

July, 2007

Public Citizens Comments to the Virginia Department of Environmental Quality on the Issuance of a VPDES permit for the Dominion North Anna Power Station

July 27, 2007

Re: The issuance of a Virginia Pollutant Discharge Elimination System (VPDES) permit for the Dominion North Anna Power Station.

The two nuclear reactors at the North Anna Power Station have significant thermal impacts on the cooling lagoons, often referred to as the “hot side” of the lake. No steps have been taken to reduce the impacts. In fact, by labeling the area as a private “Waste Heat Treatment Facility”, no regulation of the water temperature and its impacts is required. This is private misuse of a public resource. It is unacceptable that one part of the lake should be managed differently than the other. The classification of waste treatment facility does not account for the fact that there are approximately 800 residents whose homes border the cooling lagoons. Lake Anna was created to cool the sited nuclear reactors and for development and recreation around the total (cooling lagoons and reservoir) 13,000 acre lake.

Residents and visitors are subject to temperatures that have been regularly detected at 104-106 degrees Fahrenheit. Temperatures this high are a risk to human health. The warm water resulting from unrestricted temperature controls permissible in the 316a variance, pose threats to human health by creating favorable environments for unhealthy levels of bacteria. According to Dr. Robert Stroube, Va. State Health Commissioner, bacteria organisms begin to proliferate at water temperatures around 86 degrees Fahrenheit and thrive at water temperatures of 95 to 113 Fahrenheit. In fact, according to a study done by the VA Commonwealth University this summer, the human brain eating *NAEGLERIA FOWLERI* (NF) amoeba can currently be found in both the main reservoir and cooling lagoons. By not imposing temperature limits on the cooling lagoons, VDEQ is unnecessarily jeopardizing the public health of Lake Anna residents and users.

The decision to grant a 316a variance increases the thermal pollution caused by the power plant. This will negatively affect numerous aspects of the lake ecosystem, from the breeding habits of fish species to the amount of oxygen available to plants or microorganisms to thermal-discharge-effect-related fish kills. Heated effluents unchecked by proper monitoring and regulations can kill aquatic organisms directly by either heat shock or cold shock. In addition, a number of indirect or sublethal stresses are associated with thermal discharges that have the potential to alter aquatic communities such as; increasing incidence of disease.

Elevated water temperatures in power plant discharges may increase the susceptibility of fish to diseases and parasites. A number of factors that could contribute to such an effect include increased stresses on fish in warmer water that makes them more prone to

infection, and the ability of some diseases and parasites to develop faster at higher temperatures.

The purpose of the VPDES permitting process and the charge of the VDEQ is to regulate and mitigate the effects of thermal discharge and the concentration of contaminants emitted through this discharge to protect the health of the effected aquatic habitat and I would add, those that swim and recreate in the lake. The 316a determination is considered when a plant exceeds the temperature limits set by the state. Consideration to grant a 316a determination should not be taken lightly; according to regulation, to receive this allowance Dominion must prove that thermal effects will “ensure the protection and propagation of a balanced indigenous population of shellfish, fish and wildlife”, - and I would further suggest that potential human illnesses resulting from high water temperatures be part of the review – these stipulations should not be ignored because Dominion was able to get the cooling lagoons classified as a waste treatment facility. This does not reflect the true scope of the lakes use.

Therefore, the permit must contain specific maximum temperature levels in the cooling lagoons and increase the frequency of monitoring to protect the aquatic habitat and the health of the people using the lake for recreation. Thank you for your consideration of these comments. We appreciate the public meeting held by VDEQ on July 18th, and hope that VDEQ and the Water Control Board will rigorously review the terms of the permit and consider the standards necessary to truly protect the health of Virginia’s environment and its people.