



**MAY 12 2006**  
LR-E06-0232

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Administrator of Water Compliance and Enforcement  
New Jersey Department of Environmental Protection  
401 East State Street, 4th Floor East  
PO Box 422  
Trenton, New Jersey 08625-0422

**RE: PSEG Nuclear LLC - Salem Generating Station  
NJPDES Permit No. NJ0005622  
NJDEP Case No. 06-05-10-0235-20  
Five Day Report**

Dear Sir/Madam:

In accordance with N.J.A.C. 7:14A-6.10 Noncompliance Reporting, PSEG Nuclear LLC is submitting this report concerning a discharge of water containing hydrazine and ammonia through Discharge Serial Number (DSN) 488. The discharge was reported to the New Jersey Department of Environmental Protection (NJDEP) hotline and assigned case number 06-05-10-0235-20. This discharge was also reported to the Nuclear Regulatory Commission and assigned event number 42563. This report contains the following information as known at the time of this report. In accordance with the regulations, additional information regarding this discharge will be provided as it becomes available.

**1. A description of the discharge, including the time of the discharge, the location of discharge, the volume of the discharge, the concentration of pollutants discharged, and the receiving water of the discharge;**

On May 10<sup>th</sup>, 2006 at 0150 Operations personnel observed condenser hotwell levels dropping unexpectedly. An operator was dispatched to investigate. As a result of the dropping levels, the auxiliary demineralizer pump was initiated to makeup flow to the condenser hotwells. At 0215 the control room received a report of flooding from the Salem Unit 1 Condensate Polisher Building (CPB). At this time, a relief valve within the Salem Unit 1 CPB was found to be the source of the discharge. The source of the discharge was terminated immediately (0215). Some of the water discharged was collected within the CPB. Based on the level

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indication of the high conductivity pit, taken on May 9<sup>th</sup>, the volume available to be contained was approximately 10,000 gallons. The total volume of water released inside the building was approximately 40,000 gallons.

This is based on the volume of water needed to return the system to full capacity. In addition to the 10,000 gallons contained in the high conductivity pit, an unknown amount was collected through floor drains and other smaller containments within the CPB. The remaining water flowed through the two doorways of the CPB (one on the northeast side and one on the southwest side). Based on personnel observations, the majority of the water exited the building on the northeast side. Further, based upon the observations of the first responders, the volume discharged to the Delaware River through DSN 488 was approximately 2,000 gallons. A sample taken at the U1 CPB resulted in 200 ppm ammonia and 30 ppm hydrazine. A sample taken at the storm drain leading to the river indicated 3 ppm hydrazine and 40 ppm ammonia.

**2. Steps being taken to determine the cause of the permit noncompliance;**

PSEG has conducted a prompt investigation in accordance with our problem identification and resolution process. Corrective actions are under review and they will follow this letter as they become available.

**3. Steps being taken to reduce, remediate, and eliminate the noncomplying discharge and any damage to the environment, and the anticipated time frame to initiate and complete the steps to be taken;**

After discovery, the discharge was immediately stopped. Emergency responders from the Fire Protection Department were on scene shortly thereafter and placed plugs into two storm drains, thus isolating as much water as possible to the immediate area. The first plug was put in place in manhole #14, associated with the storm water system leading to DSN 488, at approximately 0225. The second plug was put in place in curb inlet H, associated with the DSN 489, including the Oil Water Separator (OWS). At the time of the discharge, the OWS was placed in manual, and therefore held all water received.

The discharged water that accumulated in the storm drain was removed, as well as standing water in the immediate area outside of the CPB using a vacuum truck at approximately 1500 on 5/10/06. This totaled over 1000 gallons. The water remaining in the OWS was neutralized with hydrogen peroxide on 5/11/06 and tested prior to discharge. The impacted soil in the immediate area surrounding the CPB was also

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neutralized using hydrogen peroxide. This method was discussed with the NJDEP Emergency Response Specialist who arrived onsite at 1300 on 5/10/06. No visible impact to the environment was noted. There is not expected to be a discernable impact to the environment.

**4. The duration of the discharge, including the dates and times of the commencement and, for an unanticipated bypass, the dates and times of the end or anticipated end of the discharge, and if the discharge has not been corrected, the anticipated time when the permittee will correct the situation and return the discharge to compliance;**

The approximate start of the discharge is believed to be 0150 on 5/10/06. The discharge was stopped at 0215 at the source, and the water flowing toward DSN 488 at 0225. Due to the volume of makeup water equaling 40,000 gallons, the maximum discharge from the condensate polisher building would be equal to that volume of 40,000 gallons. The high conductivity pit levels indicated approximately 10,000 to 12,000 gallons of capacity as of the reading on 5/9/06. The resulting release from the CPB would be a maximum of 30,000 gallons. It is unknown the exact volume trapped within the OWS. Because of the terrain, and based on observations of the first responders the majority of the water was directed toward the OWS. Along with the 1000 gallons collected within the immediate area (storm drain and standing water), it is still believed no more than 2000 gallons reached the Delaware river. This 2000 gallons which at 3 ppm, equates to no more than 8.3 ounces of hydrazine.

**5. The cause of the noncompliance;**

The cause of the noncompliance is currently under review. In accordance with the regulations the results of the investigation will be transmitted to the NJDEP within ten days after they become available.

**6. Steps being taken to reduce, eliminate, and prevent reoccurrence of the noncomplying discharge;**

The noncomplying discharge has been eliminated. Steps to prevent reoccurrence are dependant upon the results from the cause investigation and in accordance with the regulations will be transmitted to the NJDEP within ten days after they become available.

**7. An estimate of the threat to human health or the environment posed by the discharge;**

Based upon visual observation and in light of a maximum calculated 8.3 ounces of hydrazine being discharged, it is estimated there was little to no threat to human health or the

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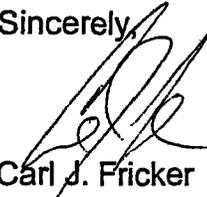
environment.

**8. The measures the permittee has taken or is taking to remediate the problem and any damage or injury to human health or the environment, and to avoid a repetition of the problem.**

To date the permittee has eliminated the discharge, and is currently investigating the cause of the noncomplying discharge. Steps to prevent reoccurrence are dependant on the results of the investigation.

If you have any questions regarding this information, please contact Brendan Daly of my staff at (856) 339-1169.

Sincerely,



Carl J. Fricker

Salem Plant Manager

C NJDEP  
Southern Enforcement Office  
One Port Center  
2 Riverside Drive, Suite 201  
Camden, NJ 08102  
Attn: Mr. Steven Mathis

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U. S. Nuclear Regulatory Commission  
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Delaware Emergency Management Agency  
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