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October 25, 2005

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

Re: CZMA consistency determination for Dominion Nuclear North Anna

Dear Ms. Irons,

The Southern Environmental Law Center submits these comments on the Coastal Zone Management Act (CZMA) consistency certification that Dominion Nuclear North Anna, LLC (Dominion) has proposed in connection with its application to the Nuclear Regulatory Commission (NRC) for the issuance of an Early Site Permit (ESP) or site suitability determination for two additional nuclear reactors at the North Anna Power Station in Louisa County, Virginia. These comments focus on two primary issues: (1) the proper scope of DEQ's review of Dominion's requested CZMA certification; and (2) the foreseeable effects that the issuance of the ESP could have on Virginia's coastal resources. We submit these comments on behalf of Public Citizen, the Nuclear Information and Resource Service and the Blue Ridge Environmental Defense League as a supplement to any comments these organizations submit to you separately. In addition, we would like to request a public hearing on this certification.

Scope

Dominion seeks to limit the scope of DEQ's CZMA consistency review to impacts from preliminary site preparation activities that the ESP would authorize, while ignoring the much more significant environmental impacts that would accompany operation of the additional reactors. Its proposed certification states that "[t]he current certification is limited to the construction activities that would be permitted under the early site permit, and State concurrence will not constitute any determination concerning the acceptability of operational impacts."[1] Dominion's attempt to curtail DEQ's review ignores the true import of a CZMA consistency certification.

[1] Dominion's proposed federal consistency certification, dated March 18, 2005, at p. 4.

According to the draft environmental impact statement (DEIS) that the NRC released on Dominion's application for the ESP, "[a]n ESP is a Commission approval of a site or sites for one or more nuclear power facilities."[2] Significantly, Dominion's ESP application seeks NRC approval of the North Anna site "as suitable for the construction, and operation, of new nuclear power generating facilities."[3] Therefore, while the suitability evaluation is limited to safety and environmental issues at the proposed site, it clearly includes environmental impacts of both constructing and operating the additional reactors, such as the potential effects of thermal discharges and reduced flows on fish and other aquatic organisms in Lake Anna ("Lake") and downstream in the York River watershed.[4] These operational impacts are set forth in the Environmental Report that was required to submit to NRC as part of its application for the ESP. Similarly, the NRC addresses impacts of operation of the reactors and associated facilities in the DEIS it is required to publish before making a decision whether or not to grant the ESP. It follows that DEQ should also assess these operational impacts before certifying that the ESP is consistent with its coastal resources management program (CRMP).

Once it grants the ESP, the NRC is not required to revisit these environmental impacts during its review of construction permits or operating licenses for the North Anna site unless significant new information arises about such impacts that is not currently available, or Dominion significantly changes the design parameters for its reactors.[5] Unfortunately, the NRC has performed only a cursory review of many of the potential environmental impacts of operating the additional reactors on Virginia's coastal zone, and it has reached questionable conclusions regarding other relevant impacts.[6] Further, the NRC's Atomic Safety and Licensing Board has ruled in an ongoing contested case regarding the ESP that compliance with the Clean Water Act is not within the scope of that proceeding because implementation of the Clean Water Act is "expressly reserved to the Environmental Protection Agency (EPA) (or state agencies to which it delegates that authority) ...."[7] This same logic would undoubtedly have kept detailed

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[2] DEIS at p. 1-1.

[3] DEIS at p. iii (emphasis added).

[4] "[S]ite suitability encompasses construction and operational parameters." DEIS at p. 1-1.

[5] "If the environmental impacts addressed in the EIS written at the ESP stage are found to be bounding by the staff, no additional analysis of these impacts is required...." DEIS at p. 1-3.

[6] See March 3, 2005 letter from E. Irons, DEQ, to M. Lesar, NRC, commenting on DEIS (page 6: "Cumulative impacts of the current and future units on downstream hydrology and biology need to be quantitatively evaluated before any determination can be made that effects of the proposed addition of reactors to the site are 'small.'"); (page 7: "A cumulative analysis of impacts of the project does not start, in our judgment, with the existing lake conditions (i.e., the lake and two reactors) and then add, incrementally, the effects of operation of the proposed third reactor (so that the 'post-project' condition is the lake and three reactors). However, the Nuclear Regulatory Commission has accepted this approach, which means that a finding of no more than 'moderate' impacts of the third unit...is not surprising..."); (page 8: "DWR disagrees with the conclusion in the Draft EIS that these pre- and post-project flow alterations and their impact can be described as small or moderate. Instead, DWR would characterize these types of alterations as large."); (page 13: DGIF continues to have reservations about the impacts of proposed Unit 3 on the lake and downstream resources. The Draft EIS does not address the main concerns outlined in the DGIF letter.").

[7] See Memorandum and Order (Ruling on Standing and Contentions), In the Matter of Dominion Nuclear North Anna, LLC (Early Site Permit for North Anna ESP Site), Atomic Safety and Licensing Board, NRC, pp. 19-20 (August 6, 2004).

consideration of CZMA consistency out of the formal ESP licensing proceedings before the NRC.

All of this notwithstanding, the NRC staff has set forth in the DEIS its preliminary recommendation that the ESP be issued. However, through the CZMA consistency review, the Commonwealth now has an opportunity to conduct a more thorough review of critical coastal issues that could affect the NRC's site suitability determination. It is essential that DEQ take full advantage of this opportunity by undertaking a thorough review of the potential impacts that the construction and operation of additional reactors at the North Anna Site could have on the Commonwealth's coastal resources, with particular importance attaching to those impacts relating to downstream water quality and quantity. Once the ESP is granted, the project necessarily gains significant momentum, making it exceedingly difficult for the Commonwealth to exert any real influence during the later stages of the regulatory approval process. As such, the ESP marks the critical first link in a chain that could very likely lead to the operation of additional reactors at the North Anna site.

Authority for DEQ to explore impacts from the construction and operation of the additional reactors as part of its CZMA consistency review can be found in the regulations of the National Oceanic and Atmospheric Administration addressing the CZMA consistency determination process. Subpart D of Part 930 in Chapter 15 of the Code of Federal Regulations sets forth the provisions for ensuring that any activity requiring a federal permit and "affecting any coastal use or resource" is conducted in a manner consistent with approved coastal management programs of the states.[8] The term "effect on any coastal use or resource" is defined in the regulations to "include both direct effects which result from the activity and occur at the same time and place as the activity, and indirect (cumulative and secondary) effects which result from the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.[9] Because the ESP is a determination that the site is suitable for the construction and operation of additional reactors, the actual operation of the reactors is an eminently foreseeable effect of granting an ESP. Consequently, the potential impacts of such operation on coastal resources should be evaluated before a CZMA consistency certification is issued. If those impacts are substantial, the certification should be denied.

Potential Impacts

As set forth in Dominion's Environmental Review and in the NRC's DEIS for the ESP, one of the two additional reactors Dominion proposes for the North Anna site would withdraw water from the Lake for cooling. The water-cooling system Dominion proposes to use would increase discharges of heated wastewater effluent into the Lake, causing a greater loss of lake

[8] 15 C.F.R. § 930.50. Because the ESP is a federally-issued permit, these provisions apply to Dominion's request to DEQ for a CZMA certification.

[9] 15 C.F.R. § 930.11(g) (emphasis added). See also 15 C.F.R. 930.33(a)(1) re direct federal activities ("Effects are determined by looking at reasonably foreseeable direct and indirect effects on any coastal use or resource. An action which has minimal or no environmental effects may still have effects on a coastal use…or a coastal resource, if the activity initiates an event or series of events where coastal effects are reasonably foreseeable.") (emphasis added).

water through evaporation. This increase in evaporation would result in lower lake levels, as well as reduced water releases to the North Anna River.

The Lake Anna watershed is a relatively small one, with a mean annual flow at the Lake Anna Dam ("Dam") of approximately 370 cubic feet per second (cfs).[10] As such, the ability of both Lake Anna and the North Anna River to withstand additional consumptive use of water must be closely scrutinized. For instance, under the Tennant rating system – a stream flow grading technique based on percentages of mean annual flow – a stream flow of 0 % to 10 % of the stream's mean annual flow is rated as "severe degradation."[11] Dominion's VWPP permit for the existing reactors requires an absolute minimum discharge of 20 cfs from the Dam to the North Anna River. A minimum release of 20 cfs equals only 5.4% of the North Anna River's mean annual flow at the Dam. With the additional evaporative losses caused by the operation of a third water-cooled reactor unit at the North Anna site, the duration of time that the release rate of water from the Dam to the North Anna River would be 20 cfs or less, representing a severely degraded condition, would increase from 5.8 percent to 11.8 percent of the time.[12]

These reductions in water releases to the North Anna River could have a number of impacts that would conflict with the enforceable policies of Virginia's Coastal Resources Management Program. For example, reduced flows in the North Anna River could adversely impact anadromous fish habitat, thereby directly affecting Virginia's coastal zone by impacting the state's management of its coastal fisheries. As set forth in a 2004 study of the relationship between fish abundance and flow patterns in the North Anna River, many fish species undergo their spawning and early life stages during the typically drier months of the year (July through October). Substantial flows during this period are critical for a significant number of these species, and there exists a "direct relationship between the magnitude of flow and abundance."[13] If durations of low-flow periods are increased during this critical time of year, these anadromous fish species could be adversely affected.[14]

Further, increased water temperatures from heated wastewater discharge could also impact aquatic habitat and fish populations within Lake Anna. As DEQ has pointed out, "[i]t is likely that a small increase in reservoir water temperature would have a dramatic effect, further reducing already limited habitat and perhaps jeopardizing the entire striped bass fishery."[15]

Additional water withdrawals from the Lake, increased discharges of heated wastewater to the Lake, and the corresponding reductions in releases from the Dam could also impact

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[10] February 10, 2004 letter from E. Irons, DEQ, to P. Faggert, Dominion, at p. 3. It is worth further note that the North Anna River had an average flow rate of approximately 286 cfs in this area before Lake Anna was constructed. March 3, 2005 letter from E. Irons, DEQ, to M. Lesar, NRC, at p. 8.

[11] Id. at p. 8.

[12] DEIS at p. 5-7.

[13] Dean Fowler, Virginia Department of Game and Inland Fisheries. *An Analysis of Fish Abundance and Flow Patterns in the North Anna River, Virginia.* June 18, 2004.

[14] It bears mention that populations of striped bass and American shad downstream of Lake Anna in the Pamunkey River have been used as brood stock for restoring and augmenting populations of those species elsewhere in the state. Impacts on these important populations could severely impact these fisheries.

[15] February 10, 2004 letter from E. Irons, DEQ, to P. Faggert, Dominion, at p. 6.

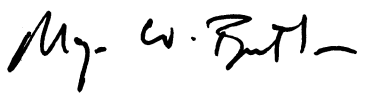
recreational uses of Lake Anna and the York River watershed. In addition to impacts on the Lake's fisheries, lower lake levels would impair recreational boating, while increased temperatures could affect swimming. Reduced releases to the North Anna River may impact fishing and boating downstream of the Lake, as well.

Finally, as reflected in the DEIS, one county upstream of Lake Anna and three counties downstream of the Lake are considering whether or not the North Anna or Pamunkey Rivers could serve as sources for drinking water.[16] The NRC refused to even consider the how this potential conflict over the limited water in the North Anna River may be resolved, asserting that "[a]ny future conflicts over water use fall within the regulatory authority of the Commonwealth of Virginia." These competing demands for water highlight even further the potential problems that reduced lake levels and downstream flows would cause, and they undermine the Commonwealth's CRMP policy goal of avoiding coastal resource use conflicts.[17]

In light of these significant potential impacts of an additional water-cooled reactor at the North Anna site, we recommend either that the consistency certification be denied, or that the certification be conditioned upon a commitment by Dominion to use air-cooled units for both new reactors so as to minimize potential impacts on Virginia's coastal resources.

Thank you for your consideration of these comments. Please let us know if you have any questions or if you decide to grant our request for a public hearing on this matter.

Sincerely,



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[16] DEIS at p. 2-23.

[17] DEIS at p. 7-3. Hanover County has proposed to withdraw 46 cfs of water from the North Anna River downstream of the Lake Anna Dam as part of a plan to provide additional drinking water to its residents. As acknowledged in the DEIS, a withdrawal of 46 cfs would exceed the 40 and 20 cfs minimum release rates from the Lake Anna Dam that are required by the Commonwealth's Lake Level Contingency Plan.