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Questions Remaining after Release of Draft Environmental Impact Statement

Based on Dominion's Early Site Permit application, the U.S. Nuclear Regulatory Commission (NRC) prepared a draft Environmental Impact Statement regarding the environmental effects of new nuclear reactors on the shores of Lake Anna. NRC was able to preliminarily recommend that new reactors would have no major adverse environmental effects. However, the draft EIS leaves many questions unanswered. How can the NRC conclude the reactors won't harm the environment and surrounding communities when major questions remain?

What about...

- **Water Quality and Effects on the Lake?** The NRC staff concluded that the impacts of another once-through reactor on the lake water will be "small," but there's limited information about how much water is flowing in and out of Lake Anna. Nor has the rate at which water moves through the lake been recorded. Yet, according to the draft EIS, such measurements "are important for both understanding the hydrodynamics of the lake" and for understanding lake temperature changes. With such inadequate data about the lake's hydrology, how can the NRC know the impact is "small?"
- **Fudging the numbers on water temperature?** In Dominion's calculation of the maximum temperature of the lake surface with a new reactor, the figure of 95 degrees is actually an average of the upper 28 feet of water. The water temperature in the upper 5 or 6 feet where most swimming activity would occur is likely to be significantly warmer than 95 degrees, while the temperature at a depth of 24-28 feet, where the sensitive striped bass typically reside, is unknown. More detail is needed on likely temperature changes in the lake.
- **Reactor fish kills?** While the NRC and Dominion believe they can easily replace fish and fish larvae killed by the nuclear plant's water intake system, the draft EIS does not consider the various ages and sizes of the fish that are killed. Without this information, NRC cannot have a clear picture of the structure and viability of the striped bass population. A new reactor would double the number of striped bass killed, and more than triple the overall number of fish killed.
- **Waste?** The draft EIS does not address environmental impacts from the large amount of high-level nuclear waste that will be generated by a new reactor.
- **Security?** Nuclear plants have known vulnerabilities to terrorist attack and sabotage. One possible security measure to protect a reactor from assault by aircraft is to place it below ground level. Yet, there is no analysis in the draft EIS of the suitability of the site to place the reactor containment below grade, which

would require an in-depth analysis of geological and hydrological conditions at the site.

- **Need for Power?** Whether Virginia will see the benefits from a new reactor at North Anna is unclear, as this analysis is not included in the Early Site Permit process. It is but one of many crucial issues pushed off until later permitting steps.