Process Description

New and Significant Information Identification

Oyster Creek Generating Station

1.0 INTRODUCTION

In an effort to streamline the environmental review process associated with nuclear plant license renewal, the U. S. Nuclear Regulatory Commission (NRC) wrote a *Generic Environmental Impact Statement for License Renewal of Nuclear Plants* (GEIS) (NRC 1996a). The GEIS examined 92 issues and resolved 69 of them generically (i.e., an issue was determined to create the same impact [small] at all plants for which it was applicable, and the benefits of mitigation did not justify the costs). Although the regulations do not require plant-specific analysis of issues that have been resolved generically, they do require that an applicant identify any new and significant information of which the applicant is aware [10 CFR 51.53(c)(3)(iv)].

This paper summarizes the process that AmerGen used to evaluate the possibility of any new and significant information that might result in Oyster Creek Generating Station (OCGS) license-renewal-related impacts beyond the bounds of the U.S. Nuclear Regulatory Commission's (NRC's) generic findings in the GEIS (NRC 1996a) and codified by 10 CFR 51. Although not required by NRC rules, AmerGen prepared this information in order to provide an understanding of AmerGen's basis for concluding that there is no new and significant information at OCGS that would negate any of the generic findings that NRC has codified or that raise new and significant issues that NRC did not evaluate in the GEIS.

2.0 BACKGROUND

NRC licenses the operation of domestic nuclear power plants and provides for license renewal. The renewal of a license requires the submittal of a license renewal application that includes an environmental report (10 CFR 54.23). NRC regulations at 10 CFR 51 prescribe the environmental report content and identify the specific analyses the applicant must perform. In an effort to streamline the environmental review, NRC resolved most of the environmental issues generically and only requires an applicant's analysis of the remaining issues.

While NRC regulations do not require an applicant's environmental report to contain analyses of the impacts of those environmental issues that have been generically resolved [10 CFR 51.53(c)(3)(i)], the regulations do require that an applicant identify any new and significant information of which the applicant is aware [10 CFR 51.53(c)(3)(iv)]. The purpose of this requirement is to alert the NRC staff to such information so that the staff can determine whether to seek the Commission's approval to waive or suspend application of the rule with respect to the affected generic analysis. The NRC has explicitly indicated, however, that an applicant is not required to perform a site-specific validation of GEIS conclusions (NRC 1996b, page C9-13, Concern Number NEP.015).

AmerGen assumes that new and significant information would be the following:

- Information that identifies a significant environmental issue not covered in the GEIS and codified in the regulation or
- Information that was not covered in the GEIS analyses and which leads to an impact finding different from that codified in the regulation

NRC requires license renewal applicants to provide NRC with input, in the form of an environmental report, that NRC will use to meet National Environmental Policy Act (NEPA) requirements as they apply to license renewal (10 CFR 51.10). NEPA authorizes the Council on Environmental Quality (CEQ) to establish implementing regulations for federal agency use. CEQ guidance provides that federal agencies should prepare environmental impact statements for actions that would significantly affect the environment (40 CFR 1502.3), focus on significant environmental issues (40 CFR 1502.1), and eliminate from detailed study issues that are not significant [40 CFR 1501.7(a)(3)]. The CEQ guidance includes a lengthy definition of "significantly" that requires consideration of the context of the action and the intensity or severity of the impact(s) (40 CFR 1508.27). Although NRC does not specifically define the term "significant," AmerGen used the guidance available in CEQ regulations to establish significance. Based on this guidance and the definitions of small, moderate, and large impacts provided by NRC, AmerGen expects that moderate or large impacts would be significant.

3.0 PROCESS DESCRIPTION

AmerGen implemented its process to become aware of new and significant information in conjunction with its preparation of the environmental report for OCGS license renewal. The process identified and relied on several integrated elements that are described in the following paragraphs. In the case of some elements, AmerGen used results of ongoing OCGS processes; in others, AmerGen established project-specific processes.

3.1 Environmental Technical Specifications

The OCGS operating license incorporates Environmental Technical Specifications as Appendix B. The technical specifications require that the licensee evaluate operational activities and provide evaluations to the NRC for routine events and non-routine events with the potential to cause significant environmental impacts or that could be of interest to the public. The Environmental Technical Specifications require that detailed written procedures, including applicable checklists and instructions, be prepared and followed for all environmental activities at OCGS. AmerGen verified OCGS conformance with the license requirements but made the assumption that information that it had previously submitted to NRC would not be "new" and would not need reiteration as part of the new and significant information identification process required by license renewal.

3.2 External Reviews/Audits

AmerGen submits reports to regulatory agencies as part of license or permitting environmental protection requirements. Each external agency receiving a report monitors OCGS performance and AmerGen would be notified of significant issues raised by these agencies. AmerGen reviewed correspondence with these agencies and interviewed staff (Sections 3.8 and 3.9) to identify issues of concern to these agencies. Table 1 lists external entities that monitor AmerGen operations and performance through routine surveys, audits, reports, or other methods of reported accountability.

3.3 Corporate Interface

AmerGen is a subsidiary of Exelon Nuclear, which owns 10 nuclear plants. The Exelon Eastern corporate environmental group in Pennsylvania and the Western corporate environmental

group in Illinois are responsible for ensuring that all 10 stations operate according to permit requirements, and with programs that are as consistent as possible. These professionals, many of whom have advanced degrees in environmental science disciplines, belong to professional organizations, attend professional meetings and monitor environmental laws in Illinois, Pennsylvania, and New Jersey. The corporate group is responsible for ensuring that company-wide, all permits and authorizations are maintained. As part of this process, they review permit requirements and compare requirements among states to ensure that each plant operates within requirements and limits. In addition, to make the environmental programs of all 10 stations as similar as possible, the corporate groups evaluate the feasibility of installing programs from one station at the others.

The Exelon corporate environmental groups already have prepared license renewal environmental reports for three other plants and participated in the NRC site visits at those sites. Exelon corporate environmental staff has reviewed the Oyster Creek license renewal environmental report. NRC evaluated the qualifications of the Exelon corporate environmental groups as part of the new and significant investigation for the Peach Bottom, Dresden, and Quad Cities Power Stations.

3.4 Industry Interfaces

AmerGen and Exelon staffs maintain contacts with their counterparts within the nuclear industry through activities such as the following:

- Participation in professional organizations and their committees and working groups
- Attendance at conferences, seminars, and meetings sponsored by professional and federal, state, and local regulatory agencies
- Attendance at professional training
- Subscriptions to trade journals and electronic-mail services
- Reviewing monitoring activities at other nuclear plants as reported on the NRC website (NRC 2004)

These activities serve to alert AmerGen to emerging regulatory and plant issues that may need to be evaluated for applicability to AmerGen. Staying abreast of such issues is another way that AmerGen routinely monitors for new and significant information.

3.5 Barnegat Bay Estuary Program

The impacts of Oyster Creek Generating Station on the aquatic communities of Barnegat Bay have been studied for more than 30 years. In 1995 Barnegat Bay was added to the U. S. Environmental Protection Agency's estuarine protection program. The Barnegat Bay Estuary Program (BBEP) Scientific and Technical Advisory Committee and AmerGen have a Memorandum of Understanding that provides the BBEP with data collected at OCGS by AmerGen staff (AmerGen 2002).

In addition, Rutgers University and others have done extensive studies of the estuary for several decades.

3.6 Qualified Investigative Team

AmerGen assembled individuals from OCGS and Exelon East corporate environmental to support preparation of the OCGS license renewal environmental report. These individuals, as a group, are knowledgeable about plant systems, the site environs, and station environmental issues. Several of the individuals are also responsible for interactions with regulatory agencies. In this capacity, they are sensitive to emerging regulatory and technical issues, AmerGen chose to lead this team an individual who has managed license renewal environmental report preparation for three other Exelon plants.

Exelon contracted with an environmental consulting firm, Tetra Tech NUS Inc., which has expertise in the NRC license renewal environmental review process, NEPA, and the scientific disciplines necessary to prepare a license renewal environmental report. Tetra Tech NUS provided an independent review of plant-related information. This combination of AmerGen, Exelon and outside consultation, onsite and offsite, and multi-disciplinary personnel resulted in a team well-qualified to implement the new and significant information identification process.

3.7 Documentation Review

AmerGen and Tetra Tech NUS performed an extensive review of plant environmental documentation related to all 92 issues in the GEIS, including the following types of documents:

- Environmental protection permits and applications
- Environmental documents and reports (including routine monitoring) prepared by AmerGen
- Environmental documents and reports prepared by regulatory agencies and academic institutions.

The documentation that was reviewed came from OCGS, Exelon corporate offices, and local and state agencies and commissions.

3.8 Staff Interviews

The AmerGen investigative team identified knowledgeable AmerGen staff to be interviewed regarding plant environmental issues, in general, as well as applicable NRC Category 1 and Category 2 issues, specifically. For each issue, team members familiar with the issue(s) interviewed one or more Exelon, AmerGen or contractor employees. Interviewers provided interviewees with the GEIS discussion of the issue prior to the interview. Interviewees included persons responsible for maintaining contacts with regulatory agencies, staying abreast of rising regulatory and technical issues, and implementing the OCGS environmental protection program.

During the interview, interviewers explained the purpose of the interview, the issue(s) of interest, the NRC definitions of significance (small, moderate, and large), and NRC findings described in the GEIS. Interviewers included issues associated with refurbishment, but explained that AmerGen has no plans for refurbishment and that questions about refurbishment were intended as background, in case AmerGen later determined that some refurbishment was necessary. For Category 1 issues, interviewers then solicited information about whether the issue was currently, or had been, an issue of concern at OCGS; whether or not the interviewee agreed with the NRC findings and, if not, why not; and whether the interviewee was aware of any similar offsite activities that could contribute to cumulative impacts. For Category 2 issues, the interviewee was asked if the issue was or had been a concern at OCGS, and whether the

interviewee was aware of any similar offsite activities that could contribute to cumulative impacts. Finally, the interviewer recorded information about the interviewees relative to their knowledge of the issue(s) for which they were interviewed.

All interviewees agreed with NRC findings that environmental impacts from Category 1 issues applicable to OCGS are small and have not been of particular concern. Interviewees identified no activities that would be cumulative to the Category 2 impacts of OCGS.

3.9 Issue Reviews

The Investigative Team researched issues associated with Oyster Creek Generating Station that have been, or could potentially be, of public interest. These include allegations of impacts on fish and other aquatic species, of health impacts of plant operations, and deposition of plant-related substances (i.e., radioisotopes or chemicals) in the area surrounding the site. During this research, site subject matter experts were consulted, and scientific literature was examined to determine the plausibility of the allegations.

After reviewing the OCGS environmental documents, interviewing the OCGS environmental staff, and reviewing the information available on issues associated with OCGS, the Investigative Team summarized the information for each Category 1 issue.

3.10 Application Reviews

After reviewing a license renewal applicant's environmental report, NRC can submit to the applicant a request for additional information (RAI) and use the applicant's response as input in preparation of a supplemental environmental impact statement (SEIS). Tetra Tech NUS maintains copies of all license renewal environmental reports submitted to NRC and related RAIs, responses, and SEISs. As part of its support to the AmerGen new and significant information identification process, Tetra Tech NUS verified that information presented for previous applications did not raise a new and significant issue for OCGS.

3.11 Regulatory Agency Communications

AmerGen corresponded with federal and state regulatory agencies to inform them of plans for OCGS license renewal. AmerGen described for the agencies its license renewal efforts and asked agency representatives questions regarding issues of concern. Table 2 identifies the

agencies contacted. Copies of the correspondence are included in the Environmental Report, which is part of the License Renewal Application.

3.12 Peer Review

As part of its environmental report preparation process, AmerGen submitted a draft for review by representatives of companies that have or are submitting license renewal applications. Review comments resulted in changes to the OCGS environmental report but did not identify any new and significant information.

4.0 RESULTS

Based on the process described in Section 3.0, AmerGen is aware of no new and significant information regarding the environmental impacts of OCGS. AmerGen implemented a process designed to identify significant environmental issues that NRC did not cover in the GEIS and codify in 10 CFR 51, or to identify information that NRC did not cover in the GEIS and which would lead to a different impact finding than that which NRC codified. AmerGen has identified no such information.

Table 1. External Reviews

Agency	Topic	Frequency
U. S. Nuclear Regulatory Commission	Annual Radiological Effluent Monitoring Report	Annual
	Annual Radiological Environmental Monitoring Program Annual Report	Annual
U.S. Environmental Protection Agency	Facility Response Plan	Triennial
	Spill Prevention Control and Countermeasures Plan (SPCC)	Triennial
	NSPS Fuel Oil Report	Semiannual
	Discharge Monitoring Report – Quality Assurance Studies	Annual
National Marine Fisheries Service	Incidental Take Report for protected marine species	Annual
	Incidental Take Statement for protected marine species	Per event
New Jersey Department of Environmental Protection	Discharge Monitoring Reports for surface water (including any discharge noncompliances)	Monthly
	Discharges to Groundwater Monitoring Report	Annual
	Acute toxicity monitoring of discharge	Annual
	Emissions Statement	Annual
	NSPS Fuel Oil Report	Semiannual

Agency	Topic	Frequency
	Discharge Monitoring Report – Quality Assurance Studies	Annual
	Report of all activities and collections under scientific collector permits	Annual
	SARA Hazardous Chemicals Inventory	Annual
	SARA MSDS Reporting	Annual
	Facility Response Plan	Triennial
	Laboratory Certification	Annual
	Miscellaneous reports on emissions, discharges to groundwater, potable water, etc	As scheduled
	Fish kill reports	Per event
New Jersey Board of Public Utilities	Hydrographic survey reports of Forked River and Oyster Creek	Biennial
	Water Mound Monitoring Report	Annual
Ocean County Soil Conservation District	Annual inspection of on-site disposal areas	Annual
Local Emergency Planning Committee	SARA Hazardous Chemicals Inventory	Annual
	SARA MSDS Reporting	Annual

Table 2. Regulatory Agency Contacts

Federal	State
U. S. Fish and Wildlife Service	New Jersey Department of Environmental Protection
National Marine Fisheries Service	Environmental Regulation
	Historic Preservation Office

5.0 REFERENCES

AmerGen. 2002. Letter, Browne, AmerGen to Scro, Barnegat Bay Estuary Program re Memorandum of Understanding. June 22.

U. S. Nuclear Regulatory Commission. 1996a. *Generic Environmental Impact Statement for License Renewal of Nuclear Plants.* NUREG-1437. Washington, D.C., May 1996.

U.S. Nuclear Regulatory Commission. 1996b. *Public Comments on the Proposed 10 CFR Part 51 Rule for Renewal of Nuclear Power Plant Operating Licenses and Supporting Documents: Review of Concerns and NRC Staff Response.* NUREG-1529. Washington, D.C., May.

U.S. Nuclear Regulatory Commission. 2004. Available online at http://www.nrc.gov/. Accessed June 4, 2004.