



APR 13 2005

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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. 05-04-08-1909-09
Five-Day Report**

Dear Sir/Madam:

In accordance with N.J.A.C. 7:14A-6.10, PSEG Nuclear has prepared this report confirming the discharge to the Delaware River of approximately 5,000 gallons of water containing a concentration of 7 mg/l of Hydrazine, (CAS # 302-01-2). This is equivalent to approximately 2.0 ounces of pure hydrazine. The discharge was reported to the New Jersey Department of Environmental Protection (NJDEP) hotline and assigned case number 05-04-08-1909-09. This discharge was also reported to the Nuclear Regulatory Commission. 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 if and when 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;

Early in the morning of April 8, 2005, as part of a current refueling outage, the Salem Unit 2 number 22 Steam Generator (22 SG) was isolated in preparation for maintenance. At 0415 hours plant operators observed that the 22 SG water level was decreasing even though the 22 SG had been isolated. A team was dispatched to investigate the cause of the decreasing water level. At approximately 0600 hours it was determined that the decreasing water level was the result of water leaking back through a malfunctioning check valve. The discharge flow path of the leaking water was not

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readily apparent and was further complicated by the significant rain that was occurring during this time period. As the investigation progressed throughout the day, it was determined at approximately 1700 hours that a flow path had been created such that the water that leaked back through the check valve eventually was discharged out a vent on the Auxiliary Building roof and entered a roof drain via a hose that had been installed on the vent. This roof drain has a direct connection to the north yard drain system which discharges to the Delaware River via Discharge Serial Number (DSN) 487. At approximately 1710, hours Fire Protection personnel installed a bladder in the yard drain and operators rerouted the hose connected to the vent so that the discharge was directed to the Industrial Wastewater Treatment System to prevent any further discharge. Samples obtained at approximately 1755 hours from the last manhole prior to discharge to the river indicated the presence of Hydrazine at a concentration of 7 mg/l. It is estimated that no more than approximately 5,000 gallons of water containing the Hydrazine was discharged.

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

It has been determined that the cause of the non-compliance was due to a malfunctioning check valve that allowed Hydrazine treated water to be released to the environment.

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;

The source of the discharge was discovered and eliminated. A bladder was placed in the storm drain system and the hose connected to the vent was directed to the Industrial Wastewater Treatment System to prevent any further discharge until the remaining Hydrazine could be remediated. No damage to the environment was observed.

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 discharge began at approximately 0415 hours on April 8, 2005 when Operations personnel observed the water level dropping in 22 SG. The discharge ended at approximately 1710 hours on April 8, 2005 when a bladder was placed in the storm drain system and the hose connected to the vent was directed to the Industrial Wastewater Treatment System. The presence of Hydrazine was not detected in the yard drain until approximately 1755 hours on April 8, 2005.

5. The cause of the noncompliance;

It has been determined that the cause of the non-compliance was due to a malfunctioning check valve that allowed Hydrazine treated water to be released to the environment.

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 inspection of the malfunctioning check valve, routing of the vent path to the Industrial Wastewater Treatment System, and coaching of Operations personnel on potential conditions which may occur during outages resulting in the cross connection of systems.

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

Based upon visual observation and in light of the small amount of Hydrazine actually discharged, it is estimated there was little to no threat to human health or the 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, rerouted the vent path to a permitted treatment works, provided coaching to Operations personnel, scheduled an inspection for the check valve in question and neutralized the residual Hydrazine in the yard drain system. As stated above, based upon visual observation and in light of the small amount of Hydrazine discharged, it is estimated there was little to no threat to human health or the environment.