



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

September 5, 2014

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

**SUBJECT: NOTICE OF AVAILABILITY OF 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,

Enclosed are three bound copies of the final plant-specific Supplement 49 to NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants (GEIS)," regarding the renewal of operating licenses NPF-39 and NPF-85 for an additional 20 years of operation for Limerick Generating Station, Units 1 and 2 (LGS).

The final Supplement 49 to the GEIS was submitted to the Environmental Protection Agency (EPA) via e-NEPA on September 4, 2014, and copies were mailed or e-mailed to interested Federal and State agencies, industry organizations, interested groups, and members of the public. A copy of this document has also been placed in the U.S. Nuclear Regulatory Commission's (NRC) Public Document Room, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, and in the NRC Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible on the NRC's website at <http://www.nrc.gov/reading-rm/adams.html>. The ADAMS accession number for final Supplement 49 to the GEIS is ML14238A284 and ML14238A290.

Additionally, enclosed are NRC's responses to EPA's recommendations that were provided by letter dated June 27, 2013, during the public comment period on the draft Supplement 49 to the GEIS. These responses can also be found in Appendix A of Supplement 49.

B. Rudnick

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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 Lois James for/

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

Docket Nos. 50-352 and 50-353

Enclosure:
As stated

cc w/encl: See next page

B. Rudnick

- 2 -

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DISTRIBUTION: See next page

ADAMS Accession Nos:

1. Package: (ML14248A191)
2. Letter: (ML14226A510)
3. "Generic Environmental Impact Statement
for License Renewal of Nuclear Plants,
Supplement 49": (ML14238A284 – main report)
(ML14238A290 – package for appendices) *concurred via email

OFFICE	LA:RPB2:DLR:*	PM:RPB2:DLR	BC:RPB2:DLR:
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DATE	8/19/14	9/3/2014	9/5/14

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NRC's Responses to EPA Recommendations on the Supplement 49 to the GEIS

EPA Recommendation: EPA concluded this rating in part due to deficient information on the potential environmental impact associated with the onsite disposal of spent fuel subsequent to the decommission of Units 1 and 2. Section 6 of the draft generic EIS provides information on impacts associated with spent fuel both "Onsite and Offsite"; however, it does not provide sufficient detail of potential environmental impacts of onsite storage subsequent to reactor decommissioning. EPA recommends that the Final EIS address this aspect of the project's future activities.

RESPONSE: *The NRC is committed to ensuring that both spent nuclear fuel (SNF) and low-level radioactive wastes are managed to prevent health impacts to the public. Spent nuclear fuel is currently stored at LGS in its spent fuel pool and in its independent spent fuel storage installation (ISFSI). This practice is expected to continue until DOE is ready to take possession of the SNF. At this time, it is uncertain when this will happen.*

The NRC is aware that a repository for SNF may not be available in the time frame that it was originally envisioned. Historically, the NRC's Waste Confidence Decision and Rule represented the Commission's generic determination that spent fuel can continue to be stored safely and without significant environmental impacts for a period of time after the end of a reactor's licensed life for operation. This generic determination meant that the NRC did not need to consider the storage of spent fuel after the end of a reactor's licensed life for operation in NEPA documents that supported its reactor and spent fuel storage application reviews. The NRC first adopted the Waste Confidence Decision and Rule in 1984. The NRC amended the Decision and Rule in 1990, reviewed it in 1999, and amended it again in 2010 (49 FR 34658 and 34694; 55 FR 38474; 64 FR 68005; and 75 FR 81032 and 81037). The Waste Confidence Decision provided a regulatory basis and NEPA analysis to support the Waste Confidence Rule (10 CFR 51.23).

*On December 23, 2010, the Commission published in the Federal Register a revision of the Waste Confidence Rule, supported again by a Waste Confidence Decision, to reflect information gained from experience in the storage of spent fuel and the increased uncertainty in the siting and construction of a permanent geologic repository for the disposal of spent nuclear fuel and high-level waste (75 FR 81032 and 81037). In response to the 2010 Waste Confidence Rule, the States of New York, New Jersey, Connecticut, and Vermont—along with several other parties—challenged the Commission's NEPA analysis in the decision, which provided the regulatory basis for the rule. On June 8, 2012, the United States Court of Appeals, District of Columbia Circuit in *New York v. NRC*, 681 F.3d 471 (D.C. Cir. 2012) vacated the NRC's Waste Confidence Rule, after finding that it did not comply with NEPA.*

In response to the court's ruling, the Commission, in CLI-12-16 (NRC 2012a), determined that it would not make final decisions for licensing actions that depend upon the Waste Confidence Rule until the court's remand is appropriately addressed. The Commission also noted that all licensing reviews and proceedings should continue to move forward. In addition, the

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Commission directed in SRM-COMSECY-12-0016 (NRC 2012b) that the NRC staff proceed with a rulemaking that includes the development of a generic EIS.

The generic EIS, which provides a regulatory basis for the revised rule, would provide NEPA analyses of the environmental impacts of spent fuel storage at a reactor site or at an away-from-reactor storage facility after the end of a reactor's licensed life for operation ("continued storage"). As directed by the Commission, the NRC will not make final decisions regarding renewed license applications until the court's remand is appropriately addressed. This will ensure that there would be no irretrievable or irreversible resource commitments or potential harm to the environment before the impacts of continued storage have been appropriately considered.

On September 13, 2013, the NRC published a proposed revision of 10 CFR 51.23 (i.e., the Waste Confidence Rule), which, if adopted as a final rule, would generically address the environmental impacts of continued storage (78 FR 56776). The NRC also prepared a draft generic EIS to support this proposed rule (NRC 2013b) (78 FR 56621). The final rule is scheduled to be published by October 2014. Upon issuance of the final rule and GEIS, the NRC staff will consider whether additional NEPA analysis of continued storage is warranted before taking any action on the LGS license renewal application.

The impacts associated with onsite storage of SNF are discussed in Chapter 6 of the SEIS.

EPA Recommendation: EPA suggests that the Final GEIS include greater detail of potential environmental impacts and the measures taken to address the increase population surrounding the facility both the aspect of emergency notification/evacuation planning and from cumulative effects perspective. As you may be aware there has been substantial population growth around the area of the LGS. While section 5 provides details on postulated accidents, and Section 4.12.8 includes summary of cumulative impacts, it is unclear in both cases, how the increase of population has been factored into the analysis.

Response: Section 2.2.9.5 of the SEIS acknowledges that the populations of Berks, Chester, and Montgomery counties have continued to grow since 1970 contributing to increased traffic volumes on local roads around LGS (see also Table 2-9). However, emergency preparedness and evacuation planning are part of the current operating license and are outside the scope of the environmental analysis for license renewal. Emergency preparedness programs are required at all nuclear power plants and require specified levels of protection from each licensee regardless of plant design, construction, or license date. Requirements related to emergency planning are 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. The NRC has regulations in place to ensure that existing emergency preparedness and evacuation plans are updated throughout the life of all plants. For example, nuclear power plant operators are required to update their evacuation time estimates after every U.S. Census, or when changes in population would increase the estimate by either 25 percent or 30 minutes, whichever is less. Additionally, the NRC assesses the capabilities of the nuclear power plant operator to protect the public by requiring the performance of a full-scale exercise—that includes the participation of various Federal, State, and local government agencies—at least once every two years. These exercises are performed in order to maintain the skills of the emergency responders and to identify and correct weaknesses.

Within the context of license renewal, the Commission considered the need for a review of emergency planning issues during the 1991 rulemaking proceedings on 10 CFR Part 54, which included public notice and comment. As discussed in the statement of consideration for rulemaking (56 FR 64943, 64966-67; December 13, 1991), 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. As a result, the Commission determined that, "[t]here is no need for a licensing review of emergency planning issues in the context of license renewal" (56 FR 64966-67). This comment does not present any new or significant information; therefore, no changes were made to the SEIS.

EPA Recommendation: As new science emerges on the topic of Climate Change, this facility should consider adaptations that might be appropriate for the future. Please address this issue in the Final EIS

Response: *NRC is actively engaged to stay abreast of changes in environmental conditions at its licensed facilities. In informing NRC's operating reactor license renewal environmental reviews, NRC utilizes consensus information from the U.S. Global Change Research Program (USGCRP). The USGCRP integrates and presents the prevailing consensus of federal research on climate and global change, as sponsored by thirteen federal agencies. Climate change and its related impacts on air quality (Section 4.12.1), water resources (Section 4.12.2), aquatic resources (Section 4.12.3) and terrestrial resources (Section 4.12.4) are discussed in the EIS. The discussions identify the environmental impacts that could occur from changes in regional climate conditions specific to a resource area. Climate change adaptation of a facility is considered out of scope for the environmental review, which documents the potential environmental impacts of continued operation, and was not evaluated in the development of this SEIS.*

Implications of global climate change are important to the operating conditions and infrastructure of LGS. All currently operating nuclear power plants are located in consideration of site-specific environmental conditions. This siting analysis included consideration of meteorologic and hydrologic siting criteria set forth in 10 CFR 100, as applicable, and nuclear power plants were designed and constructed in accordance with 10 CFR Part 50, Appendix A, General Design Criteria (GDC). These regulations require that plant structures, systems, and components important to safety be designed to withstand the effects of natural phenomena such as flooding from severe storms, without loss of capability to perform safety functions. Plant operations are dictated by NRC-issued operating license technical specifications which ensure that plants operate safely at all times. Technical specifications and operating procedures exist to ensure safe operation of the facility. Any proposed changes in operating conditions contrary to operating license specifications requires the NRC to conduct safety reviews of any such license amendment-prior to allowing the specific licensee to continue operation. Additionally, the NRC evaluates nuclear power plant operating conditions and physical infrastructure to ensure continued safe operations through its reactor oversight program. If new information becomes available, the NRC evaluates the new information to determine if any changes are needed at existing plants or its regulations.

The NRC performs a safety review of the applicants license renewal application to determine if there is reasonable assurance that the effects of aging will not adversely affect any systems,

structures, or components. The results of the safety review are documented in the safety evaluation report.

This comment does not present any new or significant information; therefore, no changes were made to the SEIS.

EPA Recommendation : 28-4-SW; Additionally, one of the leading causes of water quality impairment in Schuylkill River watershed is related to stormwater runoff. Over the last 20 years stormwater management practices have evolved from peak flow attenuation to low impact development. Please include any information on if or how the facility will upgrade its stormwater management practices over the re-licensing period. EPA recommends the facility to consider upgrading its stormwater management practices to current standards.

Response: *EPA's comment expresses concern over the need for LGS to upgrade its stormwater management facilities and practices. NRC's authority does not extend to requiring operating nuclear plants to replace or modify their stormwater management systems to reduce impacts. Nonetheless, the NRC expects that each licensee will comply with all applicable Federal, State, and local permits that the licensee must obtain to operate its plant, including those that are required by the Clean Water Act and its implementing regulations. Discharges to surface waters including the Schuylkill River are regulated through the National Pollutant Discharge Elimination System (NPDES) permitting process in accordance with the federal Clean Water Act, as discussed in Section 2.2.4.2 of this SEIS. For Pennsylvania, NPDES permit authority has been delegated by the EPA to the Pennsylvania Department of Environmental Protection (DEP). Thus, the statutory and regulatory authority for stormwater management rests with the Pennsylvania DEP. Exelon's current NPDES permit does require that a Preparedness, Prevention, and Contingency Plan be maintained for the LGS site and which requires the use of best management practices to reduce pollutants in stormwater discharges. Exelon currently has an NPDES permit renewal application before the Pennsylvania DEP, as referenced in Sections 2.1.7.1 and 2.2.4.2 of this SEIS. In accordance with its statutory and regulatory authority, Pennsylvania DEP will ultimately decide if additional or more stringent controls on stormwater are appropriate.*

This comment does not present any new or significant information; therefore, no changes were made to the SEIS.