification is necessary either to bring the permit or site into compliance with the Commission's regulations and orders in effect at the time the permit was issued, or to assure adequate protection of the public health and safety or the common defense and security."

Staff Response:

The Staff's statement about applying "current requirements" responded to a statement that was made by the Applicant pursuant to a Staff Request for Additional Information ("RAI") and which the Staff discussed in section 13.3.3.11.1 of the SER. In its RAI response, the Applicant stated its understanding that relevant federal guidance on protective action recommendations ("PARs") (including Supplement 3 to NUREG-0654/FEMA REP-1) could change, and that its RAI response was submitted in the context of current guidance. *See* SER at 13-39. The discussion cited by the Board was intended to make clear that the Staff's review and approval of Major Feature J was not dependent on future changes in federal requirements or guidance concerning PARs; rather, the Staff relied on the Applicant's compliance with current requirements and guidance. *See* SER at 13-44.

The Commission may not impose new requirements on an ESP holder, including requirements concerning emergency planning, unless it meets the § 52.39 criteria for doing so – *e.g.*, it must determine that the change is necessary "to assure adequate protection of the public health and safety or the common defense and security." *See* 10 C.F.R. § 52.39(a)(1). The referenced Staff statement in the SER does not allow the NRC to impose any new requirements at the COL stage, either on the ESP or on the site. The statement merely acknowledges that having a COL applicant address the safety significance of updated Federal guidance related to protective action recommendations would assist the Commission in making its determination with respect to whether an adequate protection concern exists. Thus, a COL

applicant referencing a North Anna ESP is not required to compare PARs to revised guidelines, but it may choose to address the significance of such updated guidance in order to promote consistency with emergency plans at other facilities. A COL applicant may, of course, reflect newer, more stringent guidance in its emergency plans should it so desire. Accordingly, the comment in the SER does not conflict with the standards of § 52.39.

Board Question 96:

> Contrary to the statement in the SER, does 10 CFR § 50.39(a)(1) mean that the Applicant is immunized (grandfathered) against any more stringent regulatory requirements or guidance for up to 80 years (the term of the ESP (20 years) plus extensions (20 years) plus the term of any COL (40 years)) unless a change can be shown to be "necessary . . . to assure adequate protection of the public health and safety or the common defense and security?"

Staff Response:

As discussed above [in the response to Board Question 95], the statement in the SER does not conflict with the standards of § 52.39. With respect to the initial 20-year duration of the ESP and any extensions, however, the Board is correct that the regulations prohibit changes to the specific terms of the ESP or new restrictions on the site, absent a determination meeting the § 52.39 criteria.

The Staff, however, does not agree that the "immunization" an ESP is given by § 52.39 also extends through the term of a COL issued with reference to that ESP. An ESP is only in effect (and thus § 52.39(a)(1) is only applicable) during its specified duration and during a proceeding on a COL that is referencing it. *See* 10 C.F.R. §§ 52.27, 52.33. For a COL to be issued, all conditions of the ESP will have been shown to be met (except for those for which a variance is granted) and it will have been demonstrated that the applicant's design falls within the characteristics specified in the ESP. Consequently, the standards for modification of the

terms of a COL (whether by applicant request or Commission requirement) would be identified in regulatory provisions other than 10 C.F.R. § 52.39 (*e.g.*, 10 C.F.R. § 50.91).[6]

Furthermore, even if the Commission could only impose new requirements after meeting the § 52.39 criteria, a COL applicant might still be requested to assess the significance of any updated guidance as part of its application. As discussed above [in the response to Board Question 95], if the Commission considers it appropriate to make an assessment of a given technical issue subject to the § 52.39 review standards, the Staff does not believe that a request for information from a COL applicant on that matter constitutes the imposition of a new requirement. Based on the information and analysis in the COL application and on the Staff's associated review, the Commission may (or may not) determine that modification to the major feature approved in the ESP is warranted. Of course, if the Commission seeks modification, it must meet the § 52.39 criteria for doing so, *i.e*., the Commission must determine that the change is necessary is necessary "to bring the permit or the site into compliance with the Commission's regulations and orders applicable and in effect at the time the permit was issued" or is necessary "to assure adequate protection of the public health and safety or the common defense and security." *See* 10 C.F.R. § 52.39(a)(1).[7]

Board Question 97:

> The SER states, at page 13-49, that "the staff did not consider the extent to which future radiological protection procedures would address radiological protection and onsite

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[6] For COLs issued that reference a certified design, imposition of new requirements with respect to matters within the scope of the design certification is governed by the relevant provisions of 10 C.F.R. § 52.63, and Section VIII of the relevant design certification rule. For all other matters with respect to such COLs – as well as for COLs not referencing a certified design– imposition of new requirements is governed by the relevant provisions of 10 C.F.R. § 50.109.

[7] NRC regulations already require an applicant to evaluate its facility against applicable agency guidance (*e.g.*, the version of the Standard Review Plan (SRP) in effect 6 months before the docket date of the application). *See* 10 C.F.R. §§ 50.34(h), 52.79(b) (applied to COL applications by reference). Applicants are not required to follow that guidance, but if they decide not to do so, they must explain how their proposed alternatives provide an acceptable method of complying with the Commission's regulations. *See* 10 C.F.R. §§ 50.34(h)(2), (3), 52.79(b) (applied to COL applications by reference).

> contamination control functions." Would the Applicant be exempt from these future procedures (unless they are shown to be necessary to assure adequate protection of public health and safety)? Please explain.

Staff Response:

The statement in the SER does not refer to future regulatory procedures or guidance, but rather to the radiological protection procedures that the applicant may develop as part of its complete and integrated plans at the OL or COL stage. As described in the SER, the application stated that "Dominion would maintain dose records in accordance with the existing NAPS radiological protection procedures or future radiological protection procedures." SER at 13-45 (emphasis added). The Staff's review and approval of proposed Major Feature K did not consider the adequacy of future radiological protection procedures, but rather relied on the existing NAPS radiological protection procedures. *See* SER at 13-49. Therefore, review of the adequacy of future radiological protection procedures that may be developed by the applicant was not necessary for determining the sufficiency of this Major Feature. However, if the COL applicant does develop new radiological protection procedures, the Staff's review of their significance would be part of the evaluation of complete and integrated emergency plans at the COL stage.

Board Question 116 [General Statement]:

> Appendix A is described as "certain site-related items that an applicant will need to address at the combined license or construction stage" and that "these items . . .are more appropriately addressed at later stages."
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> 116A. Does Appendix A run afoul of 10 CFR § 52.39(a)(1), which states that an ESP is final and that thereafter "the Commission may not impose new requirements . . . on the site?" Please provide legal support and analysis.

Staff Response:

Appendix A to the North Anna SER includes Permit Conditions (A.1), COL Action Items (A.2), Site Characteristics (A.3), and Bounding Parameters (A.4). Permit Conditions are specifically-defined requirements that the Staff has determined are conditions for issuance of

the ESP; they include limitations on the design of the facility and requirements governing other future actions (*e.g.*, actions dependent upon State or local government approval) that are necessary for the Staff to reach its site suitability determination. The regulations clearly authorize the imposition of such conditions. *See* 10 C.F.R. § 52.24 ("[T]he Commission shall issue an early site permit, in the form and containing the conditions and limitations, as the Commission deems appropriate and necessary.") As these Permit Conditions are defined as part of the ESP and included in the permit itself, they would not be new requirements at a later stage. Similarly, the Site Characteristics and Bounding Parameters are defined at the ESP stage and are included in the ESP, so they also would not in any way be new requirements at the CP or COL stage. Again, the regulations clearly contemplate that an ESP will specify such matters. *See* 10 C.F.R. § 52.39(a)(2) (referring to "site parameters included in the permit"); 10 C.F.R. § 52.79(a)(1) (referring to "the parameters specified in the early site permit.")

As for COL Action Items, they also would not be considered as new requirements at the COL stage because they are identified now and will be incorporated in the ESP. However, in contrast to the Permit Conditions, Site Characteristics, and Bounding Parameters, the information requested in these COL Action Items was not a foundation for the Staff's required determinations with respect to issuance of the ESP. Unlike Permit Conditions, the COL Action Items are only information requirements; they are not prerequisites for meeting the requirements for issuance of an ESP or for remaining in compliance with the ESP once it is issued.[8] Rather, they are intended to assist the potential COL applicant in preparing, and the

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[8] The status of COL Action Items for an ESP, as described in the North Anna SER (NUREG-1835 at A-4), is consistent with the definition of COL Action Items in the design certification context. *See* 10 CFR Part 52, Appendix C.II.E.4, "Design Certification Rule for the AP600 Design," which states: "Combined license (COL) action items (combined license information), which identify certain matters that shall be addressed in the site-specific portion fo the final safety analysis report (FSAR) by an applicant who references this appendix. These items constitute information requirements but are not the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a

(continued...)

Commission in reviewing, a COL application that references the ESP. While COL Action Items may be "site-related," this is a function of the interaction between site conditions and design, *i.e.*, the design cannot be completed and construction cannot begin without obtaining certain information regarding the site. This information, however, is not used to determine whether the site is acceptable in the first instance. As stated in Appendix A.2, the purpose of COL Action Items is to "ensure that particular significant issues are tracked and considered during the review of a later application referencing any ESP that might be issued for the North Anna ESP site." SER at A-5.

Consequently, an applicant may depart from or omit these items if the departure or omission is identified and justified in the Final Safety Analysis Report ("FSAR") (analogous to the requirement in 10 C.F.R. § 50.34(h) to evaluate the application against the SRP). For example, depending on the design a COL applicant selects, some COL Action Items may no longer be relevant. A COL applicant may address a COL Action Item by explaining why providing the requested information is not necessary to satisfy the Commission's regulations. Furthermore, the list of COL Action Items is not presented as a complete list of what a COL applicant would need to address to comply with the Commission's regulations in Part 50 or Part 52. COL Action Items are formulated to highlight issues that the Staff considered important to the COL review, but they do not relieve a COL applicant from its obligation to submit the information that is otherwise required by Part 50 or Part 52.

In short, as part of the ESP review process, the matters in SER Appendix A have been identified and defined in the SER and would be incorporated in the permit. The SER makes clear (as will the terms of any ESP issued) not only what each of these matters are, but how

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[8](...continued)
construction permit or COL, these items are not requirements for the licensee unless such items are restated in the FSAR."

they are to be addressed in the event the ESP is referenced by a COL application. Therefore, Appendix A would not impose new requirements at the COL stage and does not conflict with § 52.39.

Board Question 116B:

> How does the quoted provision comport with the Commission's refusal, when it promulgated the ESP regulations, to condone the issuance of "partial" ESP permits. *See* 54 Fed Reg. 15372, 15378 n.3 (April 18, 1989) ("the Commission declines to follow the suggestion . . . that partial early site permits be issued."). By incorporating so many items to be determined later, isn't the Staff proposing a "partial ESP?"

Staff Response:

There are no safety issues pertaining to the suitability of the site that remain unresolved. As long as the ESP is issued subject to the Permit Conditions identified in the SER, which ensure site suitability by placing limitations on the design of any facility that might ultimately be built on the ESP site and other future actions, no determination on a site-suitability safety issue will be deferred to the CP or COL stage. Likewise, as stated above [in the response to Board Question 116 A], the information requested by the COL Action Items in Appendix A.2 was not necessary for the Staff to reach its required determinations with respect to the ESP application. The COL Action Items are intended to foster the thoroughness and efficiency of any CP - or COL - stage review and to ensure compliance with the regulations governing issuance of a CP or COL. They are incorporated in the ESP for tracking purposes, not to address gaps in the analysis required for ESP issuance. The inclusion of COL Action Items does not defer the provision of any information necessary for issuance of the ESP. If the subject of a COL Action Item were essential to determining the suitability of the site, it would need to be governed by a Permit Condition, but the Staff here determined that no additional Permit Conditions were necessary.

The Staff believes the referenced Commission statement from the Final Part 52 SOC was intended to reject the suggestion that Part 52 provide for a partial review of site safety

issues. That is, the Commission rejected the suggestion that it perform a review which would have allowed issuance of an ESP governing one or more–but not all--siting issues. *See* Final Part 52 SOC, 54 Fed Reg. at 15,378 n.3. The staff has not performed such a partial review of the North Anna ESP application.

Board Question 116C:

> How does this provision comport with the Commission's statement that "[w]here adequate information is not available, early site permits will not be issued?" 54 Fed Reg. at 15378 n.3.

Staff Response:

If the subject of a COL Action Item were essential to determining the suitability of the site – *i.e.*, if, without the information described in the COL Action Items, available information would be inadequate to meet the requirements of Part 52 – the Staff arguably would have an insufficient basis for recommending issuance of the ESP absent further analysis, information, or additional permit conditions. However, as described above [in the responses to Board Questions 116A and 116B], the information requested in the North Anna COL Action Items is not necessary for the Staff to reach its required safety determinations with respect to the ESP application. Therefore, the Staff's recommendation is not inconsistent with the Commission's statement that ESPs should not be issued if "adequate information is not available."

Board Question 116D:

> Are all of these matters unresolved within the meaning of 10 CFR § 52.39(a)(2). If not, why not?

Staff Response:

The matters set forth in Appendix A are not "unresolved" within the meaning of 10 C.F.R. § 52.39(a)(2). With respect to Permit Conditions, Site Characteristics, and Bounding Parameters, these requirements are already defined, and their adequacy – whether the relevant values or the standard for compliance with them are correct – will not be revisited except in

accordance with § 52.39(a)(1). Unless these standards for modification are met (such as "to assure adequate protection of the public health and safety"), the only remaining inquiry concerns whether the ESP holder is in compliance with the permit's requirements or whether the ESP terms and conditions have in fact been satisfied by a CP or COL applicant referencing the ESP. The SER makes clear (as will the terms of any ESP issued) not only what these requirements are, but how they are to be met in the event the ESP is referenced in a CP or COL application. In short, these items are not "unresolved" under § 52.39, but compliance necessarily cannot be determined until a later date.

As indicated above, COL Action Items pertain to information that was not necessary to the Staff's determination on the ESP application. Nonetheless, the content of the COL Action Items is resolved and will not be revisited. At the CP or COL stage, the inquiry in this regard will be whether the applicant adequately addresses the Action Items, and an adequate response may include an explanation of why it is appropriate to omit a particular Action Item. The COL Action Items are only information requirements; COL Action Items do not constitute prerequisites for issuance of an ESP or for remaining in compliance with the ESP once it is issued. Rather, they are intended to assist the potential COL applicant in preparing, and the Commission in reviewing, a COL that references the ESP. Thus, like the other elements of Appendix A, COL Action Items are not "unresolved" within the meaning of § 52.39, but whether they have been appropriately addressed (*i.e.*, whether a COL applicant has provided the specified information or explained why it is not relevant to the COL application) necessarily cannot be determined until a later date.

Board Question 116E:

> Will a petition alleging that the site or Applicant is not in compliance with a permit conditions, COL action item, site characteristic, or bounding parameter specified in Appendix A be within the scope and litigable (provided it meets the other criteria of 10 CFR § 2.309(f)(2)) at the COL stage?

Staff Response:

To produce an admissible contention, a petition at the CP or COL stage alleging that the site or Applicant is not in compliance with a permit condition, site characteristic, or bounding parameter defined in Appendix A would need to satisfy all of the criteria set forth in 10 C.F.R. § 2.309(f). *See* 10 C.F.R. § 52.39(a)(2) (at the CP, OL, or COL stage, matters resolved in the ESP proceeding are resolved "unless a contention is admitted that the reactor does not fit within one or more of the site parameters included in the site permit[.]" (emphasis added)).[9] Section 52.39 confirms that such an issue would be within the scope of the proceeding and potentially material, because such a claim "may be litigated in the same manner as other issues material to the proceeding." 10 C.F.R. § 52.39(a)(2)(I).

However, the § 2.309(f) contention-admissibility criteria also require a demonstration that there is "sufficient information to show that a genuine dispute exists with the [applicant] on a material issue of law or fact." 10 C.F.R. § 2.309(f)(1)(vi). Therefore, to be litigable, a proposed contention claiming such non-compliance would need to do more than make conclusory allegations of non-compliance; the petitioner would need to articulate a sufficient basis to show that a *genuine* dispute exists. (This circumstance assumes that the applicant has not requested a variance from the ESP concerning a permit condition, site characteristic, or bounding parameter; as noted earlier [in the response to Board Question 27], issuance of a variance is, by regulation, subject to litigation in the same manner as other issues material to the proceeding. *See* 10 C.F.R. § 52.39(b).)

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[9] As distinguished from the filing of a contention that a reactor does not fit within one or more of the site parameters included in the site permit, Section 52.39 also authorizes the filing of a "petition" alleging that "the site is not in compliance with the terms of the early site permit." 10 C.F.R. § 52.39(a)(2), (a)(2)(ii). However, as noted earlier [in the response to Board Question 27], this situation refers to disputes concerning site compliance, not whether the design falls within the ESP site characteristic values.

In contrast to proposed contentions concerning non-compliance with a permit condition, site characteristic, or bounding parameter, the Staff does not believe that a petition asserting simply that a particular COL Action Item has not been adequately addressed would be within the scope of and litigable in a CP or COL proceeding. As discussed earlier, the COL Action Items are only information requirements; they are not prerequisites for issuance of an ESP or for remaining in compliance with the ESP once it is issued. Rather, they are intended to assist the potential CP or COL applicant in preparing, and the Commission in reviewing, an application that references the ESP. Consequently, COL Action Items are not "site parameters included in the site permit" within the meaning of 10 C.F.R. § 52.39(a)(2). Therefore, a proposed contention related to the subject of a COL Action Item would only be admissible to the extent the contention demonstrates that the COL applicant's response (or lack thereof) to the COL Action Item renders the application otherwise inadequate with respect to the requirements of Part 52 for a COL or with respect to one of the specific terms or conditions of the ESP.

Respectfully submitted,

/RA/

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Counsel for the NRC Staff

Dated at Rockville, Maryland
this 8th day of February, 2007

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF LEGAL BRIEF IN RESPONSE TO LICENSING BOARD'S SAFETY-RELATED QUESTIONS," with attachments, have been served on the following through deposit in the NRC's internal mail system, with copies by electronic mail, as indicated by an asterisk, or by deposit in the U.S. Postal Service, as indicated by double asterisk, with copies by electronic mail this 8th day of February, 2007:

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