

Public Service  
Electric and Gas  
Company

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Vice President and Chief Nuclear Officer

AUG 12 1991

NLR-E91203

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Gentlemen:

REPORT OF IMPINGEMENT OF SEA TURTLE  
SALEM GENERATING STATION, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-272 AND 50-311

In accordance with Section 5.4.2 of Appendix B, Environmental Protection Plan, to the Operating License for Salem Generating Station, Public Service Electric and Gas Company (PSE&G) hereby transmits notification of a nonroutine event discovery, and documents the occurrence and removal of three sea turtles from the Salem Generating Station circulating water intake structure.

Enclosed please find two (2) attachments. Attachment 1 gives a narrative description of the events, as requested by the NRC. Attachment 2, requested by the National Marine Fisheries Service (NMFS), provides more specific information regarding observance and retrieval of the sea turtles.

Should you have any questions regarding this transmittal, please feel free to contact us.

Sincerely,



Attachments

9108220072 910812  
PDR ADOCK 05000272  
S PDR

PHOTO'S TO PM

IE 23  
41

C Mr. J. C. Stone  
Licensing Project Manager

Mr. T. Johnson  
Senior Resident Inspector

Mr. T. Martin, Administrator  
Region I

Mr. Kent Tosch, Chief  
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Division of Environmental Quality  
Bureau of Nuclear Engineering  
CN 415  
Trenton, NJ 08625

Mr. Richard Delgado  
NJ Department of Environmental Protection

Ms. Colleen Coogan  
National Marine Fisheries Service  
Habitat Conservation Branch  
One Blackburn Drive  
Gloucester, MA 01930-2298

NLR-E91203

Attachment 1

IMPINGEMENT OF SEA TURTLE

REPORT: July 30, 1991

OCCURRENCE DATES: July 20, 23 and 25, 1991

FACILITY: Salem Generating Station, Units 1 and 2  
Public Service Electric and Gas Company  
Hancocks Bridge, NJ 08038

IDENTIFICATION OF OCCURRENCE:

Three loggerhead (Caretta caretta) sea turtles were impinged on on the Circulating Water System (CWS) intake trash racks at Salem Generating Station. The first turtle was reported on July 20, the second on July 23, and the third on July 25, 1991. The loggerhead is federally listed as a "threatened" species under the Endangered Species Act of 1973, as amended.

CONDITIONS PRIOR TO OCCURRENCE:

July 20, 1991 - Units 1 and 2 - 100 percent power  
July 23, 1991 - Units 1 and 2 - 100 percent power  
July 25, 1991 - Units 1 and 2 - 100 percent power

DESCRIPTION OF OCCURRENCE:

One loggerhead sea turtle was observed on July 20, 1991 at 2300 hours. The second turtle, reported on July 23, was observed at 0810 hours and the third on July 25, at 1630 hours. All three were observed near the trash racks of the CWS intake.

All of the turtles were recovered during the cleaning of the trash racks by Site Services personnel. The Senior Shift Supervisor and Licensing and Regulation personnel were immediately notified. The Marine Mammal Stranding Center (MMSC) of Brigantine, New Jersey was notified shortly thereafter.

All three turtles were released in the Delaware Bay approximately 3.5 miles southeast of Salem Generating Station (SGS), 0.5 miles off shore in 20 feet of water.

The following agencies have been notified regarding these occurrences:

U.S. Nuclear Regulatory Commission  
U.S. National Marine Fisheries Service  
New Jersey Department of Environmental Protection

APPARENT CAUSE OF OCCURRENCE:

Sea turtles are summer migrants, common to Delaware Bay. Small numbers typically occur in the lower Delaware River near Salem Generating Station during June through September. Healthy sea turtles are strong swimmers and are usually able to avoid the approach velocity of the CWS intake. Turtles which are in a weakened condition due to injury by boats or commercial fishing operations are subject to impingement. Apparently healthy turtles which become impinged may not be able to escape the approach velocity due to exhaustion or small size. Also, apparently healthy turtles may be foraging in the intake channel. While feeding they may surface in the intake bays and if observed by plant personnel will be removed as if impinged.

ANALYSIS OF OCCURRENCE:

The CWS intake is monitored for accumulation of debris, which is periodically removed. Any turtles which are observed in the area of the trash racks are recovered immediately. Between 1979 and present, a total of 65 sea turtles have been collected at or in the immediate vicinity of the plant. Of the 59 turtles collected at the intake, 43 (73%) were loggerhead sea turtles and 16 (27%) were Kemp's ridley sea turtles.

CORRECTIVE ACTION:

The trash racks at Salem are observed every two hours, twenty-four (24) hours a day specifically for sea turtles and cleaned at least once per day. Any sea turtle observed on the trash rack is removed immediately. Resuscitation will be attempted if the turtle is not unquestionably dead. In accordance with standard procedure, all dead or injured specimens will be held under appropriate conditions and turned over to the MMSC.

REPORTING REQUIREMENTS:  
Appendix II to Section 7 Consultation

Photographs should be taken and the information requested below should be collected in association with all protected species (sea turtles and shortnose sturgeon) impingements. This documentation should be sent to the National Marine Fisheries Service, Habitat Conservation Branch  
One Blackburn Drive, Gloucester, MA 01930-2298

Protected Species Impingements,  
Salem and Hope Creek Generating Stations

Observers full name: Rick Pfeffer - Nuclear Control Operator

Reporters full name: Jennifer Griffin - Licensing & Regulation

Species Identification: Loggerhead (Caretta caretta)

Site of impingement: Salem Generating Station  
Circulating Water System

Date and time impingement was observed: 7/20/91; 2300 hours

Date and time animal was collected: 7/20/91; 2320 hours

Tidal stage at time of observation: 4.1 feet, ebbing

Date and time of last observation of screen: 7/20/91; 2300 hours

Water temperature at site and time of impingement: 82.5 F

Average percent of power generating capacity achieved per unit over the 48 hours previous to impingement: Units 1 and 2 - 100%

Condition of animal: Good

Sea Turtle Measurements (indicate cm. or in.):

Carapace length: Curved: Straight: 47.0 cm.

Carapace width: Curved: Straight: 41.0 cm.

Tag number and location, if tagged: Due to equipment malfunction this turtle was not tagged. Loran coordinates: 27390.4 / 43053.0

Remarks: The turtle was released approximately three and one half miles southeast of Salem Generating Station, one half mile off shore in twenty feet of water. The turtle weighed 35 pounds.

Results of necropsy (include stomach contents if available at the time of the report, or as soon as possible): Not applicable

**REPORTING REQUIREMENTS:**

**Appendix II to Section 7 Consultation**

Photographs should be taken and the information requested below should be collected in association with all protected species (sea turtles and shortnose sturgeon) impingements. This documentation should be sent to the National Marine Fisheries Service, Habitat Conservation Branch  
One Blackburn Drive, Gloucester MA 01930-2298

**Protected Species Impingements,  
Salem and Hope Creek Generating Stations**

**Observers full name:** David Tait - Nuclear Equipment Operator

**Reporters full name:** Jennifer Griffin - Licensing & Regulation

**Species Identification:** Loggerhead (Caretta Caretta)

**Site of impingement:** Salem Generating Station - Unit 2  
Circulating Water System; Trash Rack # 23a

**Date and time impingement was observed:** 7/23/91; 0810 hours

**Date and time animal was collected:** 7/23/91; 0830 hours

**Tidal stage at time of observation:** 5.2 feet, ebbing

**Date and time of last observation of screen:** 7/23/91; 0800 hours

**Water temperature at site and time of impingement:** 83.5 F

**Average percent of power generating capacity achieved per unit over the 48 hours previous to impingement:** Units 1 and 2 - 100%

**Condition of animal:** Good

**Sea Turtle Measurements (indicate cm. or in.):**

**Carapace length:** Curved: Straight: 49.5 cm.

**Carapace width:** Curved: Straight: 43.9 cm.

**Tag number and location, if tagged:** Due to equipment malfunction this turtle was not tagged. Loran coordinates: 27390.4 /43053.0

**Remarks:** The turtle was released approximately three and one half miles southeast of Salem Generating Station, one half mile off shore in twenty feet of water. The turtle weighed 42.5 pounds.

**Results of necropsy (include stomach contents if available at the time of the report, or as soon as possible):** Not applicable

**REPORTING REQUIREMENTS:**

**Appendix II to Section 7 Consultation**

Photographs should be taken and the information requested below should be collected in association with all protected species (sea turtles and shortnose sturgeon) impingements. This documentation should be sent to the National Marine Fisheries Service, Habitat Conservation Branch  
One Blackburn Drive, Gloucester MA 01930-2298

Protected Species Impingements,  
Salem and Hope Creek Generating Stations

**Observers full name:** David Tait - Nuclear Equipment Operator

**Reporters full name:** Jennifer Griffin - Licensing & Regulation

**Species Identification:** Loggerhead (Caretta Caretta)

**Site of impingement:** Salem Generating Station - Unit 2  
Circulating Water System; Trash Rack # 22b

**Date and time impingement was observed:** 7/25/91; 1630 hours

**Date and time animal was collected:** 7/25/91; 1650 hours

**Tidal stage at time of observation:** 0.7 feet, flooding

**Date and time of last observation of screen:** 7/25/91; 1600 hours

**Water temperature at site and time of impingement:** 84.5 F

**Average percent of power generating capacity achieved per unit over the 48 hours previous to impingement:** Units 1 and 2 - 100%

**Condition of animal:** Good

**Sea Turtle Measurements (indicate cm. or in.):**

**Carapace length:** Curved: Straight: 51.15 cm.

**Carapace width:** Curved: Straight: 48.30 cm.

**Tag number and location, if tagged:** Tag #'s PPX922 and PPX923  
Loran coordinates: 27390.4 /43053.0

**Remarks:** The turtle was released approximately three and one half miles southeast of Salem Generating Station, one half mile off shore in twenty feet of water. The turtle weighed 57 pounds.

**Results of necropsy (include stomach contents if available at the time of the report, or as soon as possible):** Not applicable