

APR 20 2015

LR-N15-0095



Technical Specification Section 5.4.1

U.S. Nuclear Regulatory Commission
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Subject: 2014 ANNUAL ENVIRONMENTAL OPERATING REPORT
SALEM GENERATING STATION, UNITS 1 AND 2
FACILITY OPERATING LICENSE NOS. DPR-70 AND DPR-75
NRC DOCKET NOS. 50-272 AND 50-311

The attached 2014 Annual Environmental Operating Report is hereby submitted pursuant to Subsection 5.4.1 of the Environmental Protection Plan (non-radiological) for Salem Generating Station, Units 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).

There are no commitments contained in this letter.

If you have any questions or require additional information, please do not hesitate to contact Helen Gregory, Environmental Compliance Manager - Nuclear at (856) 339-1341.

Sincerely,

A handwritten signature in black ink, appearing to read "L M Wagner", with a large, sweeping flourish at the end.

Lawrence M. Wagner
Plant Manager - Salem
PSEG Nuclear LLC

Attachment (1): 2014 Annual Environmental Operating Report

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2014 ANNUAL ENVIRONMENTAL OPERATING REPORT
(NON-RADIOLOGICAL)
January 1 through December 31, 2014

SALEM GENERATING STATION
UNITS 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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Dated: APRIL 2015

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1.0 INTRODUCTION

This 2014 Annual Environmental Operating Report (AEOR) is submitted in accordance with Section 5.4.1 of the Salem Generating Station Units 1 and 2, Environmental Protection Plan (EPP), non-radiological (Appendix B to Units 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 ensure 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 NJPDES permit (No. NJ0005622). PSEG has reviewed the DMR's corresponding to the 2014 AEOR reporting period and we have determined that one deviation of the station's NJPDES permit occurred. For the reporting month of June the Total Residual Chlorine (TRC) exceeded the monthly average. The USNRC was previously copied on this exceedance. Copies of monthly DMRs are routinely sent to USNRC's Document Control Desk, and additional copies are available upon request.

PSEG is also required by NJPDES Permit No. NJ0005622 to conduct a comprehensive biological monitoring program that includes impingement and entrainment monitoring, baywide bottom trawl sampling, baywide beach seine sampling, monitoring of fish passage at installed fish ladders, monitoring of fish abundance in restored wetlands, and monitoring of wetland vegetation in restored and reference marshes. These monitoring programs are conducted in accordance with a biological monitoring program work plan approved by the NJDEP, and a Biological Monitoring Program Annual Report is submitted to the NJDEP by June 30 of the following year. The Biological Monitoring Program 2014 Annual Report is not yet available, but will be available upon request after June 30, 2015.

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 National Marine Fisheries Service Incidental Take Statement, dated January 21, 1999. In 2014, Kemp's Ridley sea turtles, Atlantic Sturgeon and Shortnose Sturgeon were recovered at the circulating water intake trash bars. These non-routine events are further described in section 5.1 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 2014.

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 2014 were reviewed for potential environmental impact. There were no changes that 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 2014 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 the following 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 2014 reporting period. 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 April 16, 2014 a hydraulic (vegetable) oil discharge from the Salem Unit 1 Trash Rake to the Delaware River occurred while trash raking was in progress at 12B Circulating Water (CW) bay. At the time of the discharge the 12B CW Pump was operational and there was no observable oil sheen on the river when Site Protection Services arrived to perform clean-up. However, oil soaks were placed in the bay as a precaution. The estimated volume of the discharge was one pint of hydraulic oil however, based on the flow rate of the CW pump it is believed all oil was drawn into the plant structure and emulsified. The NJDEP, National Response Center (NRC) and USNRC were notified of this discharge and remedial actions required by the NJDEP are in progress.

On May 13, 2014 there was a discharge of diesel fuel oil from the Salem Service Water (SW) hot air furnace fuel line. The leak was isolated and the area was subsequently cleaned up. The NJDEP and the USNRC were notified of the discharge.

The table below details the threatened and endangered species recovered from the Circulating Water System (CWS) intake trash racks at the Salem Generating Station. During routine cleaning of the trash racks, station personnel recovered the specimens listed below. Sturgeon and sea turtles are generally recovered alive and released back to the Delaware River. Only six of the recovered sturgeon were recently deceased and had any evidence of injuries that could potentially result from interaction with the intake structure. Both sea turtle specimens recovered during 2014 were decomposing when retrieved and had died prior to impingement on the trash bars. The fish were examined, measured, weighed and scanned for Passive Integrated Transponder (PIT) tags. No responses were obtained when the species were scanned for PIT tags. The U.S. Nuclear Regulatory Commission (NRC), the National Marine Fisheries Service (NMFS) and the New Jersey

Department of Environmental Protection (NJDEP) were notified regarding these occurrences.

Date	Threatened & Endangered Species
01/06/14	Atlantic Sturgeon
01/08/14	Atlantic Sturgeon
01/27/14	2 - Atlantic Sturgeon
02/12/14	Atlantic Sturgeon
02/19/14	Atlantic Sturgeon
02/20/14	Atlantic Sturgeon
03/13/14	Shortnose Sturgeon
03/20/14	Shortnose Sturgeon
03/27/14	Atlantic Sturgeon
03/31/14	Atlantic Sturgeon
04/03/14	Atlantic Sturgeon
04/07/14	3 - Atlantic Sturgeon
04/09/14	Atlantic Sturgeon
04/15/14	Shortnose Sturgeon
04/18/14	Atlantic Sturgeon
07/09/14	Kemp's Ridley Turtle
08/05/14	Atlantic Sturgeon
09/03/14	Kemp's Ridley Turtle
11/20/14	Shortnose Sturgeon
11/21/14	Shortnose Sturgeon
12/10/14	2 - Shortnose Sturgeon
12/22/14	Atlantic Sturgeon

5.2 ONGOING ISSUES FROM PREVIOUS NONROUTINE REPORTS

Groundwater monitoring and recovery activities to remediate an underground leak of spent fuel pool water containing tritium from the Unit 1 Fuel Handling / Auxiliary Building seismic gap continued through 2014 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. Further details regarding this and other radiological monitoring activities are provided in Salem's 2014 Annual Radiological Environmental Operating Report (AREOR) and 2014 Annual Radioactive Effluent Release Report (ARERR).

Groundwater monitoring and product recovery activities to remediate an underground diesel fuel oil leak first identified in August 2, 2004 continued through 2014 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 intermittent use of absorbent socks at the monitoring wells. Groundwater sample results continue to remain below the Ground Water Quality Criterion (GWQC) for Class IIA aquifers. By letter dated March 24, 2008, NJDEP modified the scheduled sampling and reporting periods. A new groundwater monitoring well was installed in 2010 at NJDEP's request to provide additional horizontal delineation data.

Groundwater monitoring and product recovery activities to remediate an underground diesel fuel oil odor identified on April 16, 2010 continued through 2014 in accordance with the scope of work proposed in the Remedial Investigation Work Plan, dated June 2010 (NJDEP Incident Number 10-0416-164911). To further evaluate the presence of Separate

Phase Hydrocarbons (SPH) and characterize dissolved-phase constituents in groundwater within the source area, PSEG installed four monitoring wells in November 2010. This diesel fuel oil investigation was combined with the above diesel fuel oil investigation and is being managed and reported as one remedial case. Both of these cases were previously reported to the USNRC at the time of discovery.

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