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Chief, Rules Review and Directives Branch
U.S. Nuclear Regulatory Commission
Mail Stop T6-D59
Washington, DC 20555-0001

Dear Sir/Madam:

This is in response to the Nuclear Regulatory Commission's (NRC) final Generic Environmental Impact Statement for License Renewal of Nuclear Plants-Supplement 30 (final GEIS) for the Vermont Yankee Nuclear Power Station (VYNPS), dated August 2007. The Department of the Interior (Department) commented on the draft GEIS by letter dated March 6, 2007.

GENERAL COMMENTS

We believe that the NRC has not fully responded to the issues raised in the Department's March 6, 2007, comment letter. These comments were raised pursuant to our review under the National Environmental Policy Act (NEPA) or the Fish and Wildlife Coordination Act, and as such should been adequately addressed in the final EIS.

Likewise, the final GEIS repeatedly states that "...reports and demonstrations have shown the fish community in the vicinity of VYNPS ...to be healthy and relatively stable." This characterization does not take into account the most recent biological monitoring results that we referred to in our March 6, 2007, letter. In addition, there is now another draft report out that continues to show a decline in catch per unit effort (CPUE) of American shad, walleye and white sucker.[1] The Department is concerned about these recent trends and intends to raise the issue in the context of the National Pollutant Discharge Elimination System (NPDES) process; however, that should not relieve the NRC of its responsibility to consider this information in its NEPA evaluation.

SPECIFIC COMMENTS

Section 2.1.3

[1] Ecological Studies of the Connecticut River Vernon, Vermont, Report 36. January-December 2006, DRAFT. March 2007. Normandeau Associates.

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While the dimensions of the intake structure were provided in response to our comments on the draft GEIS, it is still not possible for us to determine or verify the intake velocities cited because the dimensions are for the entire intake, not for the individual bays.

Section 3.0 Environmental Impacts of Refurbishment

The final GEIS states that the integrated plant assessment that Entergy conducted did not identify the need to undertake any major refurbishment or replacement actions to maintain the functionality of important systems, structures, and components during the VYNPS license renewal period; therefore, refurbishment was not considered. Given the recent collapse of a large portion of one of VYNPS's cooling towers, it appears that NRC should reconsider the need to address refurbishment. If rotten wood is the reason for the collapse, full-scale replacement of the cooling tower support structures may be necessary.

Section 4.7.2

This section of the final GEIS responds to comments received on the draft GEIS regarding thermal discharges and how they may adversely affect migratory fish species. After reviewing the information provided, the Department finds NRC's response to be inadequate and deficient in certain areas. In particular, many of the comments the Department raised about potential impacts to outmigrating salmon smolts were inadequately addressed. The Department cited a number of recent studies showing a link between elevated water temperatures and smolt physiology as it relates to preparedness for the marine environment; however, there is no mention of that research and its relevance to the subject relicensing in this section of the GEIS.

Further, the document continues to reiterate information provided by the applicant that is outdated, incorrect, or out of context. These deficiencies were pointed out to the NRC by the Department in its March 6, 2007, comment letter, yet the final GEIS does not address these comments. For example, NRC states that smolts pass through the project area within 12 hours and can avoid the warmest waters by swimming around or under the plume, when radiotelemetry studies done to evaluate the efficiency of the Vernon downstream fish bypass facility showed that some smolts resided in the impoundment for up to three days, and it is not known where the smolts go relative to the plume while in the headpond because those studies have not been conducted. The VANR did not grant VYNPS a waiver to increase their thermal limits for the period May 16 through June 15 specifically because there was a lack of information upon which to make a determination of either no prior appreciable harm or no future harm to the balanced indigenous population (BIP). Therefore, NRC's conclusion that impacts on the migration of fish from continued operation of VYNPS are small does not seem to be supported.

Section 8.0

The Department is disappointed that NRC has chosen not to evaluate an alternative of VYNPS operating in closed-cycle mode. While we understand that Congress has limited the NRC's authority to set conditions that infringe on the NPDES process, the NEPA document is an appropriate mechanism to compare and evaluate the relative levels of impact for various alternatives, even ones that are not presently required in the NPDES permit. The license period

for the subject project is 20 years. NPDES permits are issued every five years. It is conceivable that within the renewed license period, a NPDES permit could be issued that requires closed cycle operation. Given that possibility, it is reasonable to include closed cycle as an alternative in the GEIS.

APPENDICES

Appendix A

In its response to Departmental comments on the draft GEIS, the NRC states: "It should be mentioned that even if smolts originating from upstream portion of the Connecticut River lose their salinity tolerance....due to delays in downstream passage, they can successfully undergo smoltification the following year." No documentation is provided to support this claim. Department staff conducted a literature review and found several papers related to salmon desmoltification, but all of those studies were conducted under lab/aquaculture conditions, not in the wild. While salmon that have been held up by dams or temperature induced loss of salinity tolerance may not die as a direct result of desmoltification, we are unaware of any data indicating those fish can survive for a year in the wild, or contribute to the smolt run the following year. Salmon that have desmolted likely have very high mortality rates due to the paucity of suitable habitat for post-smolts in the Connecticut River mainstem or large tributaries (e.g., those systems contain many predators, have water temperatures that are above their lethal limit in many years, etc.).

In responding to the Department's comments on changes to the fish community, the NRC attributes those changes to a number of factors, including the addition of fish passage facilities, introductions of fish species, and differences in sampling gear. The one factor not considered by NRC is that the changes may be due to the operation of VYNPS. No reason has been put forth by NRC as to why VYNPS should not be considered a potential factor in either the change to community composition or in the recent declining CPUE trends for two residents and one anadromous species of fish.

Appendix E

6.0 Essential Fish Habitat

The final GEIS identifies a number of factors that could contribute to the loss of smolt characteristics, including increasing water temperature in the impoundments. Surprisingly, no mention is made of how VYNPS also increases water temperature. This is a serious omission, given the known relationship between loss of smolt characteristics and the capacity of smolts to survive in seawater and return as adults.

The Essential Fish Habitat discussion also makes the following categorical statements: "Atlantic salmon smolts migrating past VYNPS would not be subjected to elevated temperatures for more than 12 hr. and could avoid the warmest waters by swimming around or under the plume....studies indicate that most smolts successfully complete their downstream migration." As mentioned above under Section 4.7.2, the 12 hours cited is an average, and how fish negotiate

the thermal plume is unknown because no directed studies have been conducted to date. Lastly, the wording of the final statement by NRC implies that smolts succeed in migrating to sea. To our knowledge, none of the studies cited in the GEIS or any supporting documentation followed smolts beyond Vernon dam; therefore, NRC's statement is misleading. In fact, if there were recent studies (i.e., since the most recent thermal increase went into effect) showing that smolts passing through VYNPS actually migrated to sea successfully, the Environmental Advisory Committee likely would not have recommended to disallow the requested increase during the smolt migration period.

Based on the reasons detailed in this letter and our March 6, 2007, letter, we question the NRC's conclusion that VYNPS operations would likely have a minimal adverse effect on Atlantic salmon Essential Fish Habitat. If possible, we request that you consider these comments as a part of your deliberations with respect to the issuance of a record of decision for this project.

Thank you for the opportunity to provide comments. Should you have any questions about these comments or wish to discuss further any issues raised in this letter, please do not hesitate to contact Ms. Melissa Grader, New England Field Office, United States Fish and Wildlife Service at (413) 548-8002, Extension 124.

Sincerely,

Willie R. Taylor
Director
Office of Environmental
Policy and Compliance