



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001**

October 17, 2014

Ms. Barbara Rudnick
Office of Environmental Programs
Environmental Protection Agency
1650 Arch Street
Mail Code: 3AE30
Philadelphia, PA 19103

SUBJECT: RESPONSE TO ENVIRONMENTAL PROTECTION AGENCY COMMENTS REGARDING THE FINAL PLANT-SPECIFIC SUPPLEMENT 49 TO THE GENERIC ENVIRONMENTAL IMPACT STATEMENT FOR LICENSE RENEWAL OF NUCLEAR PLANTS REGARDING LIMERICK GENERATING STATION, UNITS 1 AND 2

Dear Ms. Rudnick:

On October 14, 2014, the Environmental Protection Agency (EPA), Region III, provided comments to the Final Supplemental Environmental Impact Statement (FSEIS) pertaining to the license renewal of Limerick Generating Station (LGS), Units 1 and 2 (NUREG-1437, Supplement 49). In that letter, EPA noted that the U.S. Nuclear Regulatory Commission (NRC) should consider if existing and predicted climatic changes, as discussed in the FSEIS, "have the potential to impact resiliency of the storage spent fuel, if the potential flooding may impact emergency notification/evacuation planning and/or the cooling water withdrawals due to increase temperature." Furthermore, EPA requested further clarification as to how these climatic changes are being incorporated into planning for the facility and assessed in the National Environmental Policy Act (NEPA) analysis.

The NRC acknowledges EPA's concerns regarding climate change and the implications for spent fuel stored at LGS, and potential flooding impacts pertaining to emergency preparedness and/or cooling water withdrawals. As discussed below, the additional matters the EPA has requested the NRC to further consider in its NEPA analysis are considered outside the scope of the NRC's license renewal environmental review and therefore are not addressed specifically in the LGS FSEIS. However, as discussed below, the NRC is committed to ensuring that the implications of global climate change to licensed facilities are evaluated on an ongoing basis, through various licensing and oversight processes, to ensure continued safe operations.

Storage Spent Fuel

In accordance with Exelon's current Title 10 of the *Code of Federal Regulations* (CFR) Part 50 operating license for LGS, spent nuclear fuel is stored onsite in a spent fuel pool and in an independent spent fuel storage installation (ISFSI), which was constructed in 2008. Under NRC's regulations, Exelon has a general license to store spent fuel from both LGS units in

pre-approved dry storage casks in accordance with the requirements in 10 CFR Part 72, Subpart K. The NRC carries out periodic inspections of the spent fuel pool and ISFSI to verify its compliance with its licensing and regulatory requirements.

It should be noted that the main plant complex at LGS housing the spent fuel pool, and the ISFSI pad located just to the west of the plant complex, are situated on a bedrock ridge located more than 150 feet in elevation above the floodplain of the Schuylkill River below the ridge. Direct flooding impacts from rising water levels are unlikely given the projected climate change impacts described in Section 4.12.2.1 of the LGS FSEIS (NUREG-1437, Supplement 49).

In addition, the NRC recently published its Continued Storage Rule (79 FR 56238, September 19, 2014) in the *Federal Register* and associated “Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel” (NUREG-2157, ADAMS Accession No. ML14196A105 and ML14196A107). The impacts of climate change on the storage of spent fuel were addressed by the rule and its supporting Generic Environment Impact Statement (GEIS). The analysis and the environmental impacts were deemed incorporated by the rule, which was effective October 19, 2014. As discussed in Chapter 6 of the FSEIS for LGS, the NRC stated that it would rely on the revised rule (10 CFR 51.23) and its supporting GEIS to provide the NEPA analysis of the environmental impacts of continued storage of spent nuclear fuel.

Emergency Notification/Evacuation Planning

Emergency preparedness is considered outside the scope of the environmental review and therefore not addressed in the LGS FSEIS. As discussed in the Statements of Consideration for the rulemaking (56 FR 64966), the programs for emergency preparedness at nuclear power facilities apply to all nuclear power facility licensees and require the specified levels of protection from each licensee regardless of plant design, construction, or license date. Requirements related to emergency planning are specified in the regulations at 10 CFR 50.47 and Appendix E to 10 CFR Part 50. These requirements apply to all operating licenses and will continue to apply to facilities with renewed licenses. Through its standards and required exercises, the Commission ensures that existing emergency plans are adequate throughout the life of any plant even in the face of changing demographics and other site-related factors. Thus, these drills, performance criteria, and independent evaluations provide a process to ensure continued adequacy of emergency preparedness in light of changes in site characteristics that may occur during the term of the existing operating license, such as transportation systems and demographics.

Furthermore, on November 23, 2011, the NRC amended certain emergency preparedness requirements; the Statements of Consideration to this amendment states (76 FR 72562):

This final rule does not affect the findings necessary for issuance of a renewed nuclear power operating license under 10 CFR part 54. As the Commission explained in the license renewal final rule (56 FR 64943; December 13, 1991) and again in revisions to that final rule (60 FR 22461; May 8, 1995), the scope of license renewal is limited to those issues that have a specific relevance to protecting the public health and safety during the license renewal period (i.e., age related degradation). Issues relevant to current plant operations, like emergency planning, fall within the purview of the current regulatory process and continue into the extended operation period of a license renewal. See also NUREG-1412, “Foundation for the Adequacy of the Licensing Bases,” dated December 1991. The Commission has affirmed repeatedly that “emergency preparedness need not be reviewed again for license renewal,” 71 FR 74848, 74852; December 13, 2006 (referencing 56 FR at

64966). The Commission stated that “[t]hrough its standards and required exercises, the Commission ensures that existing plans are adequate throughout the life of any plant even in the face of changing demographics and other site-related factors” (71 FR at 74852) (quoting 56 FR at 64966). This basic determination is reflected in the NRC’s regulations at § 50.47(a), in which a new finding on emergency planning issues is not required for license renewal.

Therefore, the Commission has determined that there is no need for a licensing review of emergency planning issues in the context of license renewal.

Cooling Water Withdrawals

As discussed in Sections 2.7 and 4.4.2.1 of the LGS FSEIS, LGS’s surface water withdrawals from Schuylkill River, and associated consumptive use, are regulated by the Delaware River Basin Commission (DRBC), and not the NRC. As an interstate compact, the DRBC is responsible for basin-wide implementation of water supply allocation, regulatory review (permitting), and other watershed planning and management programs.

Nevertheless, any changes in operating conditions that could affect the safe operations of a nuclear power plant would trigger action by the NRC. Specifically, technical specifications and associated operating procedures, which are and would remain part of Exelon’s operating license, exist to ensure safe operation of the facility. Changes to the operating license for a nuclear power plant such as a change to the technical specifications due to system modification, or changes to operating procedures require approval by the NRC before they could be implemented by the licensee. For example, approval would be required for proposed changes in cooling water system operations as might be necessitated by climate change, such as withdraw of cooling water at a temperature or flow condition outside of the limits established under the current technical specifications of the license. The licensee would be required to submit a license amend request to the NRC for any such change, and which would be the subject of both a safety and a separate environmental review. Changes in cooling water operations may also require the approval of other regulatory agencies having jurisdiction over LGS, notably the DRBC relative to water allocation and the Pennsylvania Department of Environmental Protection with respect to the National Pollutant Discharge Elimination System permitting program.

Thank you for your comments. If further information is required, please contact the NRC environmental project manager, Ms. Leslie Perkins, at 301-415-2375 or by e-mail at Leslie.Perkins@nrc.gov.

Sincerely,

/RA/

Brian Wittick, Chief
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Dockets No. 50-352 and 50-353

cc: Listserv

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Sincerely,

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Brian Wittick, Chief

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Letter to B. Rudnick from B. Wittick dated October 17, 2014

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