



LR-E14-0059

APR 10 2014

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
ARTICLE NUMBER: 7011 3500 0000 5084 7946

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

The Nuclear Environmental Event Report, "Report of Impingement of Shortnose Sturgeon" is being submitted pursuant to the requirements of Section 5.4.2 of Appendix B, Environmental Protection Plan, to the Operating License for the Salem Generating Station, PSEG Nuclear LLC (PSEG).

Please find enclosed a letter and two attachments with further information regarding this impingement event.

If you have any questions or require additional information, please do not hesitate to contact Kenneth Strait, Manager – Biological Programs at (856) 339-3929.

Sincerely,

A handwritten signature in black ink, appearing to read "LMW", is written over the typed name of Lawrence M. Wagner.

Lawrence M. Wagner  
Plant Manager - Salem  
PSEG Nuclear LLC

Attachments (2)

IE77  
NR

## REPORT OF IMPINGEMENT OF SHORTNOSE STURGEON

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, and documents the occurrence and removal of a shortnose sturgeon (*Acipenser brevirostrum*) from the Salem Generating Station circulating water intake structure trash bars.

Consultation pursuant to Section 7 of the Endangered Species Act of 1973 (ESA) between NRC and the National Marine Fisheries Service (NMFS) on the effects of the operation of Salem Station on threatened and endangered species has been ongoing since 1979. The most recent revision to the Biological Opinion and Incidental Take Statement issued in January 1999 exempts the specified annual take of shortnose sturgeon and sea turtles. In advance of relicensing for Salem Station, consultation pursuant to Section 7 of the ESA between NRC and NMFS was reinitiated in 2009. On April 6, 2012, the NMFS listed five Distinct Population Segments of Atlantic sturgeon as threatened or endangered under the ESA. In May 2012, NRC requested consultation on the effects of the continued operation of Salem Station on Atlantic sturgeon. The NMFS issued a draft Biological Opinion and Incidental Take Statement (ITS) in July 2012 that, when finalized, will authorize a specified incidental take of both Atlantic sturgeon and shortnose sturgeon associated with operation of the Salem Station circulating water intake system.

Pursuant to Section 5.4.2 of the Environmental Protection Plan for Salem Station, nonroutine events which require reporting to other federal agencies shall be reported in accordance with the other agencies' reporting requirements. Accordingly, enclosed please find two (2) attachments. Attachment 1 provides the information requested by the NMFS in Appendix II to the current ITS and in Appendix B, Part 2, to the revised draft ITS. Attachment 2 is a copy of a Sturgeon Salvage Form verbally requested by the NMFS.

There are no commitments contained in this letter.

CC: Mr. William Dean, Administrator - Region I  
U. S. Nuclear Regulatory Commission  
2100 Renaissance Blvd., Suite 100  
King of Prussia, PA 19406-2713

Mr. John Hughey, Licensing Project Manager  
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

Ms. Jessica Pruden  
National Marine Fisheries Service  
Protected Resources Division  
Jessica.Pruden@noaa.gov

Mr. Dave Jenkins  
Endangered and Nongame Species Program  
New Jersey Department of Environmental Protection  
Dave.Jenkins@DEP.State.NJ.US

Ms. Jeanette Bowers  
Department of Fish and Wildlife  
New Jersey Department of Environmental Protection  
Jeanette.Bowers@DEP.State.NJ.US

Salem Commitment Coordinator  
Mail Code X25

## ATTACHMENT 1 (Sturgeon)

Observer's full name: Matthew S. Parris

Reporter's full name: Matthew S. Parris

Species Identification (Key attached): Shortnose Sturgeon (Acipenser brevirostrum)

Site of Impingement (Unit 1 or 2, CWS or DWS, Bay #, etc.): SGS Unit 1; CWI 12A

Date animal observed: 3/13/14

Time animal observed: 09:35am

Date animal collected: 3/13/14

Time animal collected: 09:35am

Date rehab facility contacted: \_\_\_\_\_

Time rehab facility contacted: \_\_\_\_\_

Date animal picked up: \_\_\_\_\_

Time animal picked up: \_\_\_\_\_

Environmental conditions at time of observation (i.e., tidal stage, weather):

Air temp. -(-5.0°C); sal. -10.0ppt; wind-NW; sky-partly cloudy; wave-moderate; tide-Flood slack(90.5ft)

Date and time of last inspection of screen: 3/13/14 at 0843am

Water temperature (°C) at site and time of observation: 2.5°C

Number of pumps operating at time of observation: Unit 1 6 Unit 2 5

Average percent of power generating capacity achieved per unit at time of observation:

Unit 1 100 Unit 2 100

Average percent of power generating capacity achieved per unit over the 48 hours previous to observation:

Unit 1 100 Unit 2 100

### Sturgeon Information:

Species Shortnose Sturgeon (Acipenser brevirostrum)

Fork length (or total length) 889mm(FL)/946mm(TL)

Weight 4.1kg

### Condition of specimen/description of animal

The sturgeon was deceased at the time of retrieval by Salem Yard Crew. It appears that the specimen has been dead for a prolonged period of time based on the severe decomposed condition (exposed canial bones, rotting flesh, foul odor). State of NJ DEP & National Marine Fisheries (NMFS) were contacted at 10:42 and 10:39 respectively. Specimen has been preserved (frozen) for later examination.

Fish Decomposed: NO

SLIGHTLY

MODERATELY

SEVERELY

Fish tagged: YES (NO) Please record all tag numbers. Tag # \_\_\_\_\_

Photograph attached: (YES) / NO

(please label species, date, geographic site and vessel name on back of photograph)

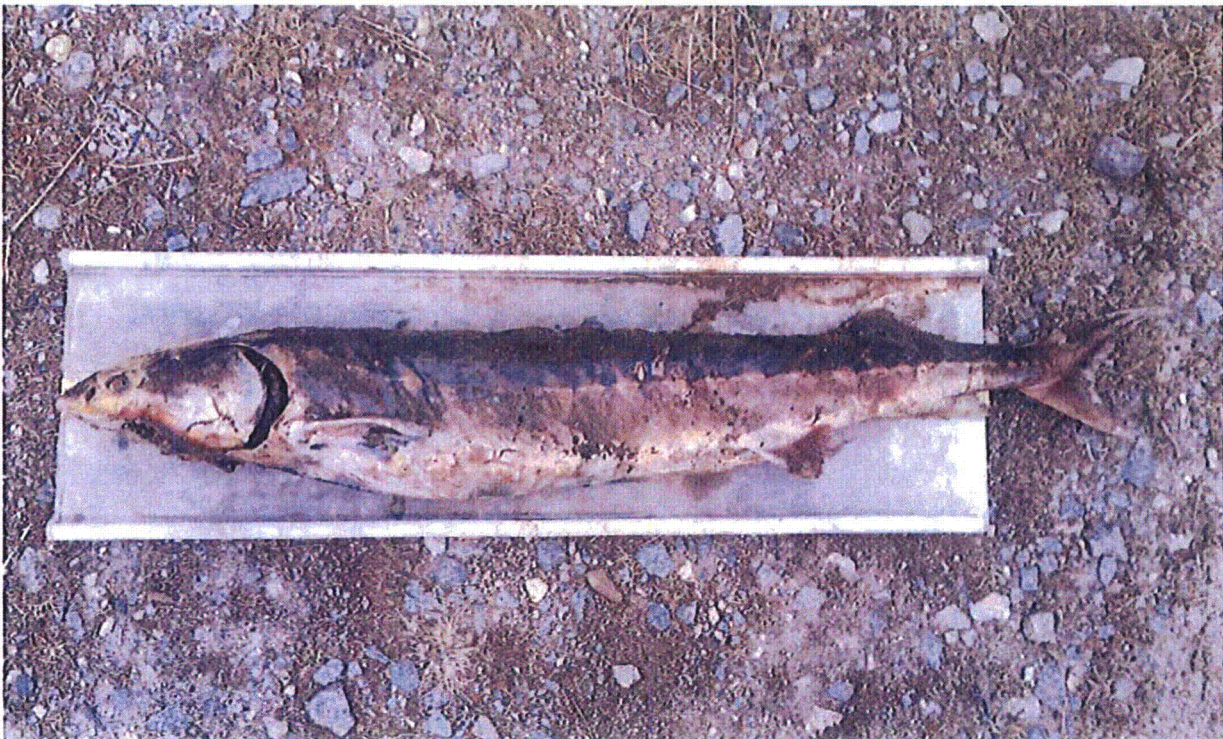


ATTACHMENT 1 (Sturgeon) continued

Photographs



Dorsal view showing size and condition of the deceased Shortnose sturgeon (*Acipenser brevirostrum*), retrieved on 3/13/14 at 09:35am, by Salem Yard Crew personnel during routine trash rack cleaning at the Salem CWIB (3/14/14).



A left lateral view of the specimen, which shows the extent of decay occurring over the entire body (3/14/14).

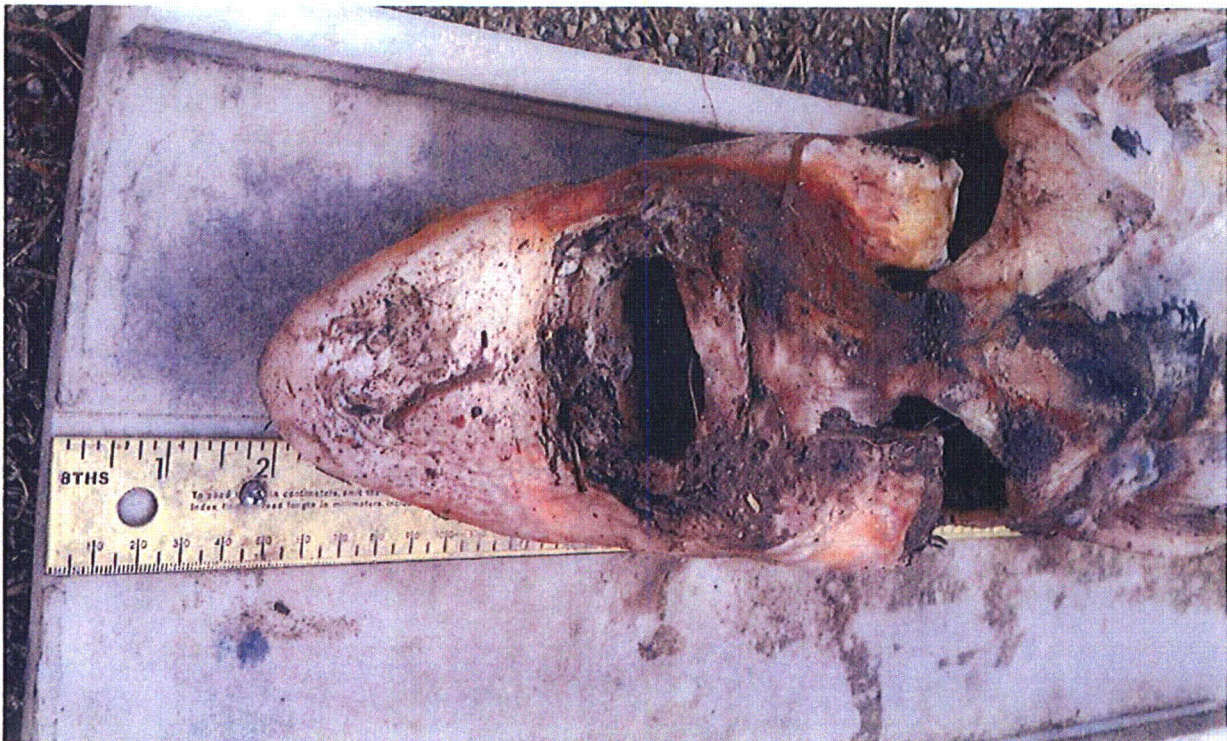


ATTACHMENT 1 (Sturgeon) continued

Photographs



A ventral view of the same specimen (3/14/14).

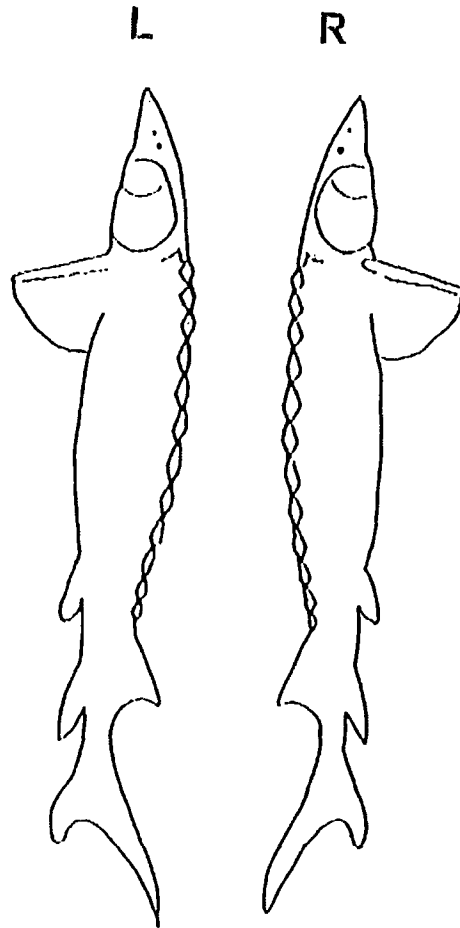


This ventral view of the rostrum provides additional detail of the advanced state of decomposition of the specimen (3/14/14).



## ATTACHMENT 1 (Sturgeon) continued

Draw wounds, abnormalities, tag locations on diagram and briefly describe below



### Description of fish condition:

At the time of retrieval, the condition of the sturgeon was poor. No direct damage (cuts, lacerations, abrasions, etc.) to the body was observed, however evidence of the advanced stages of decomposition were apparent. The specimen was transported to the Environmental Consulting Services office and preserved (frozen) waiting further direction from NMFS. After a three week period of holding, and no response from NMFS, the specimen was discarded at the direction of PSEG Nuclear Environmental Affairs.

# STURGEON SALVAGE FORM

For use in documenting dead sturgeon in the wild under ESA permit no. 1614 (version 05-16-2012)

## INVESTIGATORS'S CONTACT INFORMATION

Name: First Douglas Last Potts  
 Agency Affiliation PSEG subcontractor Email dpotts@ecsl-del.com  
 Address 100 South Cass Street, Middletown, DE 19709  
 Area code/Phone number (302) 378-9881

UNIQUE IDENTIFIER (Assigned by NMFS)

## DATE REPORTED:

Month 03 Day 13 Year 2014

## DATE EXAMINED:

Month 03 Day 13 Year 2014

## SPECIES: (check one)

- ☒ shortnose sturgeon  
☐ Atlantic sturgeon  
☐ Unidentified *Acipenser* species  
 Check "Unidentified" if uncertain.  
 See reverse side of this form for aid in identification.

## LOCATION FOUND:

☐ Offshore (Atlantic or Gulf beach) ☒ Inshore (bay, river, sound, inlet, etc)

River/Body of Water Delaware River City Hancocks Bridge State NJ

Descriptive location (be specific Removed from Circulating Water Intake Structure (CWIS) Intake trash racks, Intake bay 12A, during routine trash rack cleaning at the Salem Generating Station, PSEG Nuclear LLC.

Latitude 39° 27'38.17 N (Dec. Degrees) Longitude 75° 32'10.08 W (Dec. Degrees)

## CARCASS CONDITION at time examined: (check one)

- ☐ 1 = Fresh dead  
☐ 2 = Moderately decomposed  
☒ 3 = Severely decomposed  
☐ 4 = Dried carcass  
☐ 5 = Skeletal, scutes & cartilage

## SEX:

- ☒ Undetermined  
☐ Female ☐ Male  
 How was sex determined?  
☐ Necropsy  
☐ Eggs/milt present when pressed  
☐ Borescope

## MEASUREMENTS:

Circle unit

Fork length 88.9 cm  
 Total length 94.6 cm  
 Length ☒ actual ☐ estimate  
 Mouth width (inside lips, see reverse side) 4.5 cm  
 Interorbital width (see reverse side) 6.7 cm  
 Weight ☒ actual ☐ estimate 4.1 kg

TAGS PRESENT? Examined for external tags including fin clips? ☐ Yes ☒ No Scanned for PIT tags? ☒ Yes ☐ No

Tag #

Tag Type

Location of tag on carcass

## CARCASS DISPOSITION: (check one or more)

- ☐ 1 = Left where found  
☐ 2 = Buried  
☐ 3 = Collected for necropsy/salvage  
☒ 4 = Frozen for later examination  
☐ 5 = Other (describe) \_\_\_\_\_

## Carcass Necropsied?

☐ Yes ☒ No

Date Necropsied: \_\_\_\_\_

Necropsy Lead: \_\_\_\_\_

## PHOTODOCUMENTATION:

Photos/video taken? ☒ Yes ☐ No

Disposition of Photos/Video PSEG Nuclear Environmental Affairs and Nuclear Regulatory Affairs personnel.

## SAMPLES COLLECTED? ☐ Yes ☒ No

Sample

How preserved

Disposition (person, affiliation, use)

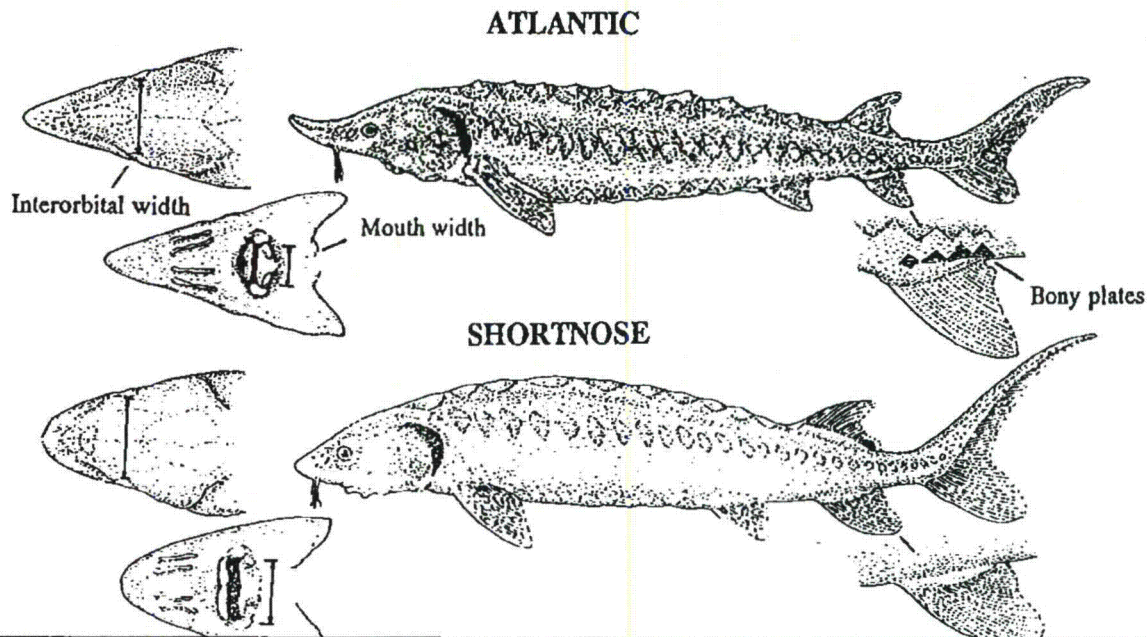
Comments: The deceased Shortnose sturgeon was collected from the Salem Circulating Water Intake Structure during routine trash rack cleaning on 3/13/14. Positive identification was made by Environmental Consulting Services personnel at 10:30am. The specimen was measured, photographed, and inspected for tags, but none were found. The State of New Jersey DEP, Division of Fish and Wildlife, and National Marine Fisheries (NMFS) were contacted in regards to the incidental take at 10:42 and 10:39am respectively. Upon completion of processing, the fish was transported back to the ECSI main office in Middletown, DE, and preserved (frozen), waiting further instruction of final disposition from NMFS. After a three week period of holding, with no response from NMFS, the specimen was discarded at the direction of PSEG Nuclear Environmental Affairs.



# Distinguishing Characteristics of Atlantic and Shortnose Sturgeon (version 07-20-2009)

| Characteristic            | Atlantic Sturgeon, <i>Acipenser oxyrinchus</i>  | Shortnose Sturgeon, <i>Acipenser brevirostrum</i>   |
|---------------------------|---|---|
| Maximum length            | > 9 feet/ 274 cm  | 4 feet/ 122 cm  |
| Mouth                     | Football shaped and small. Width inside lips < 55% of bony interorbital width         | Wide and oval in shape. Width inside lips > 62% of bony interorbital width                    |
| *Pre-anal plates          | Paired plates posterior to the rectum & anterior to the anal fin.                     | 1-3 pre-anal plates almost always occurring as median structures (occurring singly)           |
| Plates along the anal fin | Rhombic, bony plates found along the lateral base of the anal fin (see diagram below) | No plates along the base of anal fin  |
| Habitat/Range             | Anadromous; spawn in freshwater but primarily lead a marine existence                 | Freshwater amphidromous; found primarily in fresh water but does make some coastal migrations |

\* From Vecsei and Peterson, 2004



Describe any wounds / abnormalities (note tar or oil, gear or debris entanglement, propeller damage, etc.). Please note if no wounds / abnormalities are found. At the time of the initial observation, the condition of the sturgeon was poor. No significant damage (deep cuts, lacerations, abrasions, missing fins, etc.) to the body was observed, however evidence of the advanced stages of decomposition were apparent, indicating that the specimen has been deceased for an extended period of time.

Data Access Policy: Upon written request, information submitted to National Marine Fisheries Service (NOAA Fisheries) on this form will be released to the requestor provided that the requestor credit the collector of the information and NOAA Fisheries. NOAA Fisheries will notify the collector that these data have been requested and the intent of their use.

Submit completed forms (within 30 days of date of investigation) to: Northeast Region Contacts - Shortnose Sturgeon Recovery Coordinator (Jessica Pruden, [Jessica.Pruden@noaa.gov](mailto:Jessica.Pruden@noaa.gov), 978-282-8482) or Atlantic Sturgeon Recovery Coordinator (Lynn Lankshear, [Lynn.Lankshear@noaa.gov](mailto:Lynn.Lankshear@noaa.gov), 978-282-8473); Southeast Region Contacts - Shortnose Sturgeon Recovery Coordinator (Stephanie Bolden, [Stephanie.Bolden@noaa.gov](mailto:Stephanie.Bolden@noaa.gov), 727-824-5312) or Atlantic Sturgeon Recovery Coordinator (Kelly Shotts, [Kelly.Shotts@noaa.gov](mailto:Kelly.Shotts@noaa.gov), 727-551-5603).