



MAY 06 2003  
LR-E03-0209

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
ARTICLE NUMBER: 7099 3400 0003 6390 3093

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

Gentleman:


**REPORT OF IMPINGEMENT OF SHORTNOSE STURGEON  
SALEM GENERATING STATION UNIT NO. 1  
DOCKET NO. 50-272**

In accordance with Section 5.4.2 of Appendix B, Environmental Protection Plan, to the Operating License for the 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 a shortnose sturgeon from the Salem Generating Station circulating water intake structure.

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

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

Sincerely,

  
James M. Eggers  
Supervisor -  
Environmental Licensing

Attachments (2)

JE34

C Mr. H. J. Miller, Administrator - Region I  
U. S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Mr. R. Fretz, Licensing Project Manager - Salem  
U. S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Mail Stop 0-4D-3  
Rockville, MD 20852

USNRC Senior Resident Inspector - Salem  
Mail Code X24

Mr. K. Tosch, Manager IV  
Bureau of Nuclear Engineering  
33 Arctic Parkway  
P. O. Box 415  
Trenton, NJ 08625-0415

Ms. Carrie McDaniel  
National Marine Fisheries Service  
Protected Resources Division  
One Blackburn Drive  
Gloucester, MA 01930-2298

Mr. Michael Ludwig  
National Marine Fisheries Service  
212 Rogers Avenue  
Milford, CT 06460

Mr. Dave Jenkins  
Endangered and Nongame Species Program  
7A Van Sykel's Road  
Hampton, NJ 08827

Mr. Lawrence J. Niles, Chief  
New Jersey Department of Environmental Protection  
Endangered and Nongame Species Program  
P. O. Box 400  
Trenton, NJ 08625-0400

MAY 06 2003

LR-E03-0209  
ATTACHMENT 1

INCIDENTAL TAKE OF SHORTNOSE STURGEON

OCCURRENCE DATE: April 9, 2003

FACILITY: Salem Generating Station, Unit 1  
PSEG Nuclear LLC  
Hancocks Bridge, NJ 08038

IDENTIFICATION OF OCCURRENCE:

A shortnose sturgeon (*Acipenser brevirostrum*) was removed from the Circulating Water System (CWS) Intake trash racks at the Salem Generating Station. The sturgeon was recovered on April 9, 2003. Shortnose sturgeon are federally listed as "endangered" species under the Endangered Species Act of 1973, as amended.

CONDITIONS PRIOR TO OCCURRENCE:

April 9, 2003	Unit 1	100 percent power
	Unit 2	100 percent power

DESCRIPTION OF OCCURRENCE:

DATE	TIME	STATUS	INTAKE BAY	FORK LENGTH (CM)	TOTAL LENGTH (CM)	WEIGHT (KG)
4/09/03	0900	ALIVE BUT DIED SHORTLY AFTER RECOVERY	12A	69 Est.	NA	2.5

During routine cleaning of the trash racks, Site Services personnel recovered the sturgeon alive but with a severe wound directly in front of the tail. The sturgeon died shortly after recovery. Environmental Licensing personnel responded and confirmed the identification of the sturgeon.

The sturgeon was examined, measured, weighed and scanned for Passive Integrated Transponder (PIT) tags. The sturgeon had one severe wound directly in front of the tail. The tail was only attached by a thin piece of tissue. Based on observations of the wound, the wound appears to have been inflicted prior to removal from the trash racks. A basic necropsy was performed to verify identification and no abnormalities were noted. No response was obtained when the sturgeon was scanned for PIT tags. The sturgeon was frozen pending disposition of the carcass in accordance with the terms and conditions of the current Incidental Take Statement.

The U. S. Nuclear Regulatory Commission (NRC), the National Marine Fisheries Service (NMFS) and the New Jersey Department of Environmental Protection (NJDEP) have been notified regarding this occurrence.

#### APPARENT CAUSE OF OCCURRENCES

Based on historical and recent records, shortnose sturgeon appear to utilize the entire Delaware estuary-river complex, from the river mouth to New Hope, Pennsylvania (0-238 river kilometer - rkm). Spawning occurs north of Trenton, 128 rkm upstream from the Salem and Hope Creek Generating Stations. It is unlikely that larval or post-larval fish would travel the distance downstream to Artificial Island. Adult shortnose sturgeon may move into the Artificial Island area during fall migration to wintering grounds. Healthy adult and juvenile shortnose sturgeon are strong enough swimmers that they should be able to escape from intake velocities typically encountered at the trash bars. Sturgeon that are in a weakened condition may be subject to impingement.

#### ANALYSIS OF OCCURRENCE

The CWS intake is monitored for accumulation of debris throughout the year. This accumulated debris is periodically removed. Because of the debris in the Delaware River this winter and spring, cleaning of the trash racks has been occurring typically on a daily basis. The sturgeon was recovered during this cleaning. Between 1978 and 2003, a total of sixteen (16) shortnose sturgeon have been collected at the CWS intake, two in 1978, one in 1981, three in 1991, two in 1992, two in 1994, three in 1998, one in 1999, one in 2000, and this occurrence in 2003.

## CORRECTIVE ACTIONS

The trash racks are required to be inspected every two hours from June 1 through October 15. Observations are made specifically for sea turtles and sturgeon during this time. During the remaining months the trash racks are inspected daily for debris load and cleaned as necessary. As the shortnose sturgeon was initially recovered alive but with mortal injuries that appear to have been previously inflicted, it is felt that the measures in place are sufficient and no other actions are warranted at this time.

MAY 06 2003

LR-E03-0209  
ATTACHMENT 2

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:** Jessie Walker, Eric Hackett – PSEG Nuclear LLC Site Services

**Reporters full name:** David Hurka – PSEG Nuclear LLC Environmental Licensing

**Species identification:** Shortnose Sturgeon (*Acipenser brevirostrum*)

**Site of impingement:** Salem Generating Station – CWS Trash Racks

**Date and time impingement was observed:** 04/09/03 0900 hrs

**Date and time of animal was collected:** 04/09/03 0900 hrs

**Tidal stage at time of collection:** Low Tide

**Date and time of last observation of screen:** 04/09/03 0900 hrs

**Water temperature at site at time of impingement:** 9.5° (C)

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

**Condition of animal:** Alive but with fatal injuries

**Shortnose Sturgeon Measurements:**

**Fork Length:** 69 cm estimated

**Total Length:** NA

**Weight:** 2.5 kg

**Remarks:** The sturgeon was found during routine cleaning of the CWS Intake trash racks. The sturgeon had one severe wound directly in front of the tail. The tail was only attached by a thin piece of tissue. Based on observations of the wound, the wound appears to have been inflicted prior to removal from the trash racks. A crude necropsy was performed to verify identification and no abnormalities were noted.