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

Serial No. NA3-09-008
Docket No. 52-017
COL/LTB

DOMINION VIRGINIA POWER
NORTH ANNA UNIT 3 COMBINED LICENSE APPLICATION
COMMENTS ON NUREG-1917, DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT

This letter provides Dominion's comments on the NRC staff's Draft Supplemental Environmental Impact Statement (DSEIS), NUREG-1917, for the North Anna Unit 3 Combined License (COL). Comments are provided in the enclosed table.

A number of comments involve inconsistencies between the DSEIS and information provided by Dominion in the North Anna Unit 3 COL application Environmental Report, the Early Site Permit (ESP) application, the ESP Environmental Impact Statement, and in responses to requests for additional information. The enclosed table presents excerpts from those documents, when appropriate. In addition, comments are provided to inform the NRC staff of changes submitted in Revision 1 of the North Anna Unit 3 COL application (December 2008), which may need to be reflected in the Final SEIS.

Overall, Dominion found NUREG-1917 to be thorough and complete, and commends the NRC staff for its effort.

Please contact Tony Banks at (804) 273-2170 (tony.banks@dom.com) if you have questions.

Very truly yours,

Eugene S. Grecheck

D089
NRO

Enclosure:

North Anna COL DSEIS (NUREG-1917) Comment Table

Commitments made by this letter: None.

cc with Enclosure:

U. S. Nuclear Regulatory Commission, Region II
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	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	DSEIS Section No.	**DSEIS Section Title**	**Statement from DSEIS**	**ER Section No.**	**ER Section Title**	**Statement from ER**	**Comment**
1	None (page xvii)	Executive Summary	The purpose of Dominion's requested action, issuance of the COL that encompasses both a construction permit and an operating license, is to obtain from the NRC a license to construct and operate a nuclear power plant.	Section 1.1	The Proposed Action	The purpose and need for the proposed action is to provide additional base load power for residential and industrial customers in the region served by Dominion and ODEC. Additional purposes of proposed Unit 3 are to maintain fuel diversity in this region, reduce dependence on imported power, leverage Dominion's and ODEC's existing nuclear facilities, and to promote the regional economy, while not contributing to CO_2 emissions.	Dominion suggests that the following text, paraphrased from Section 1.1 of its environmental report (ER) be substituted: The Dominion purpose and need for the proposed action is to provide additional base load power for customers in the region served by Dominion and ODEC, maintain fuel diversity in this region, reduce dependence on imported power, leverage Dominion's and ODEC's existing nuclear facilities, and to promote the regional economy, while not contributing to carbon dioxide emissions.
2	1.3	The Purpose and Need for the Proposed Action	The purpose and need for the proposed action (i.e., issuance of a COL) is to provide for additional base-load electrical generating capacity.	Section 1.1	The Proposed Action	The purpose and need for the proposed action is to provide additional base load power for residential and industrial customers in the region served by Dominion and ODEC. Additional purposes of proposed Unit 3 are to maintain fuel diversity in this region, reduce dependence on imported power, leverage Dominion's and ODEC's existing nuclear facilities, and to promote the regional economy, while not contributing to CO_2 emissions.	Dominion suggests that the following text, paraphrased from Section 1.1 of its environmental report (ER) be substituted: The Dominion purpose and need for the proposed action is to provide additional base load power for customers in the region served by Dominion and ODEC, maintain fuel diversity in this region, reduce dependence on imported power, leverage Dominion's and ODEC's existing nuclear facilities, and to promote the regional economy, while not contributing to carbon dioxide emissions.
3	1.5; Appendix L	Compliance and Consultations; Authorizations and Consultations	Dominion (2007) provided a list of environmental approvals and consultations associated with the NAPS proposed Unit 3. Potential authorizations and consultations relevant to the proposed COL are included in Appendix L.	Table 1.2-1	Federal, State, and Local Authorizations	None	The DSEIS Appendix L list of authorizations and consultations is identical to the ESP EIS Appendix L. If NRC has determined that revision of the list is unnecessary, Dominion suggests the DSEIS Appendix L could be deleted and the section 1.5 language could be revised to read as follows: Appendix L of the ESP EIS lists authorization and consultation requirements that Dominion listed in connection with the Unit 3 construction and operation. NRC has identified no need to revise this list for the COL. Should NRC revise the DSEIS Appendix L list to include only those additional authorizations and consultations that Dominion identified in its COLA-ER, section 1.5 language could be revised as follows: Appendix L of the ESP EIS lists authorization and consultation requirements that Dominion listed in connection with the Unit 3 construction and operation. Appendix L of the SEIS lists additions to the ESP listing.
4	2.1	Site Location	The nearest population center that has more than 25,000 residents is Fredericksburg, Virginia.	ESP-ER[1] Section 2.5.1.2	Population Center	The nearest population center with more than 25,000 residents is the City of Charlottesville. The closest point of Fredericksburg is 22 miles to the northeast with a projected 2065 population of about 20,950.	The correct nearest population center with more than 25,000 residents is Charlottesville (Fredericksburg's population is less than 25,000). The US Census Bureau website lists the population of the city of Fredericksburg, VA as 22,410 for 2007 (access date 1/12/09).

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5	2.1	Site Location	Figure 2-1. ESP Site Boundaries within the Existing NAPS Site	COLA-ER[2] Section 2.1	Site Location	Figure 1.1-1 Site Utilization Plan	"ESP site boundaries" should be shown in the FSEIS and are not reflected properly in the current drawing. In addition, the intake channel in the DSEIS drawing indicates a full removal of the outer berm which contradicts correct statements made in DSEIS Section 9.3.1. Dominion suggests that Figure 1.1-1 from the ER be substituted.
6	2.3	Meteorology and Air Quality	A review by Dominion of the location of the nearest receptors, conducted as part of the annual Radiological Environmental Monitoring Program review, showed that the closest receptor was now located 1.20 km (3930 feet) from the NW of North Anna Unit 1.	COLA-ER[2] Section 2.7.6	Long-Term (Routine) Diffusion Estimates	Table 2.7-1 lists the closest receptor as the residence in the NW direction at 3930 feet (distance from the facility boundary). Note 1: Distances are from the plant facility boundary. See FSAR Figure 2.0-205.	The COLA-ER describes the closest receptor as 1.20 km (3930 feet) from the plant facility boundary (Unit 3).
7	2.7.2.1	Aquatic communities of Lake Anna	The VDGIF (2007) reported that fishing preferences in 2005 were similar to those in 2000, with most anglers seeking striped bass, largemouth bass, crappie, and catfish.	N/A	N/A	N/A	The VDGIF reference presented a fishing preference with largemouth bass ahead of striped bass.
8	2.7.2.1	Aquatic communities of the North Anna River	During an extended drought in 2001 and 2002, discharges at the North Anna Dam were maintained at 0.6 m^3/s (20 cfs) from November 3, 2001 to December 18, 2002, and gradually increased to 1.2 m^3/s (40 cfs) from December 19 to 22, **2008**...	N/A	N/A	N/A	Editorial: Change "2008" to "2002."
9	2.7.2.1	Aquatic communities of the North Anna River	Other abundant fish species are satinfin shiner (Cyprinella analostana), rosyface shiner (Notropis rubellus), swallowtail shiner (N. procne), and margined madtom (Noturus insignis) (Dominion 2008a).	N/A	N/A	N/A	The America eel *(Anguilla rostrata)*, should also be included. Reference - Accession No. ML081960653, page 28, "Environmental Study of Lake Anna and the Lower North Anna River – Annual Report for 2007". "The numerically dominant species collected in 2007 were, in descending order, American eel, redbreast sunfish, rosefin shiner, margined madtom and satinfin shiner, fallfish Semotilus corporalis, and tessellated darter Etheostoma olmstedi (Table 4.2-3)."
10	2.7.2.1	Aquatic communities of the North Anna River	Redbreast sunfish (Lepomis auritus) have consistently been the most abundant species in the North Anna River since 1981 (VEPCo 2001a; Dominion Electric Environmental Services Environmental Biology 2004; Dominion Nuclear North Anna, LLC 2006b; Dominion 2007b, 2008a).	N/A	N/A	N/A	Missing the qualifier "among". Redbreast sunfish (Lepomis auritus) have consistently been **among** the most abundant species in the North Anna River since 1981. Reference - Accession No. ML081960653, page 28, "Environmental Study of Lake Anna and the Lower North Anna River – Annual Report for 2007".

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	DSEIS Section No.	**DSEIS Section Title**	**Statement from DSEIS**	**ER Section No.**	**ER Section Title**	**Statement from ER**	**Comment**
11	2.7.2.1	Aquatic communities of the North Anna River	Dominion continues to monitor fish in the North Anna River by electrofishing (seine and backpack) at six stations between the dam and about 39 km (14 mi) downstream.	N/A	N/A	N/A	Should say four stations, not six. Reference - Accession No. ML081960653, page 35, "Environmental Study of Lake Anna and the Lower North Anna River – Annual Report for 2007". "The locations of the following four (4) electrofishing stations are shown in Figure 4.1-1: NAR-1 (Route 601 Louisa Bridge), NAR-2 (Route 658 Bridge), NAR-4 (Route 601 Hanover Bridge) and NAR-6 (U.S. Route 1 Bridge)."
12	2.7.2.1	Aquatic communities of the North Anna River	Recent Dominion surveys have indicated that despite the limited supply of forage in the river, largemouth bass and smallmouth bass populations are healthy (Dominion Nuclear North Anna, LLC 2006a).	ESP-ER[1] Section 2.4.2.3.3	Important Species in North Anna River	Recent VDGIF surveys have indicated that largemouth bass and smallmouth bass populations are healthy, despite the river's limited supply of forage.	Editorial: Revise "Dominion" to "VDGIF."
13	2.7.2.1	Aquatic communities of the North Anna River	Because the IFIM study results are primarily intended to inform decisions on reservoir management and relies on modeling rather than direct observations of aquatic communities to reach conclusions, the staff believes the IFIM study results will provide additional information concerning optimal flow regimes and can be used to assess cumulative impacts to aquatic resources in the North Anna River.	N/A	N/A	N/A	Dominion suggests the following: Add "<u>The IFIM study focused on how changes in flow resulted in changes in aquatic habitat in the North Anna and Pamunkey Rivers</u>." Modify "<u>The IFIM study…to reach conclusions.</u>" Insert "<u>Though the study did not address explicitly the well-documented effect of diluting acid mine drainage in the North Anna River,…</u>" Continue with "<u>…the staff believes…in the North Anna and Pamunkey Rivers</u>."
14	2.7.2.2	Threatened and Endangered Aquatic Species	Table 2-4 *Federal or State Listed Threatened or Endangered Species Known or Likely to Occur in Counties Adjacent to or Downstream from the Lake Anna Reservoir*	N/A	N/A	N/A	Dominion suggests deleting the word "Reservoir" from the title of Table 2-4 to be consistent with other references to Lake Anna in the DSEIS.
15	2.7.2.3	Aquatic Ecology Monitoring	Dominion also updated its monitoring plan in February 2008, proposing to add a smallmouth bass population study in the North Anna River below the dam and to search for mussels to determine whether subsequent shellfish monitoring is necessary (Dominion 2008b).	N/A	N/A	N/A	Dominion suggests that the reference to "mussels" be deleted. Mussels were not included as part of the approved river study. Reference - Accession No. ML081960659, "A Monitoring Plan for Lake Anna, the Waste Heat Treatment Facility and the North Anna River", February 2008 - "*Biological monitoring shall include fish population surveys."*
16	2.9.3	Native American Consultation	In addition, further consultation with the Virginia Department of Historic Resources resulted in an additional six groups added to this list for consultation. Those groups were: ….Tuscarora Nation	N/A	N/A	N/A	The Tuscarora Nation is listed twice in Section 2.9.3. The Tuscarora Nation is listed as consulted in association with the COL and is listed under "additional six groups added to this list." Appendix B (Organizations Contacted) lists the Tuscarora Nation and the Tuscarora Indian Tribe; however the Tuscarora Indian Tribe is not listed in Section 2.9.3. Dominion suggests the NRC clarify its listing between both the Nation and Tribe.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	DSEIS Section No.	**DSEIS Section Title**	**Statement from DSEIS**	**ER Section No.**	**ER Section Title**	**Statement from ER**	**Comment**
17	2.10, 4.7, 5.7	Environmental Justice	The draft SEIS for the COL presents data on minority and low-income populations in counties.	COLA-ER[2] Section 2.5	Environmental Justice	The county-level minority and low-income data were not in the COLA-ER. The COLA-ER states that no new and significant information has been identified.	NRC added a different data parameter in the DSEIS for the COL (minority and low-income populations in counties). The FEIS and ER for the ESP presented data on minority and low-income populations in Census Bureau Census Year 2000 block groups in accordance with NRC guidance (NUREG-1555 and LIC-203). The county-based data cannot be accurately called new data because it has no relevance to minority and low-income populations as defined in the ESP SEIS; the county-level amalgamation would mask any change at a block-group level. The two data sets, the county-based and census block-based, are not comparable because multiple block groups make up counties and not all block groups contain minority or low-income populations. Dominion suggests NRC consider indicating that the ESP outreach revealed no discrepancy between minority and low-income information at that time, 2006, and that information gathered since that time does not indicate a substantial change.
18	3.2.2	Cooling System	When the elevation of Lake Anna is below 76.2 m (250 ft) MSL for a period of seven or more consecutive days, Unit 3 would be cooled with a closed-cycle, combination wet and dry cooling tower system to limit consumptive water use. Dominion terms this cooling mode the Maximum Water Conservation (MWC) mode; the estimated makeup water flow rate is 970 L/s (15,376 gpm) in MWC mode (Dominion 2007).	ESP-ER[1] Section 3.4	Cooling System	COLA-ER 3.4 references ESP-ER 3.4 which states (ESP-ER 3.4.1.1): However, if reservoir level falls below 250 ft. msl and if the level is not restored within a reasonable period of time, the MWC mode would be used. The period of time before switching to the MWC mode was assumed to be 7 days for analysis of water level and downstream flows. The actual time frame would be established with the appropriate State agencies at the time of permitting.	The DSEIS implies that MWC mode will be initiated when the lake level drops below 250 ft. msl for a period of seven or more days. The period of seven days was utilized for analysis, but no commitment to use this period as the basis for switching from EC to MWC mode has been made in the COLA-ER. The operating parameters for switching from EC to MWC mode will be established in coordination with State agencies at the time of permitting.
19	3.2.2.2	Component Descriptions (Heat Dissipation Systems)	The condenser cooling needs of the proposed Unit 3 would be provided by a closed-cycle, combination wet and dry tower system. The percentage of excess heat dissipated by the dry towers would depend on the availability of water from Lake Anna and ambient environmental conditions. If excess water were available, Unit 3 would be cooled entirely using the wet towers. During times of drought and high humidity conditions, the majority of the Unit 3 waste heat would be dissipated by the dry towers.	COLA-ER[2] Section 3.4	Cooling System	COLA-ER 3.4 references ESP-ER 3.4 which states (ESP-ER 3.4.1.1): Footnote 1: In the MWC mode, the dry towers would have the capacity to remove one-third of the design condenser heat duty at a design dry bulb temperature (DBT) of 95°F (the 0.4 percent exceedance DBT for the site). As the DBT decreases, the percentage of heat which can be removed by the dry towers would increase proportionately until, at some lower DBT, the dry towers would have the capability of removing the entire condenser heat duty.	The DSEIS statement as written misstates the operation and capability of the dry towers. The first sentence suggests that the dry tower will always be in operation. The third sentence as stated is not entirely accurate because at design ambient conditions the dry towers have the capacity to remove one-third of the heat load. A "majority" of dry cooling wouldn't be reached until the DBT reaches a certain level. Dominion suggests that the statement be reworded to state, "Dry tower operation depends on the availability of water from Lake Anna. If lake level is at or above 250 ft. msl, Unit 3 would be cooled entirely using the wet towers. During a dry weather period when lake level is below 250 ft. msl for a specified time, a minimum of one third of the Unit 3 waste heat would be dissipated by the dry towers, increasing with decreasing DBT."

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	DSEIS Section No.	**DSEIS Section Title**	**Statement from DSEIS**	**ER Section No.**	**ER Section Title**	**Statement from ER**	**Comment**
20	3.2.2.2	Component Descriptions	Since the ESP EIS was prepared, Dominion finalized designs for the intake channel entrance. The existing cofferdam would be modified by installation of five 3.05 m × 3.66 m (10 ft × 12 ft) box culverts (Figure 3-2) (Dominion 2008).	ESP-ER[1] Section 3.4.2.1 Response to RAI ER 3.4-1 [Serial No. NA3-08-079R Docket No. 52-017]	Intake System	Response to RAI ER 3.4-1: For the new Unit 3 intake, five box culverts of dimensions 10 ft x 12 ft, ***or equivalent***, will be installed in the cofferdam to allow water from Lake Anna to flow through toward the Unit 3 intake via the approach channel. Minor adjustments of the intake dimensions are expected to be necessary during detailed design stage to accommodate the size of equipment (pumps and screens) specified by the suppliers.	The DSEIS implies that the intake design has been finalized, but Dominion's response to RAI ER3.4-1 was intended to provide NRC staff a conceptual layout of the Unit 3 intake. The final dimensions of the intake as well as the box culverts are subject to change to accommodate actual equipment size as indicated in the response to RAI ER 3.4-1. An equivalent flow area would be maintained.
21	4.3.1	Hydrological Alterations	Dominion (2008a) has specified the method to allow water access from Lake Anna to the intake channel by installing five 3 × 3.7 m (10 × 12 ft) box culverts through the existing cofferdam.				
22	4.4.2	Aquatic Ecosystem Impacts	To supply water to the proposed Unit 3, Dominion now indicates five box culverts, each with a width of 3.7 m (12 ft) and a height of 3.1 m (10 ft), will be installed in the existing cofferdam to allow water from Lake Anna to flow toward Unit 3 through the existing approach channel in Lake Anna (Dominion 2008a).				
23	5.4.2.1	Intake and Discharge Systems	As described in Section 3.4, the intake design proposed by Dominion since preparation of the ESP EIS includes the installation of five box culverts in the existing cofferdam, each with a width of 3.7 m (12 ft) and a height of 3.1 m (10 ft).				
24	4.5.1.3	Roads	Because the currently contemplated construction workforce for one unit is 2500 to 3000 workers rather than the 5000 workers anticipated for construction of two units documented in the ESP EIS, the impact on roads from commuter traffic is expected to be less.	COLA-ER[2] Section 4.4	Socioeconomic Impacts	No new and significant information on this topic was included in Section 4.4 based on the COLA-ER new and significant evaluation, which cites a construction workforce of 2500-3500.	DSEIS Sections 4.5.1.3 and 5.5.4.1 cite an estimated construction workforce of 2500-3000. This is inconsistent with the COLA-ER new and significant evaluation as well as other sections of the DSEIS (Section 4.5 and 4.5.3), which cite an estimated construction workforce of 2500-3500. Dominion suggests the construction workforce be characterized as 2500-3500.
25	5.5.4.1	Transportation	The NRC staff continues to believe that any modifications that would be found necessary to relieve congestion on the local roads would have been made at the construction stage because of the much larger workforce involved (2500 to 3000 workers).				
26	4.5.4.5	Education	The workforce employed to construction the proposed Unit 3....	N/A	N/A	N/A	Editorial. Change "construction" to "construct".

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	DSEIS Section No.	**DSEIS Section Title**	**Statement from DSEIS**	**ER Section No.**	**ER Section Title**	**Statement from ER**	**Comment**
27	4.8.2	Noise Impacts	During the April 2008 site audit, NRC staff was shown the results of a modeling study showing that noise levels at the Exclusion Area Boundary (EAB) would be less than 65 dBz. .....Therefore, at the EAB (870 m [2854.9 ft], per the plant parameter envelope considered in the ESP ER, the noise level at the EAB would be reduced by approximately six doublings resulting in a noise reduction of 36 dBA, or a noise level of 94-36 = 58 dBA, which is comparable with or slightly less than the 65 dBA limit required for other construction activities at the EAB.	ESP-ER[1] Table 3.1-9	Bounding Site-Specific Plant Parameters Envelope	Noise <65 dbA at EAB Maximum expected sound level produced by operation of the cooling towers. Refer to Sections 3.1.5, 5.3.3.2.3, 5.3.4.2, & 5.8.1.2	Editorial: Change dBz to dBA. Note the 65 dBA limit applies to plant operation, not construction activities.
28	4.10	Measures and Controls to Limit Adverse Impacts During Construction	The discovery of potential historic or cultural resources will result in a stop work and appropriate procedures will be followed to notify the Virginia Department of Natural Resources.	N/A	N/A	N/A	Dominion suggests changing the word "Natural" to "Historic" to revise the reference to the Virginia Department of Historic Resources.
29	5.4.1.4	Shoreline and Riparian Habitat	Dominion is monitoring the impacts of lake level changes on shoreline and wetland vegetation as part of its Instream Flow Incremental Methodology (IFIM) monitoring program.	N/A	N/A	N/A	As part of the IFIM study, Dominion is evaluating the potential impacts to shoreline and wetland vegetation, not monitoring as part of a program. Dominion suggests the following wording, "Dominion is evaluating the potential impacts of lake level changes on shoreline and wetland vegetation as part of its Instream Flow Incremental Methodology (IFIM) study, and regulatory permitting activities."

	(1) DSEIS Section No.	(2) DSEIS Section Title	(3) Statement from DSEIS	(4) ER Section No.	(5) ER Section Title	(6) Statement from ER	(7) Comment
30	5.4.2.4	Downstream Impacts	Based on a review of the new water budget provided by Dominion since the ESP EIS (Dominion Nuclear North Anna, LLC 2006a) was prepared, the staff concludes that the expected flow reductions at the North Anna Dam developed during the ESP process are still valid. Thus, the staff estimates that the percentage of time the surface elevation of Lake Anna would be below 75.6 m (248 ft) above mean sea level would increase from approximately 6 percent when only Units 1 and 2 are operating (baseline conditions) to 11 percent when Units 1, 2, and 3 are operating. This will increase the number of days that 0.6 m^3/s (20 cfs) releases are required from approximately 22 to 40 days per year.	ESP-ER[1] Section 5.2.2.2	Analysis and Evaluations of Impacts on Water Use	For the existing units the …duration for which the minimum release is 20 cfs would be 5.2 percent of the time. Comparable durations with the addition of Unit 3 are….7.3 percent of the time for a flow of 20 cfs.	Related to comments provided by Dominion for the ESP DEIS on ER Section 5.3.1, 5.3.2, 5.4.1.4 and Appendix K as provided in Dominion Letter dated Sept. 12, 2006 (Accession No. ML062990422) and as summarized below: The FEIS for the ESP used an acceptable, but less precise method of confirming the evaluation performed by Dominion in order to assess the impact of Unit 3. The analysis used the long term average evaporation rate that Dominion stated in the ESP Application, which included a large portion of time when the lake was at or above 250 ft. msl and there was enough water to support the evaporative cooling process. When applied to the time periods when the lake is below 250 ft. msl, this method over estimates the evaporative loss caused by wet cooling and does not adequately credit the use of dry (i.e., no evaporation) cooling. The FEIS for the ESP concluded that the water use impact of Unit 3 was SMALL during normal periods and MODERATE during drought periods using the conservatively high value for evaporation, so further analysis using a more precise method was not required. Dominion's analysis used a more precise evaluation including daily evaporation estimates as a function of ambient environmental conditions and cooling system modes of operation (EC or MWC) depending on the projected lake level. The FEIS for the ESP reflects the NRC confirmatory analysis, and while the results do not exactly match those stated in the ESP-ER, the conclusion of SMALL IMPACT is unaffected.
31	5.4.2.4	Downstream Impacts	Rather, it relies on habitat suitability criteria for a variety of species of interest, and evaluates flow regimes that are representative of baseline conditions (operation of Units 1 and 2 only), the addition of the proposed Unit 3 under normal operations and maximum water conservation mode, and flow alterations under three-unit operation with an increase in reservoir surface elevation from 76.2 m (250 ft) to 76.3 m (250.3 ft)_above mean sea level.	N/A	N/A	N/A	NRC references 250.3 ft. msl correctly as stated in the original study plan. The actual study and draft final report, however, are aimed at a target lake elevation of 250.25 ft. msl.
32	8.4.3.3	Need for Reserve Margin	This is a conservative assumption because it does account for the probability that they might not all be built.	N/A	N/A	N/A	Editorial. The statement should read "This is a conservative assumption because it does <u>not</u> account for the probability that they might not all be built."

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	DSEIS Section No.	**DSEIS Section Title**	**Statement from DSEIS**	**ER Section No.**	**ER Section Title**	**Statement from ER**	**Comment**
33	9.2	Energy Alternatives	The objective of Dominion in seeking a COL for the proposed Unit 3 at the NAPS site is to secure a site for new base-load electric power generation. The generated power would be used by Dominion Virginia Power to maintain a reliable, stable supply of electricity within its power system control area.	Section 1.1	The Proposed Action	The purpose and need for the proposed action is to provide additional base load power for residential and industrial customers in the region served by Dominion and ODEC. Additional purposes of proposed Unit 3 are to maintain fuel diversity in this region, reduce dependence on imported power, leverage Dominion's and ODEC's existing nuclear facilities, and to promote the regional economy, while not contributing to CO_2 emissions.	Dominion suggests that NRC revise the text consistent with Dominion comments on the Executive Summary and other sections of Chapter 1.
34	9.2.1	Alternatives Not Requiring New Generating Capacity	If the purchased-power alternative were to be implemented, a major environmental unknown would be whether new transmission lines would be required. The construction of new transmission lines could have both environmental and aesthetic consequences, particularly if new transmission line rights-of-way were needed.	NA	NA	NA	Text preceding this statement clearly indicates that new transmission lines would be required. Dominion suggests that the text should state: "If the purchased-power alternative were to be implemented, a major environmental unknown would be whether new transmission line **rights-of-way** would be required. ..."
35	9.2.2	Alternatives Requiring New Generating Capacity	"... a reasonable set of energy alternatives to the construction and operation of a new nuclear generating unit at the NAPS site should be limited to analysis of discrete power generation sources ..." {underline added for emphasis}.	NA	NA	NA	The statement in Section 9.2.2 of the DSEIS indicates that the analysis should be limited to discrete power generation sources. However, NRC evaluated a combination of alternatives in Section 9.2.4, and Dominion evaluated combinations of alternatives in Section 9.2.2.4 of the ER. Dominion suggests that the limitation to discrete power generation sources be eliminated from the text in Section 9.2.2.
36	9.2.2	Alternatives Requiring New Generating Capacity	The current mix of base-load power generation options in Virginia is one indicator of the feasible choices for power generation technology within the Commonwealth. ... In its Annual Energy Outlook 2008 (DOE/EIA 2008), the EIA ...	NA	NA	NA	NRC indicates that generation options in Virginia are an indicator of feasible technology choices then summarizes national projections from the EIA Annual Energy Outlook regarding new capacity additions. No description of the power generation mix within Virginia is provided. Dominion suggests that the statement regarding the current mix of base-load power generation options in Virginia be deleted from the text.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	DSEIS Section No.	**DSEIS Section Title**	**Statement from DSEIS**	**ER Section No.**	**ER Section Title**	**Statement from ER**	**Comment**
37	9.2.2.1	Coal-fired Generation	For the coal-fired generation alternative, the staff assumed construction of three supercritical pulverized coal-fired units, each with a net capacity of 507 MW(e). ... Dominion estimates that the coal-fired alternative emissions for SO2, NOx, CO, PM, Hg, and volatile organic compounds (VOC) would be approximately as follows (Dominion 2007, 2008a): SO2 – 3777 MT (4163 tons)/yr NOx – 1888 MT (2081 tons)/yr CO – 4248 MT (4683 tons)/yr PM10 – 853 to 1932 MT (940 to 2130 tons)/yr PM2.5 – 490 to 1125 MT (540 to 1240 tons)/yr Hg – 0.34 to 0.85 MT (0.37 to 0.94 tons)/yr VOC – 165 MT (182 tons)/yr.	9.2.3.1, Tables 9.2-4 & 9.2-4a	Coal-fired Generation	Dominion provided an analysis of three different Coal-fired unit s: a 600 MW unit with a heat rate of 8800 Btu/kW-hrs, a 700 MW unit with a heat rate of 8900 Btu/kW-hrs, and an 800 MW unit with a heat rate of 9000 Btu/kW-hrs. Dominion's analysis provides a range of emissions for a generic 507 MW coal-fired plant. Table text is extensive and not provided here.	NRC provided a single estimate for SO_2, NOx, CO and VOC emissions (based on the 600 MW unit) and provided a range for PM10, PM2.5, and Hg emissions. Dominion suggests that all emissions estimates be presented as a range.
38	10.6.1 and Table 10-3	Benefits	None	8.0.1.3, 8.0.1.4, Table 8.0-1, Table 8.0-2, Table 10.4-1	Various (emissions reduction, emissions avoidance, carbon dioxide emissions)	Various	In Chapters 8 and 10 of its COLA-ER, Dominion notes that one benefit of the proposed action is the avoidance of air pollutants that would be emitted if the need for power was met by constructing and operating alternative coal- or gas-fired plants. This benefit is increasingly significant with regard to emissions of carbon dioxide, which is a greenhouse gas. The DSEIS acknowledges this in Chapter 9 but does not bring it forward to the benefit/cost discussion. Dominion suggests the NRC revise the DSEIS section 10.6.1 discussion of benefits by adding avoidance of emissions in general and greenhouse gas emissions in particular.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
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Clarification Statements Submitted in COLA-ER Revision 1							
39	2.7.1.2	Biological Communities within the North Anna-to-Ladysmith Transmission Line Right-of-Way	Wildlife surveys have not been performed and wetlands have not been delineated by Dominion along the Ladysmith right-of-way.	COLA-ER[3] Rev. 1 Section 4.3.1.1	Terrestrial Ecosystems – Transmission Corridors	A wetlands delineation was conducted along the NAPS-to-Ladysmith corridor in August 2008.	A wetlands delineation had not been performed at the time of submittal of COLA-ER Rev. 0. A wetlands delineation along the NAPS-to-Ladysmith transmission corridor was performed in August 2008 and is described in the COLA-ER Rev. 1, Section 4.3.1.1, submitted in December 2008. A jurisdictional determination from the US Army Corps of Engineers was also received in September 2008.
40	3.3	Power Transmission System	Interconnection of the proposed Unit 3 will require several system reinforcements that were identified in the system load studies (Dominion 2007). The reinforcements include: …addition of a 500kV breaker in one of the half bays to support the new transmission line.	COLA-ER[3] Rev. 1 Section 3.7.1	Switchyard Interfaces	The second bullet was revised in Rev. 1 of the COLA to read "adding a new 500 kV bay to support the new North Anna-to-Ladysmith transmission line".	The system reinforcements required were revised in the COLA-ER Rev. 1, submitted in December 2008. The second bullet should be revised to state: "addition of a new 500 kV bay to support the new transmission line."

Notes:

1 Dominion Nuclear North Anna, LLC, *North Anna Early Site Permit Application, Part 3, Environmental Report,* Revision 9, September 2006, Dominion Nuclear North Anna LLC, Glen Allen, Virginia, Accession No. ML062580096.

2 Dominion Virginia Power (Dominion), *North Anna 3 Combined License Application, Part 3, Environmental Report,* Revision 0, November 2007, Dominion Virginia Power, Glen Allen, Virginia, Accession No. ML083190858.

3 Dominion Virginia Power (Dominion), *North Anna 3 Combined License Application, Part 3, Environmental Report,* Revision 1, December 2008, Dominion Virginia Power, Glen Allen, Virginia, Accession No. ML090090113.