

**PSEG**  
*Nuclear LLC*

LR-E16-0032

**MAR 11 2016**

National Marine Fisheries Service  
Greater Atlantic Regional Fisheries Office  
ATTN: Section 7 Coordinator  
55 Great Republic Drive  
Gloucester, MA 01930

CERTIFIED MAIL  
RETURN RECEIPT REQUESTED  
ARTICLE NUMBER: 7013 2630 0000 0535 8375

**SALEM AND HOPE CREEK GENERATING STATIONS  
BIOLOGICAL OPINION NER-2010-6581  
ANNUAL INCIDENTAL TAKE REPORT**

The U.S. Nuclear Regulatory Commission (USNRC) and the National Marine Fisheries Service (NMFS) concluded formal consultation under Section 7 of the Endangered Species Act of 1973, as amended, (ESA) on July 17, 2014, with NMFS's issuance of a final biological opinion and incidental take statement (ITS) for Salem Nuclear Generating Station, Units 1 and 2 (Salem), and Hope Creek Generating Station, Unit 1 (Hope Creek). USNRC Amendment Nos. 308 and 290 to Renewed Facility Operating Licenses DPR-70 and DPR-75 for the Salem Nuclear Generating Station, Unit Nos. 1 and 2, and USNRC Amendment No. 198 to Renewed Facility Operating License NPF-57 for the Hope Creek Generating Station incorporating provisions of the incidental take statement became effective at the Salem and Hope Creek Generating Stations (Station) on the date of issuance, June 17, 2015. Pursuant to Terms and Conditions Nos. 9 and 23 of the ITS, this report is being provided to detail all interactions with Endangered Species Act (ESA) species, specifically sturgeon and sea turtles encountered at the Salem and Hope Creek Generating Stations (Station) for the 2015 reporting year.

In accordance with T&C number 9 of the ITS, enclosed in this report are tables summarizing the sturgeon and sea turtle interactions at the Station for the previous reporting year. To summarize, in 2015 PSEG encountered three (3) atlantic and one (1) shortnose sturgeon at the Salem Generating Station circulating water intake trash bars, zero (0) sturgeon at the intake traveling screens, and zero (0) sea turtles across the Station. We estimate that the total number of sturgeon collected at the traveling screens to be zero (0) for 2015 based on the number of sightings observed while performing routine impingement sampling at the Station. There were no additional sightings of sturgeon or sea turtles in the vicinity of the Station that require reporting under the ITS.

IE 77  
NRR

All impingement reports were submitted within the ITS required time frame following the events; therefore no additional reports are contained in this submittal. Attached in this report are records of trash rack inspection dates and times for the seven days prior to each take. Necropsy results for the one (1) deceased atlantic sturgeon are not provided in this submittal, as the specimen was not subjected to a full necropsy by the Delaware Department of Natural Resources, Division of Fish and Wildlife; however, a chain of custody documenting the transfer is provided in Attachment 6 of this report. Necropsy results for the one (1) deceased shortnose sturgeon are not available at this time because a facility has not been identified to accept shortnose sturgeon specimens for necropsy. This animal remains on ice at the Environmental Consulting Services, Inc. facility in Middletown Delaware, awaiting instructions for final disposition.

During the 2015 reporting year, there were no interactions with a listed Endangered Species Act (ESA) species during Radiological Effluent Monitoring Program (REMP) sampling, therefore, no attachments in this report pertain to T&C number 23 of the ITS.

Finally, PSEG confirms that we have renewed our arrangement with the Marine Mammal Stranding Center (MMSC) in Brigantine, New Jersey for 2016. PSEG will continue to rely upon the MMSC to provide any necessary assistance with the transport, evaluation, veterinary care, tagging and release of and future sea turtles recovered at the Station.

If you have any questions or require additional information, please do not hesitate to contact Michael Pego at (856) 339-1404.

Sincerely,

A handwritten signature in cursive script that reads "Alison Kraus".

Alison Kraus  
Manager – Nuclear Environmental Affairs  
PSEG Nuclear LLC

cc: United States Nuclear Regulatory Commission  
[endangered.species@nrc.gov](mailto:endangered.species@nrc.gov)

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### **Attachments**

1. Shortnose Sturgeon Collection Table
2. Atlantic Sturgeon Collection Tables
3. Sea Turtle Collection Tables
4. Incidental Take Summary Table
5. Trash Rack Inspection Log
6. Chain of Custody for Report of Impingement (11/24/15)

**Attachment 1**  
**Shortnose Sturgeon Summary Table**

<b>Shortnose Sturgeon Collection (Trash Bars)</b>	
<b>Category</b>	<b>Takes (6/17/15 - 12/31/15)</b>
Unit 1 - Dead	1
Unit 1 -Dead (Due to Impingement)	0
Unit 1 (Live)	0
Unit 1 - Total	1
Unit 2 - Dead	0
Unit 2 -Dead (Due to Impingement)	0
Unit 2 (live)	0
Unit 2 - Total	0
Total Collection - Dead	1
Total Collection Dead Due to Impingement	0
Total Collection	1

**Attachment 2**  
**Atlantic Sturgeon Collection Tables**

<b>Atlantic Sturgeon Collection (Trash Bars)</b>	
<b>Category</b>	<b>Takes (6/17/15 - 12/31/15)</b>
Unit 1 - Dead	1
Unit 1 -Dead (Due to Impingement)	0
Unit 1 (Live)	2
Unit 1 - Total	3
Unit 2 - Dead	0
Unit 2 -Dead (Due to Impingement)	0
Unit 2 (Live)	0
Unit 2 - Total	0
Total Collection - Dead	1
Total Collection Dead Due to Impingement	0
Total Collection	3

<b>Atlantic Sturgeon Collection (Traveling Screens)</b>	
<b>NYB DPS</b>	<b>Takes (6/17/15 - 12/31/15)</b>
Unit 1 - Injury or Mortality	0
Unit 1 (Live)	0
Unit 1 - Total	0
Unit 2 - Injury or Mortality	0
Unit 2 - Live	0
Unit 2 - Total	0
Total Collection	0

**Attachment 3**  
**Sea Turtle Collection Tables**

<b>Loggerhead Sea Turtle</b>	
<b>Category</b>	<b>Takes (6/17/15 - 12/31/15)</b>
Unit 1 Loggerhead (Dead)	0
Unit 1 Loggerhead (Live)	0
Unit 1 - Total	0
Unit 2 Loggerhead (Dead)	0
Unit 2 Loggerhead (Live)	0
Unit 2 - Total	0

<b>Green Sea Turtle</b>	
<b>Category</b>	<b>Takes (6/17/15 - 12/31/15)</b>
Dead	0
Alive	0
Station Total	0

<b>Kemp's Ridley Sea Turtle</b>	
<b>Category</b>	<b>Takes (6/17/15 - 12/31/15)</b>
Unit 1 Kemp's Ridley (Dead)	0
Unit 1 Kemp's Ridley (Live)	0
Unit 1 - Total	0
Unit 2 Kemp's Ridley (Dead)	0
Unit 2 Kemp's Ridley (Live)	0
Unit 2 - Total	0

**Attachment 4**  
**Incidental Take Report Summary Table**

<b>Impingement Date</b>	<b>Impingement Time</b>	<b>Species</b>	<b>Mortality</b>	<b>Report Sent to NRC</b>	<b>Report Sent to NMFS</b>
11/24/2015	14:00 PM	Atlantic Sturgeon	Deceased	11/25/2015	11/25/2015
12/4/2015	9:20 AM	Atlantic Sturgeon	Alive	12/7/2015	12/7/2015
12/11/2015	9:35 AM	Shortnose Sturgeon	Deceased	12/14/2015	12/14/2015
12/18/2015	10:15 AM	Atlantic Sturgeon	Alive	12/21/2015	12/21/2015



**Attachment 5**  
**Trash Rack Inspection Log**

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**Tour Readings with Reading Times**

Facility- Operations

3/9/2016

Description	Reading	Time of Reading
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/17/2015 12:31:50 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/17/2015 9:47:22 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/18/2015 10:14:27 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/18/2015 7:54:57 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/19/2015 9:49:20 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/20/2015 12:37:51 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/20/2015 8:42:50 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/20/2015 9:13:16 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/21/2015 10:24:09 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/21/2015 8:41:21 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/22/2015 8:07:40 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/22/2015 10:42:19 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/23/2015 7:40:31 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/23/2015 9:52:08 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/24/2015 10:48:03 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/24/2015 9:38:51 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/25/2015 10:09:21 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/25/2015 9:03:47 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/26/2015 8:29:51 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/26/2015 9:16:47 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/27/2015 11:30:44 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/27/2015 8:08:01 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/28/2015 8:09:51 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/28/2015 9:32:28 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/29/2015 10:36:04 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/29/2015 8:08:14 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/30/2015 8:59:50 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	11/30/2015 7:40:23 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/1/2015 11:43:31 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/1/2015 10:17:58 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/2/2015 10:41:12 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/2/2015 10:10:13 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/3/2015 8:33:00 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/3/2015 9:46:08 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/4/2015 10:14:15 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/4/2015 10:54:17 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/5/2015 9:14:48 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/5/2015 8:43:58 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/6/2015 9:30:19 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/6/2015 8:35:24 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/7/2015 9:31:50 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/7/2015 8:49:43 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/8/2015 10:19:01 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/8/2015 7:33:35 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/9/2015 9:48:56 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/9/2015 8:24:18 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/10/2015 8:05:15 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/10/2015 10:36:36 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/11/2015 9:19:27 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/11/2015 10:35:01 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/12/2015 9:50:07 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/12/2015 8:25:56 PM



## Tour Readings with Reading Times

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Facility- Operations

3/9/2016

Description	Reading	Time of Reading
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/13/2015 8:55:14 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/13/2015 9:05:36 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/14/2015 8:27:08 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/14/2015 8:26:17 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/15/2015 1:00:26 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/15/2015 9:49:55 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/16/2015 9:15:16 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/16/2015 8:39:32 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/17/2015 9:23:43 AM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/17/2015 8:08:24 PM
Trash Rack Inspection [ITS-App. B] (sta # 225)	SAT	12/18/2015 8:39:27 AM

**Environmental Consulting Services, Inc.**

**Chain Of Custody Record**

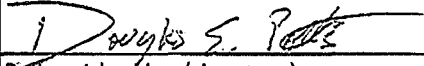
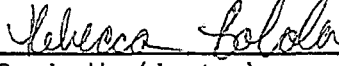
100 South Cass Street  
Middeltown, DE 19709

Phone: (302) 378-9881  
FAX: (302) 378-9107

Collection Date: 11/24/2015

Custodian: ECSI

	Species	Condition	Collection location	Tags	Comments
1	Atlantic Sturgeon	Deceased	PSEG Salem Generating Station	none	preserved on ice; fin clip collected from right ventral fin. Minor laceration at base of dorsal fin; minor damage to caudal fin.
2					
3					
4					
5					
6					
7					

Relinquished by: (signature)	Date	Received by: (signature)	Affiliation	Date
	12/1/2015		DFW	12/1/15
Relinquished by: (signature)	Date	Received by: (signature)	Affiliation	Date
Relinquished by: (signature)	Date	Received by: (signature)	Affiliation	Date

Attachment 6  
Chain of Custody