



OCT 28 2004

LR-E04-0491

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U. S. Nuclear Regulatory Commission  
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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, PSEG Nuclear LLC (PSEG) 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,

A handwritten signature in black ink, appearing to read "James M. Eggers".

James M. Eggers  
Supervisor –  
Environmental Licensing

Attachments (2)

Handwritten initials "IE23" in black ink, located in the bottom right corner of the page.

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C Mr. S. Collins, Administrator - Region I  
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USNRC Senior Resident Inspector - Salem  
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Mr. K. Tosch, Manager IV  
Bureau of Nuclear Engineering  
33 Arctic Parkway  
P. O. Box 415  
Trenton, NJ 08625-0415

Ms. Carrie Upite  
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

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/dkh

BC Vice President – Site Operations  
Vice President – Nuclear Assessment  
Nuclear Plant Manager - Salem  
E. J. Keating  
NBS RM – N64  
Env. File No. 4.7.2 SGS  
Nuclear File No. 1.2.1 SGS



The sturgeon was examined, measured, weighed and scanned for Passive Integrated Transponder (PIT) tags. The sturgeon had no obvious injuries but appeared weak and underweight for its size. 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 trash bars are required to be cleaned daily between June 1 and October 15. The sturgeon was recovered during this cleaning. Due to the heavy rains from the remnants of hurricane Ivan that fell at the end of September, the flooding on the main stem Delaware River was the worst since August 1955. Even before the rains arrived from Ivan, the Delaware River at Montague and Trenton, N.J. was flowing at 298 percent and 265 percent of normal, respectively, for the first half of September. It is believed that these heavy flow conditions may have been a contributing factor in the taking of this sturgeon. Between 1978 and 2003, a total of sixteen (17) 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, one in 2003 and this occurrence in 2004.

## CORRECTIVE ACTIONS

The trash racks are required to be inspected every two hours from June 1 through October 15, cleaned three times per week from May 1 and November 15, and as mentioned above, are required to be cleaned daily between June 1 and 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 appeared underweight and in a weakened condition, it is felt that the measures in place are sufficient and no other actions are warranted at this time.

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:** Dale Boleslawski, John Pugliese – PSEG Nuclear LLC, Facility 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:** 10/01/04 1007 hrs

**Date and time of animal was collected:** 10/01/04 1007 hrs

**Tidal stage at time of collection:** Flood

**Date and time of last observation of screen:** 10/01/04 1007 hrs

**Water temperature at site at time of impingement:** 21.3<sup>o</sup> (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 appeared weakened and underweight

**Shortnose Sturgeon Measurements:**

**Fork Length:** 64.6 cm

**Total Length:** 73.7 cm

**Weight:** 1.1 kg

**Remarks:** The sturgeon was found during routine cleaning of the CWS Intake trash racks. The sturgeon was recovered alive but appeared weak and lethargic. The sturgeon died shortly after recovery.