

NORTH ANNA NUCLEAR POWER PLANT

EARLY SITE PERMIT INFORMATION

Plant Information

Location: Mineral, VA (40 miles northwest of Richmond, on the shore of Lake Anna; Louisa County)

Owner: Dominion Generation (subsidiary of Dominion Resources, Inc.)

Headquarters: Richmond, VA



North Anna nuclear plant in Mineral, Virginia

Specifications: Produces 1,786 megawatts from two Pressurized Water Reactor units. Unit 1 began commercial operation on June 6, 1978 (currently licensed to operate until April 1, 2038) and Unit 2 on December 14, 1980 (licensed to operate until August 21, 2040).

Contentions

- 1. Uses too much water.** Nuclear reactors must draw in significant amounts of water in order to operate and avoid a meltdown – up to 2.5 billion gallons every day. Adding up to two new reactors at the site could permanently reduce the water level in the lake by several feet. Severe drought last year dramatically dropped the lake level near the point at which the plant must declare an “ALERT.” If the new reactors employ cooling towers rather than a once-through cooling system, it could help to some degree, but there may still be a need to bring water in from elsewhere, by truck or even by constructing a pipeline. Drawing water from the lake causes impingement and entrainment of fish, fish spawn, larvae and nutrients; they are routinely destroyed.
- 2. Disrupts marine ecosystems.** In addition to drawing water from the lake, the plant would also discharge water back into the lake. The discharged water can be up to 25°F warmer than the rest of the lake and contains chemicals, heavy metals, cleaning solvents, biocides, and radioactive contamination. This is already a problem with the reactors currently on site – two more would simply double the adverse effects.
- 3. Increases risk of terrorism.** Nuclear plants and plant sites contain and store large amounts of the most deadly substance known to man: nuclear fuel. The sites are essentially pre-deployed “dirty bombs” that could cause catastrophic damage to communities and make an area the size of Pennsylvania uninhabitable if an accident or attack caused the release of radiation. In an age of increased risk of terrorism, it makes no sense to construct new targets. The U.S. Nuclear Regulatory Commission (NRC) is not considering security implications of new plants in license applications, calling the threat of terrorism “too speculative.” Tests of security forces at nuclear plants have not included mock water-based assaults.
- 4. Vulnerability from airplane crashes.** There is a large airfield for cargo and general aviation very close to the North Anna site. The General Accounting Office (GAO) concluded in a recent report that cargo and general aviation airfields are more vulnerable to security breaches than commercial airports. While nuclear power stations are being evaluated for risk from accidental aircraft crashes, there remains a clear and present danger from a hijacked, stolen or rented aircraft that

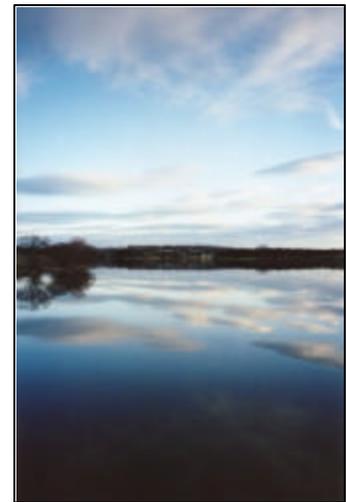


Location of North Anna site

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could be used in a sabotage of a nuclear power station. This is not adequately evaluated in the Early Site Permit application.

5. **Lake Anna subject to closure.** There is additional socio-economic impact associated with closing the entire lake to the public for security reasons, as evidenced during code orange alerts issued by the Department of Homeland Security. Numerous man-made lakes established for the cooling and receiving waters for nuclear power stations have already undergone lengthy closures to public access for security reasons. These include Wolf Creek in Kansas and Clinton, Braidwood and Byron in Illinois. Additionally, restricted water access zones have been permanently expanded at virtually all nuclear power stations in the U.S. The public restrictions and associated economic hardships are likely to continue and even increase with a widening war on terrorism and the expansion of nuclear power station sites. Adding two more reactors to the North Anna site only increases its attractiveness as a target, raising chances that Lake Anna would need to be closed.
6. **New reactor designs incompatible with old reactor sites.** New, “inherently safe” reactor designs have weakened control room radiation protection features as part of their new designs, meaning control room operators have less protection in case of an accident. “Control room habitability” has not been addressed as an issue in the application. The result: if an accident takes place at unit 1 or 2, control room operators in units 3 and 4 would be at great risk, possibly leaving those reactors unmanned during an emergency next door.
7. **Inadequate emergency plans.** Courts have found that states do not have the statutory authority to conscript civilian participants into a plan for a nuclear power station emergency. School teachers, for example, can’t be forced in the emergency plan to shepherd children in schools until the end of the emergency. Dominion has not adequately evaluated the adverse impact of people abandoning their posts, as has happened in other similar situations. As such, the plan is inadequate.
8. **Failure to fully evaluate population impacts.** Dominion has not adequately addressed population trends for the potential full term of the license. Population trends should be projected out to include not only the 40-year license but a 20-year license extension, which all other applicants to date have received. Therefore, population growth trends should be projected out to 2070 in order to ensure adequate evacuation plans are feasible.
9. **Public health impact not addressed.** Dominion has not adequately addressed the potential public health impacts associated with an increase in “legal” or “permissible” radiological releases from the new reactors.
10. **Crucial factors not examined.** In the Early Site Permit process, the need for new power generating capacity, the impact on energy prices, and alternative sources of power besides nuclear are not even considered. For instance, the Southeastern U.S. is awash in excess generating capacity, so any electricity generated by new reactors at North Anna will be for the benefit of customers in other regions of the country.



Lake Anna, Virginia

OPPOSE NEW REACTORS AT NORTH ANNA

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