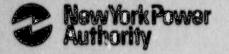
James A. FitzPatrick Nuclear Power Plant P.O. Box 41 Lycoming, New York 13093 315 342-3840



William Fernandez II Resident Manager

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October 23, 1989 JAFP-89-0759

United States Nuclear Regulatory Commission Document Control Desk Mail Station P1-137 Washington, D.C. 20555

REFERENCE: DOCKET NO. 50-333 LICENSEE EVENT REPORT: 88-008-01

Dear Sir:

Enclosed please find referenced Licensee Event Report in accordance with 10 CFR 50.73.

If there are any questions concerning this report, please contact Mr. W. Verne Childs at (315) 349-6071.

Very truly yours,

WILLIAM FERNANDEZ

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Enclosure

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cc: USNRC, Region I (1) INPO Records Center, Atlanta, GA (1) American Nuclear Insurers (1) Internal Power Authority Distribution NRC Resident Inspector Document Control Center LER/OR File

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e (During the 1988 refuel outage, one primary containment [NM] penetration exceeded the Technical Specification 4.7.A.2.b.(2) limit of 0.6 La (3,216 standard cubic feet per day) when subjected to Local Leak Rate Testing.											
TI	The leaking penetration valves were in the High Pressure Coolant Injection [BJ] turbine exhaust line. Leakage was attributed to wear.											
р	Corrective action was to replace both leaking valves. Replacement was planned prior to the outage as part of a comprehensive leakage reduction program.											
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NRC Form 368

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Description and Cause of Event

During the 1988 refueling, maintenance, and modification outage, performance of Local Leak Rate Testing (LLRT) of primary containment [NM] penetration X-214 on September 1, 1988 revealed leakage in excess of Technical Specification 4.7.A.2.d.(2) limit of 0.6 La or 3,216 standard cubic feet per day (SCFD). Penetration X-214 has a configuration of two (2) check valves in series on the High Pressure Coolant Injection (HPCI) [BJ] turbine exhaust line to the primary containment suppression pool where low pressure turbine exhaust steam is condensed. As-found leakage of the inboard isolation valve (23-HPI-12) was approximately 3,736 SCFD, and the as-found leakage of the outboard valve (23-HPI-65) was approximately 7,014 SCFD. The cause of the deficiency is attributed to wear.

Analysis of Event

Leakage through HPCI turbine exhaust valves 23-HPI-12 and -65 would not be expected to be significant during either normal or accident conditions.

During normal plant operation conditions, the pressure suppression chamber is at or very near atmospheric pressure. As a result, little or no pressure differential exists to cause flow from the suppression chamber atmosphere through the valves. In addition, any leakage past the valves would be into closed piping within the secondary containment (reactor building) [NG]. The reactor building is normally maintained at a pressure slightly below atmospheric pressure, and the ventilation exhaust is continuously monitored for radioactive materials. If significant amounts of radioactive material are present in the ventilation exhaust, the normal reactor building ventilation system is automatically isolated and the building is then maintained at a slightly negative pressure by the Standby Cas Treatment (SGT) system [BH]. Automatic isolation of the normal reactor building ventilation and automatic starting of the SGT system also occur during accident conditions. Air flow through the SGT system is filtered by activated charcoal and High Efficiency Particulate Air (HEPA) filters prior to release from the elevated plant stack [VL]. Any effect on the off-site dose would be expected to be extremely small.

During a Loss of Coolant Accident (LOCA) in which the HPCI system is operating, leakage through the valves is not possible.

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NUCLEAR POWER PLANT

During a LOCA in which HPCI is not operating, leakage of radioactive materials from the pressure suppression chamber atmosphere would be expected to be higher than during normal operation due to the presence of higher pressure in the suppression chamber atmosphere as a result of the LOCA.

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During a LOCA, radioactive materials would be "scrubbed" by passing through the suppression chamber water and (except for noble gases) most of the radioactive material would not be present in the suppression chamber atmosphere for leakage through valves 23-HPI-12 and -65. Any leakage of radioactive material from the closed HPCI turbine exhaust piping to the reactor building would also be diluted and delayed by the large volume of the reactor building. As a result of the scrubbing, dilution, delay, filtering, and elevated release, the effects on off-site dose would be very small.

Corrective Action

Plans for replacement of the valves had been made prior to the 1988 Refuel Outage plant shutdown as part of a comprehensive containment isolation valve replacement program. Both valves were replaced with new valves of a different design and were subjected to LLRT prior to plant startup. The "as-left" leakage rate for Penetration X-214 following valve replacement was 96.4555 SCFD.

Additional Information

Failed component identification:

Valves 23-HPI-12 and -65

Manufacturer - Wm. Powell Company

NPRD Code - P305

Model Number - 1561A-WE

Previous Similar Events:

LER-87-001, 85-008, 81-078, and 80-050 are previous events in which the valves for primary containment penetrations were found leaking in excess of 0.6 La.