POLICY ISSUE
INFORMATION

June 9, 2006 SECY-06-0134

FOR: The Commissioners

FROM: Luis A. Reyes
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SUBJECT: TECHNICAL BASIS FOR REVISING ENVIRONMENTAL ISSUES TO BE CONSIDERED FOR LICENSE RENEWAL

PURPOSE:

This paper informs the Commission of the staff's intention to update NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," the technical basis for an amendment to 10 CFR Part 51, Subpart A, Appendix B.

BACKGROUND:

In SECY-96-035, "Final Rulemaking on 'Environmental Review for Renewal of Nuclear Power Plant Operating Licenses,' 10 CFR Part 51," dated February 9, 1996, the staff requested approval to publish the final rule for 10 CFR Part 51. Attached to SECY-96-035 was the "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," NUREG-1437 (GEIS). The GEIS, the final version of which was published in 1996, provided the technical basis for many of the requirements and much of the language in the final rule. The GEIS examined the impacts of 92 different environmental issues at nuclear power plants operating at that time. The GEIS also documented a literature search done to qualitatively assess the various impacts of nuclear power generation. The purpose of the GEIS was to determine which issues required a site-specific evaluation during the license renewal review and which issues could be evaluated generically, and to focus staff effort during license renewal reviews on only issues that were highly variable from site to site and that could potentially have a significant impact. Since 1996 the staff has used the GEIS in assessing the environmental

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impacts of license renewal in accordance with the National Environmental Policy Act of 1969. The GEIS and the codification of the conclusions in 10 CFR Part 51, Subpart A, Appendix B, have been effective in focusing resources on the important environmental issues and have been successfully employed in reviewing 27 license renewal applications. The staff has relied on the GEIS in its evaluation of a large number of environmental issues that have similar levels of impact at many locations or facilities.

The rule and the GEIS increased the efficiency of the license renewal process by documenting and codifying in the Commission's regulations those environmental impacts that are well understood. In publishing the GEIS and final rulemaking, the staff recognized in 1996 that the assessment of the issues might change over time due to advances in impact assessment, experience in conducting license renewal reviews, and changes in regulations and requirements. Additional issues might be identified for consideration, and the generic versus site-specific categorization of an issue might change.

Accordingly, the staff stated in 10 CFR Part 51, Subpart A, Appendix B, that "On a 10-year cycle, the Commission intends to review the material in this appendix and update it if necessary." To accomplish this update, the staff will supplement the 1996 GEIS and initiate a rulemaking to again codify the results of the staff's assessment in the regulations. The staff also will incorporate any changes resulting from the update of the GEIS and rulemaking into Regulatory Guide 4.2 Supplement 1, "Preparation of Supplemental Environmental Reports for Applications To Renew Nuclear Power Plant Operating Licenses," and NUREG-1555, Supplement 1, "Environmental Standard Review Plan."

An effort to update the GEIS began in June 2003 when the agency published a *Federal Register* notice of intent to conduct scoping. The original comment period was from June 2003 to September 2003 (including an extension). The technical assistance budget and utilization of contractor staff for this activity have been in direct competition with higher priority license renewal and early site permit environmental reviews. Therefore, the project was inactive for 2 years. The staff reinitiated the review in October 2005 by publishing a *Federal Register* notice extending the comment period until December 30, 2005.

DISCUSSION:

The 1996 GEIS had three principal objectives: (1) to provide an understanding of the types and severity of environmental impacts that may occur as a result of renewing the licenses of nuclear power plants under 10 CFR Part 54, (2) to identify and assess impacts that are expected to be generic to license renewal, and (3) to support a rulemaking (10 CFR Part 51) to define the site-specific issues that need to be addressed by the applicants in license renewal proceedings.

Each site-specific Environmental Impact Statement published in support of a reactor license renewal review is a supplement to the GEIS and is referred to as a Supplemental Environmental Impact Statement (SEIS). The GEIS summarizes the findings of a systematic inquiry into the potential environmental consequences of renewing the licenses of individual nuclear power plants and their operation for an additional 20 years. The effort described the attributes of the nuclear power plants, such as major features and plant systems, and the ways the plants can affect the environment. This systematic inquiry identified 92 environmental issues that should be analyzed to determine the potential impact of a license renewal. For each SEIS the staff evaluates a subset of the 92 environmental issues, depending on the plant

design and location. For many of these issues the staff adopts the conclusions reached in the GEIS that the impacts are similar at all facilities and are small. Absent new and significant information, the staff adopts the conclusions presented in 10 CFR Part 51, Subpart A, Appendix B, and no further assessment is performed. However, for 21 of the issues analyzed in the GEIS the staff concluded that a site-specific assessment would be required for each license renewal review. This site-specific assessment is presented in the SEIS for the facility applying for license renewal. Additionally, the issue of environmental justice was not evaluated on a generic basis in the 1996 GEIS and, therefore, is assessed in a site-specific manner in each SEIS. Finally the staff found in the GEIS that the health effects of electromagnetic fields on members of the public was inconclusive at the time the GEIS was published and could not be generically assessed.

Table B-1 of 10 CFR Part 51, Subpart A, Appendix B, summarizes the Commission's findings on the scope and magnitude of environmental impacts of renewing the operating license for a nuclear power plant, as required by the National Environmental Policy Act of 1969. In Table B-1, environmental issues are divided into Category 1 and Category 2 issues. Category 1 issues are issues whose environmental impacts apply either to all plants or to plants having a specific type of cooling system or other specified plant or site characteristics. For Category 1 issues, a single significance level (small, moderate, or large) has been assigned to the impacts. Mitigation of adverse impacts associated with the issue has been considered in the analysis, and the staff has determined that additional plant-specific mitigation measures are unlikely to be sufficiently beneficial to warrant implementation. Category 2 issues are issues for which the analysis reported in the GEIS has shown that one or more of the Category 1 criteria cannot be met and, therefore, additional plant-specific review is required. The staff intends to review the categorization of issues to ensure that the information is consistent with the current state of the science of impact assessment. The staff will determine if all Category 1 issues are indeed still generic and if the environmental impact of Category 1 issues remains small. The staff also will review all Category 2 issues to determine if any of these issues can be resolved generically. In addition, the staff has compiled a list of items to be revised in the GEIS based on lessons learned from previous environmental reviews for license renewal.

Based on scoping comments received on the GEIS update project, a review of the literature on impact assessment, lessons learned from previous environmental reviews for license renewal, and a review of current environmental regulations, the staff also will determine if any new environmental issues should be added to Table B-1 for license renewal reviews. Among the issues that will be considered for addition to Table B-1 are the impacts on the environment of routine dredging around intake and discharge structures and health impacts on individuals using the warm water discharge area for recreation.

COMMITMENTS:

The staff commits to the following review:

1. The staff will update the GEIS, NUREG-1437, beginning in November 2006 and conduct the associated rulemaking to revise 10 CFR Part 51 to be consistent with the findings in the GEIS.

2. The staff will revise Regulatory Guide 4.2, Supplement 1, "Preparation of Supplemental Environmental Reports for Applications to Renew Nuclear Power Plant Operating Licenses,"

and NUREG-1555, Supplement 1, "Environmental Standard Review Plan," to incorporate any changes as a result of updating the GEIS.

RESOURCES:

The schedule for completion of the GEIS update and the final rulemaking to 10 CFR Part 51 is 34 months from the contract placement. The scoping comment period ended on December 30, 2005. Scoping comments have been received via public meetings, e-mails, and letters. The first step in resuming the review is to issue a scoping summary report addressing public concerns and to compile a list of candidate issues to be addressed. The staff plans to resume the GEIS update project in June 2006. The schedule of the major milestones for completing the GEIS update and 10 CFR Part 51 rulemaking is as follows:

ACTION	ESTIMATED DATE OF COMPLETION
Develop the draft GEIS	February 2007
Develop proposed 10 CFR Part 51 rulemaking	August 2007
Commission reviews SECY paper on draft GEIS and proposed rulemaking	November 2007
Issue draft GEIS and proposed rulemaking for comment	January 2008
Address public comments on rule and GEIS and hold public meetings	October 2008
Commission reviews SECY paper on final GEIS and final rulemaking	January 2009
Issue final GEIS and final 10 CFR Part 51 rulemaking	February 2009
Revise guidance documents for license renewal environmental reviews	February 2009

The resources estimates for the GEIS update project, the 10 CFR Part 51 rulemaking, and the update of guidance documents are $376,411 and 0.7 FTE in FY 2006, $277,532 and 1.9 FTE in FY 2007, $587,812 and 1.9 FTE in FY 2008, and 0.9 FTE in FY 2009. Resources are budgeted for FY 2006 and FY 2007. Resources for FY 2008 have been included in the proposed budget that is before the Chairman and the FY 2009 resources will be requested in the PBPM process next year.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections.

The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections.

CONCLUSION:

Consistent with the statement in 10 CFR Part 51, Subpart A, Appendix B, that the Commission intended to review the material in the appendix every 10 years and update the appendix if necessary, the staff is initiating an effort to update the GEIS, NUREG-1437. Based on the findings of the GEIS update effort, the staff will prepare a rulemaking to revise 10 CFR Part 51, Subpart A, Appendix B and Table B-1.

/RA/

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Consistent with the statement in 10 CFR Part 51, Subpart A, Appendix B, that the Commission intended to review the material in the appendix every 10 years and update the appendix if necessary, the staff is initiating an effort to update the GEIS, NUREG-1437. Based on the findings of the GEIS update effort, the staff will prepare a rulemaking to revise 10 CFR Part 51, Subpart A, Appendix B and Table B-1.

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