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February 21, 1995

Re: Indian Point Unit No. 2
Docket No. 50-247
LER 95-02-00

Document Control Desk
US Nuclear Regulatory Commission
Mail Station P1-137
Washington, DC 20555

The attached Licensee Event Report LER 95-02-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,

Stephen E. Quinn

Attachment

cc: Mr. Thomas T. Martin
Regional Administrator - Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Francis J. Williams, Jr., Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
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NRC FORM 366 (6-89)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104
EXPIRES: 4/30/92
ESTIMATED BURDEN PER RESPONSE TO COMPLY WTH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Indian Point Unit No. 2	0 5 0 0 0 2 4 7	1 OF 0 4

TITLE (4)

Low Level in Spent Fuel Pit

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)
0 1	2 0	9 5	9 5	0 0 2	0 0	0 2	2 1	9 5		0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)							
POWER LEVEL (10)	3 5		20.402(b)		20.405(c)		50.73(a)(2)(iv)		73.71(b)
			20.405(a)(1)(i)		50.36(c)(1)		50.73(a)(2)(v)		73.71(c)
			20.405(a)(1)(ii)		50.36(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)
			20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		
			20.405(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)		
			20.405(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (AREA CODE)
Joseph Bahr, Principal Engineer	9 1 4 7 3 4 - 5 6 0 2

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

Following the tagout of a portion of the station air header in the Unit 2 Turbine Building on January 20, 1995, an alarm was received in the Central Control Room (CCR) indicating a low level in the spent fuel pit. Investigation revealed that the tagout activities had inadvertently isolated station air to the Fuel Storage Building due to a valve mislabeling. This isolation terminated station air to the seal between the spent fuel pit and the adjacent fuel transfer canal, thereby permitting leakage to the previously dry transfer canal, which in turn caused the drop in spent fuel pit water level. The equilibrium level reached between the pools resulted in a reduction in the level in the spent fuel pit from the normal level of 93 feet 2 inches to a value of approximately 90 feet, which still maintained 20 feet of water above the stored fuel. There was no measurable increase in radiation dose above the spent fuel pit as a result of the lowered water level. The tagout was cleared and the seal repressurized. A violation of Technical Specification 3.8.C.2. occurred when level was not restored to the specified minimum within the allowable time of 4 hours. The pool was subsequently refilled and the level required by the Technical Specification restored approximately 12 hours after the initial alarm was received. The valve mislabeling was corrected, the appropriate alarm response procedure was modified and operators were trained in this procedure modification. In addition, a supply of nitrogen was provided as backup to the station air supply to the gate seal. The health and safety of the public were not affected by this event.

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse 4-Loop Pressurized Water Reactor

IDENTIFICATION OF OCCURRENCE:

Low Level in Spent Fuel Pit

EVENT DATE:

January 20, 1995

REPORT DUE DATE:

February 21, 1995

REFERENCES:

Significant Occurrence Reports (SOR) 95-50, 95-50a

PAST SIMILAR OCCURRENCE:

None

DESCRIPTION OF OCCURRENCE:

At approximately 0130 on January 20, 1995, tagout #95-3315 was applied to isolate a section of the Station Air header in the Unit 2 Turbine Building. This tagout required closure of valves SA-10-1 and SA-9 and opening of valve SA-20-3 as a vent. Shortly after the tagout was applied, a Spent Fuel Pit (SFP) low level alarm sounded in the CCR. Operators dispatched to the Fuel Storage Building to investigate observed water leaking from the SFP to the adjacent transfer canal. At approximately 0225 it was discovered that station air had been isolated to the Fuel Storage Building, although at that point the means of isolation had not been determined. Between 0217 and 0230 hours primary water was added to the SFP in an attempt to restore level. At 0230 the filling was stopped to obtain a boron sample since non-borated water was being added. Meanwhile, an investigation on the conventional side of the plant revealed that the labels on valves SA-10 and SA-10-1 were interchanged. Therefore, the tagout described above, which was intended to isolate a portion of the station air header in the Turbine Building, inadvertently isolated the header which provides air to the Primary Auxiliary Building (PAB) and the Fuel Storage Building (FSB).

At 0410 hours the tagout was cleared and station air was restored to the FSB, thereby repressurizing the seal between the spent fuel pit and the fuel transfer canal. At 0430, the spent fuel pit level reading verified that the level had not changed since termination of primary water addition at 0230 hours.

DESCRIPTION OF OCCURRENCE: (continued)

Once chemical analysis determined the acceptability of the water in the transfer canal, level was restored via use of a portable pump to transfer this water back to the spent fuel pit. At 1355 hours on January 21, the LCO was cleared when water level reached 93 feet 2 inches.

ANALYSIS OF OCCURRENCE:

Technical Specification 3.8.C.2. requires that "spent fuel storage pit water level shall be maintained at an elevation of at least 93 feet 2 inches. In the event that level decreases below this value, all movement of fuel assemblies in the spent fuel pool storage pit and crane operations with loads over spent fuel in the spent fuel pit shall cease and water level shall be restored to within its limit in 4 hours."

The level requirement provides approximately 24 feet of water above the fuel assemblies in the spent fuel storage racks. The sealed area between the spent fuel storage pit and the fuel transfer canal extends from the top of the pool down to a level which is above the fuel storage racks. The amount of water that can leak from a full spent fuel storage pool to an empty transfer canal is limited by the much smaller volume of the transfer canal. Therefore, as demonstrated in this event, the equilibrium level reached due to complete loss of the sealing mechanism between the two areas is approximately 3 feet below the normal level. This still provides over 20 feet of water above the spent fuel racks, which provides more than enough shielding to ensure personnel safety. As a result, radiation levels in the FSB did not increase as a result of this event and the health and safety of the public were not impacted.

Prior to the mislabeling which caused this event, both valves were labeled with the same designation (SA-10). When the newer labels were installed (circa 1984) which differentiated between the two valves, a personnel error occurred at the time of their application resulting in the interchange of the two labels. There apparently have been no previous instances wherein this mislabeling has caused misoperation of equipment. These valves are normally maintained open to provide station air service in the plant. The gate seal in the FSB was the only continuous service application of this system affected. Station air was not being used temporarily via other connections in the PAB or FSB.

CAUSE OF OCCURRENCE:

The cause of the isolation of station air to the gate seal was the mislabeling of two valves on the conventional side of the station air header. Similar valve mislabeling has not resulted in any other event in the time period since the newer labels were installed.

Water level in the spent fuel pool fell below the Technical Specification minimum due to leakage caused by failure of station air pressure to the seal. Restoration of water level back to Technical Specification minimum within 4 hours was not achieved due to the need to provide a borated source of water of the proper purity. Normal paths of such make-up water were not immediately available due to the reactor startup concurrently in progress and the need to provide for reactivity control. As soon as water purity was confirmed, pool level was restored by pumping water back from the transfer canal.

CORRECTIVE ACTION:

The source of the isolation of station air to the FSB was identified and rectified. SFP water level was returned to normal. The labeling deficiency between valves SA-10 and SA-10-1 was corrected. The Alarm Response Procedure for SFP water level was modified to emphasize the need to promptly restore SFP water. Operations personnel were trained in this procedure modification. A study is underway to re-evaluate the design basis of the spent fuel pit gate seal requirements under loss of station air conditions and the capability of existing equipment to restore water level within the required 4 hours under a variety of potential level reduction scenarios. This study will be completed by August 31, 1995.

This entire event, including personnel and plant system response, will be included in future operator requalification training sessions.