

March 2, 2007

Mr. Kenneth A. Westlake, Chief  
NEPA Implementation Section  
Office of Science, Ecosystems, and Communities  
U.S. Environmental Protection Agency  
Region 5, Mail Code B-19J  
77 West Jackson Boulevard  
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SUBJECT: COMMENTS ON THE FINAL ENVIRONMENTAL IMPACT STATEMENT FOR  
AN EARLY SITE PERMIT (ESP) AT THE EXELON ESP SITE (TAC NO.  
MC1125) (EIS No. 20060320)

Dear Mr. Westlake:

In your letter dated September 1, 2006, you provided comments on the U.S. Nuclear Regulatory Commission (NRC) staff's "Environmental Impact Statement for an Early Site Permit (ESP) at the Exelon ESP Site," (NUREG-1815 - Final) dated July 2006. In that letter, you stated that you had determined that the Final Environmental Impact Statement (FEIS) resolved some of the concerns raised in your May 25, 2005 letter, but that you still had some remaining concerns.

The NRC staff has reviewed the remaining comments provided in the September 1, 2006 letter. Many are identical or nearly identical to those of your May 25, 2005 letter, providing little additional information or clarification of your concerns. However, the staff has reconsidered its responses to those concerns that are provided in Appendix E of the FEIS, and has determined that it has sufficiently addressed the matters you raise and concludes that no further changes to the FEIS are necessary to support the licensing review of the Exelon ESP site. As discussed in Section 3.2 of the FEIS, during the review of a construction permit (CP) or combined license (COL) application referencing an ESP, the staff would assess the environmental impacts of the construction and operation of a specific plant design. Environmental impacts not considered or not bounded at the ESP stage would be assessed at the CP or COL stage. In addition, measures and controls to limit adverse impacts would be identified and evaluated for feasibility and adequacy in limiting adverse impacts at the CP or COL stage.

However, there were two concerns stated in your letter for which you provided further clarification. The following is a discussion of those concerns along with a summary of the responses provided in the FEIS:

Comment: We remain concerned about the level of wetland information provided in the FEIS. There is no wetland delineation or functions and values information provided, nor a detailed description of the wetland impacts caused by the proposed project. We stated that the FEIS should include temporary and permanent impacts, such as wetland filling, vegetation clearing and hydrological alterations. Also, the FEIS should have included a comprehensive mitigation

K. Westlake

strategy. Finally, we stated that the U.S. Nuclear Regulatory Commission (USNRC) should consult with the U.S. Army Corps of Engineers (ACE) to ensure compliance with Section 404 of the Clean Water Act.

The FEIS does not include the information we requested. Instead, the FEIS states that the applicant will apply for a permit to address wetland issues under Section 404 of the Clean Water Act (Section 404). The details of wetland impacts will be written in future environmental documentation, when the applicant applies for a construction permit (CP) or a combined license (COL) for the additional nuclear reactor.

The FEIS does not include a comprehensive analysis of wetlands in the study area, or a wetland impact comparison between the preferred alternative and other feasible alternatives initially under consideration. This is required under the National Environmental Policy Act (NEPA) and Section 404. As the FEIS is written, feasible alternatives may be eliminated from consideration based on an incomplete environmental analysis. Therefore, the FEIS does not provide information showing that the preferred alternative is the least environmentally damaging practicable alternative (LEDPA) under Section 404.

Response: *In Exelon's environmental report for the ESP site, the applicant states that as the four minor wetlands onsite do not occur within the power block, cooling tower, switchyard expansion, or new intake footprint areas, they would not be impacted by construction of these structures. Exelon also provides a commitment that associated equipment laydown areas and fill disposal areas, and the conduit for the new intake will be sited so as to preclude impacts to these wetlands.*

*The staff agrees that the current level of information in the FEIS does not provide a detailed description of construction impacts to wetlands at the ESP site. However, because an applicant referencing the Exelon ESP in an application for a construction permit (CP) or combined license (COL) would be required to obtain an U.S. Army Corp of Engineer Section 404 permit that would address such areas as wetland filling, vegetation clearing, and hydrological alternations, etc., the staff concludes that Exelon's statements and commitments in the ESP environmental report are sufficient for an ESP review. In a future environmental impact statement related to an application for a CP or COL, the staff will disclose the provisions of this permit, which will include such temporary and permanent wetland impacts. The issues identified in the May 25, 2005 EPA letter were answered in Appendix E of the FEIS in Section E.2.12, "Comments Concerning Terrestrial Ecology."*

Comment: We remain concerned about the proposed project's impacts on Clinton Lake. According to the DEIS, Clinton Lake (and several connected reaches) are on the Illinois Environmental Protection Agency's (Illinois EPA's) Draft 2004 list of impaired waterbodies under Section 303(d) of the Clean Water Act. Low dissolved oxygen is one of the attributes of one or more of these impairments. The DEIS also states that the proposed project would increase the water temperature of Clinton Lake, which could exacerbate the low oxygen levels of the already impaired waterbodies. We stated that the USNRC should provide

## K. Westlake

future environmental documentation that evaluates the impact of the proposed project on the impaired status of Clinton Lake and its connected reaches. Such environmental documentation should include commitments to mitigate these impacts. The FEIS response states that Illinois EPA will be responsible for issuing a water quality permit for the new nuclear reactor. Therefore, water quality parameters, including temperature, will be regulated. However, NEPA does not merely require the project proponents to acknowledge that they will comply with regulatory limits; rather the project proponents must disclose the project's environmental impacts (such as a hotter effluent to an impaired waterbody). The FEIS does not include an adequate analysis of this impact.

Response: *In its ESP FEIS, the staff discloses the potential project's environmental impacts to Clinton Lake to the extent possible given the level of information provided in the plant parameter envelope. In Section 5.3.2 of the FEIS, the staff concludes that during normal water years, the water-use impacts would be SMALL and mitigation would not be warranted. During the years of below-average precipitation, the impact level could be MODERATE until normal water conditions return. In Section 5.3.3, the staff summarizes its assessment of water quality matters stating that the consumptive water use from a new nuclear unit would reduce the volume of water in the lake, which would result in an increase in temperature during low water periods. Impacts to the lake would be lessened during periods of relative water excess because the lake volume would be approximately the same regardless of ESP unit operation. However, the staff concludes that impacts of the new nuclear unit on lake water quality would be SMALL, and mitigation would not be warranted, because Exelon committed to keep the combined discharge of the CPS and ESP unit effluent within the bounds of the Clinton Power Station's (CPS's) existing National Pollution Discharge and Elimination System (NPDES) permit, which the Illinois Environmental Protection Agency (IEPA) has determined provides adequate protection to the environment. In times of low water periods, Exelon would need to coordinate with IEPA on appropriate mitigation measures, such as derating or even temporary shutdown of the unit.*

*In Section 5.4.2 of the FEIS, the staff addresses the potential impacts of increased temperature and depleted oxygen to aquatic species. The staff concludes that the small increase in average lake temperature during combined operations of the CPS and a new nuclear unit, as long as it remains within the NPDES limits currently in place, are not expected to adversely affect important aquatic organisms or upset the balance of the aquatic community in Clinton Lake, its tributaries (i.e., Salt Creek and the North Fork of Salt Creek), or the portion of Salt Creek that is downstream from the Clinton Dam. During low water years, the impact to the water level, and thus to the water temperature and available habitat, could be MODERATE until normal water conditions and lake level return.*

*An applicant for a CP or COL referencing an ESP for the Exelon ESP site would need to provide additional information on the intake structure design and expected NPDES permit requirements regarding the thermal effects on aquatic organisms in order for the staff to make a significance determination with respect*

K. Westlake

*to this resource. The staff concludes that the aquatic ecology issues associated with operation of a new unit located on the ESP site are unresolved and will need to be further addressed in an EIS at the CP or COL stage of review. However, the staff concludes that it has disclosed the potential project's environmental impacts to Clinton Lake in its ESP FEIS to the extent possible given the level of information provided in the plant parameter envelope. Some of these issues are further addressed in Appendix E of the FEIS in Section E.2.9, "Comments Concerning Surface Water Use and Quality."*

If you have any questions concerning this matter, please contact the NRC Environmental Project Manager, Mr. Thomas Kenyon, by telephone at (301) 415-1120.

Sincerely,

*/RA/*

Brent Clayton, Chief  
Environmental Technical Support Branch  
Division of Siting and Environmental Reviews  
Office of New Reactors

Docket No. 52-007

cc: See next page

K. Westlake

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Docket No. 52-007

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