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Salem Generating Station, Units 1 and 2
Facility Operating License Nos. DPR-70 And DPR-75
NRC Docket Nos. 50-272 and 50-311

Subject: 2007 ANNUAL ENVIRONMENTAL OPERATING REPORT

The attached 2007 Annual Environmental Operating Report is hereby submitted pursuant to Subsection 5.4.1 of the Environmental Protection Plan (non-radiological) for Salem Generating Station, Unit Nos. 1 and 2. The Environmental Protection Plan is Appendix B to Facility Operation License DPR-70 and DPR-75 (Docket Nos. 50-272 and 50-311).

If you have any questions or require additional information, please do not hesitate to contact Mr. Clifton Gibson at (856) 339-2686 or Mr. Luis Cataldo at (856) 339-2307.

Sincerely,

A handwritten signature in cursive script, appearing to read "George H. Gellrich".

George H. Gellrich
Plant Manager - Salem
PSEG Nuclear LLC

Attachment (1)

Handwritten initials "JERS" in a large, bold, stylized font, with "KRR" written in a smaller font below it.

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Bcc: Salem Site Vice President
Salem Plant Manager
Salem Radwaste and Environmental Supervisor
Edward Keating
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File No. 4.6 (Salem)

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2007 ANNUAL ENVIRONMENTAL OPERATING REPORT
(NON-RADIOLOGICAL)
January 1 through December 31, 2007

SALEM GENERATION STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311
OPERATING LICENSE NOS. DPR-70 AND DPR-75

PSEG NUCLEAR LLC
P.O. BOX 236
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APRIL 2008

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1.0 INTRODUCTION

This 2007 Annual Environmental Operating Report (AEOR) is submitted in accordance with Section 5.4.1 of the Salem Generating Station Unit No. 1 and 2, Environmental Protection Plan (EPP), non-radiological (Appendix B to Unit Nos. 1 and 2, Facility Operating License Nos. DPR-70 and DPR-75, Docket Nos. 50-272 and 50-311, respectively).

2.0 ENVIRONMENTAL PROTECTION ACTIVITIES

2.1 AQUATIC MONITORING – SUMMARY AND ANALYSES

Subsection 4.2.1 of the EPP references the Clean Water Act as a mechanism for protecting aquatic biota through water quality monitoring. The United States Nuclear Regulatory Commission (USNRC) relies on the State of New Jersey, acting under the authority of the Clean Water Act, to insure applicable requirements for aquatic monitoring are implemented. The New Jersey Department of Environmental Protection (NJDEP) is the State's regulatory agency.

The NJDEP requires as part of the New Jersey Pollutant Discharge Elimination System (NJPDES) permit program that effluent monitoring be performed, with the results summarized and submitted monthly on Discharge Monitoring Report (DMR) forms. The monitoring is intended to determine compliance with the effluent limitations of the station's NJPDES permit (No. NJ0005622). PSEG reviewed the DMRs corresponding to the AEOR 2007 reporting period and determined that no deviations have occurred. PSEG has observed no evidence of trends towards damage to the environment. Copies of monthly DMRs are routinely sent to USNRC's Document Control Desk, and additional copies are available upon request.

While the USNRC relies on the State of New Jersey and the NJDEP for protection of the water quality, the National Marine Fisheries Service (NMFS) maintains regulatory authority with respect to certain migratory threatened and endangered aquatic species. As required by Section 4.2.1 of the EPP, Salem Generating Station adhered to the recommendations delineated in the "Conservation Recommendations" of the Section 7 Consultation Biological Opinion, dated May 14, 1993, as follows:

1. PSEG, in conjunction with the NMFS, completed the research program to determine whether the station provides features attractive to sea turtles in a study entitled "Evaluation of Macrohabitat Utilization by Loggerhead Sea Turtles In Delaware Estuary Using Sonic and Satellite Tracking Techniques", dated June 1997, that was sent to NRC in PSEG Letter LR-E970424 from D.R. Powell

to the NRC Document Control Desk, dated July 30, 1997. The study concluded that sea turtles make use of the entire Delaware Estuary macrohabitat and are not attracted to the Salem Circulating Water Intake Structure.

2. PSEG's historic benthic survey data review results were forwarded to NRC identifying prey density and distribution at various sites in the Delaware Bay and clarifying the potential for attractions of invertebrates to the site.
3. PSEG completed the distribution studies for sea turtles in the Delaware Bay in the study cited in Item 1 above.
4. PSEG forwarded results to NRC indicating that an agreement was reached with the State of New Jersey Endangered Species and Non-Game Commission regarding the protocol for conducting pesticide and heavy metal sampling during necropsy procedures on lethal turtle takes.
5. Per the current Incidental Take Statement, dated January 21, 1999, Terms and Conditions, Item 6, the Conservation Recommendation to meet annually with the NMFS to review incidental takes, assess the status of sea turtles in the Delaware Bay and to reconsider the Conservation Recommendations accordingly was revised to read that the NMFS, NRC and PSEG staff will meet "as appropriate" to review incident reports, identify trends in sea turtle and shortnose sturgeon takes and review Conservation Recommendations that may improve understanding of listed species' biology in the region. There were no meetings held in 2007.

As required by Section 4.2.1 of the EPP, Salem Generating Station also adhered to the requirements delineated in the "Reasonable and Prudent Measures" and "Terms and Conditions" sections of the current Incidental Take Statement, dated January 21, 1999. In 2007, no sea turtles and only one shortnose sturgeon was recovered at the circulating water intake trash bars. This non-routine event is described in section 5.1 later in this document.

2.2 TERRESTRIAL MONITORING – SUMMARY AND ANALYSES

As addressed in Section 4.2.2 of the EPP, Terrestrial Monitoring is not required.

3.0 EPP NONCOMPLIANCES

Subsection 5.4.1 of the EPP requires a list of EPP noncompliances and the corrective actions taken to remedy them. There were no EPP noncompliances during 2007.

4.0 CHANGES IN STATION DESIGN OR OPERATION

Pursuant to the requirements of Section 3.1 of the EPP, station changes to design or operations, as well as any tests and experiments, made in 2007 were reviewed for potential environmental impact. None of these changes posed a potential to significantly affect the environment, created an unreviewed environmental question or resulted in a change to the EPP.

5.0 NONROUTINE REPORTS

5.1 2007 NONROUTINE REPORTS

Subsection 5.4.1 of the EPP requires a list of all nonroutine reports (submitted in accordance with Subsection 5.4.2 of the EPP) be included as part of the Annual Environmental Operating Report. Salem Generating Station experienced no unusual or important events (in accordance with Subsection 4.1 of the EPP) that indicated or could have resulted in a "significant environmental impact" during the 2007 reporting period. However, the following events were reported to other Federal, State or local agencies in accordance with their reporting requirements, and copies of those reports were provided to the USNRC at the same time:

- On May 24, 2007 at approximately 0232, a catastrophic failure of the upper sight glass on the #24 Condensate Polisher System demineralizer vessel caused the shutdown of Salem Unit 2. Approximately 20,000 gallons of steam plant water (containing approximately 1 ppm hydrazine) were released outside of the Condensate Polisher Building. At the time of the report it was believed that the hydrazine may have entered the stormwater drainage system and been discharged through the Salem Oil Water Separator, DSN 489, to the Delaware River. At 0310, the Oil Water Separator (Discharge 489) was isolated to prevent or minimize any effluent discharge to the Delaware River. Subsequent sampling and analyses were performed demonstrating that no hydrazine was present in the Oil Water Separator main chamber or effluent chamber; therefore, NO hydrazine was release to the Delaware River. Hydrazine that was discharged to the land was managed in accordance with the Discharge Prevention, Containment, and Countermeasure Plan (DPCC). The initial notification to New Jersey Department of Environmental Protection (NJDEP), also reported to the Nuclear Regulatory Commission (NRC) was retracted after the fact-finding results. The cause of the incident was stress by over-torque during manipulation of the sight glass. All sight glasses from Unit 1 and Unit 2 Condensate Polisher System were replaced and a maintenance activity to replace sight glasses after any manipulation was established.

- On November 28, 2007 at approximately 0950, and during routine cleaning of the trash racks, Site Services personnel recovered the decaying carcass of a sturgeon, which appeared to have wounds similar to those resulting from a boat impact. Personnel from Environmental Services responded and confirmed the identification of the sturgeon as an Atlantic Sturgeon. During examination, an ID tag fell out of the sturgeon's carcass and the tag manufacturer was contacted to request identification of the tag owner. On December 5, 2007 at 1446, the owner of the tag ERC contacted the station indicating that they tagged the fish in November 2002 as a female Shortnose Sturgeon. The sturgeon was examined, measured and weighed and scanned for Passive Integrated Transponder (PIT) tags but no response was obtained during the scanning. The sturgeon was discarded when it was identified as an Atlantic Sturgeon on November 28, 2007. The U.S. Nuclear Regulatory Commission (USNRC), the National Marine Fisheries Service (NMFS) and the New Jersey Department of Environmental Protection (NJDEP) were notified regarding this occurrence. All measures in place were analyzed and determined that no other actions were warranted.

Corrective actions for the above events have been completed. No visible impacts to the environment were observed.

5.2 ONGOING ISSUES FROM PREVIOUS NONROUTINE REPORTS

Groundwater monitoring and product recovery activities to remediate an underground leak of spent fuel pool water containing tritium from the Unit 1 Fuel Handling / Auxiliary Building seismic gap first identified on September 18, 2002 continued through 2007 in accordance with the scope of work proposed in the Remedial Action Work Plan, approved by the NJDEP - Bureau of Nuclear Engineering (BNE) in November 2004. Product recovery activities involved the use of both a fixed groundwater extraction system and a mobile groundwater recovery unit.

Groundwater monitoring and product recovery activities to remediate an underground diesel fuel oil leak first identified on August 2, 2004 continued through 2007 in accordance with the scope of work proposed in the Remedial Investigation Work Plan, dated December 2004 (NJDEP Incident Number 04-08-02-2350-16). Product recovery activities involve the use of a Spill Buster® unit, a passive oil skimmer, or absorbent socks at the monitoring wells. Groundwater sample results continue to remain below the Ground Water Quality Criterion (GWQA) for Class IIA aquifers.

Copies of the progress reports for either of the above remediation activities are available upon request.