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June 2, 1997

Re: Indian Point Unit No. 2
Docket No. 50-247
LER 97-11-00

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

The attached Licensee Event Report 97-11-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,

Stephen E. Quinn

Attachment

cc: Mr. Hubert J. Miller
Regional Administrator - Region I
US Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Jefferey Harold, Project Manager
Project Directorate I-1
Division of Reactor Projects I/II
US Nuclear Regulatory Commission
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US Nuclear Regulatory Commission
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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): Indian Point Unit No. 2

DOCKET NUMBER (2): 05000247

PAGE (3): 1 OF 04

TITLE (4): ESF Automatic Containment Isolation Valves

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)
05	01	97	97	011	00	06	02	97		05000
										05000

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)	000	20.402(b)	20.405(c)	X 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)	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
Philip E. Griffith, Sr. Licensing Engineer	914 734-5190

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	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)

On May 1, 1997, with the unit at zero power, while preparing for steam generator safety valve testing prior to cooldown for the 1997 refueling outage, an automatic containment isolation valve closure occurred as a result of a high alarm on the steam generator blowdown radiation monitor R-49. The blowdown was re-established upon subsequent investigation based on successful completion of steam generator tube leak identification procedure steps of Abnormal Operating Instruction, A 1.2, Steam Generator Tube Leak. This isolation occurred due to a conservatively low alarm setpoint for the steam generator blowdown radiation monitor R-49 and the release, through the blowdown pathway, of low level radioactivity from the steam generators. Although these steam generator blowdown isolation valves are automatic containment isolation valves, which are Engineered Safety Feature (ESF) components, their closure was in response to low level radioactivity and not a containment isolation signal as a result of an ESF actuation.

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse 4-Loop Pressurized Water Reactor

IDENTIFICATION OF OCCURRENCE:

Unexpected closure of steam generator blowdown isolation valves which also function as ESF automatic containment isolation valves.

EVENT DATE:

May 1, 1997

REPORT DUE DATE:

June 2, 1997

REFERENCES:

Condition Identification and Tracking System (CITRS) No. 97-E01304, Abnormal Operating Instruction A-1.2, Steam Generator Tube Leak, LER 95-20-00 and LER 97-05-00

PAST SIMILAR OCCURRENCE:

LER 95-20-00, LER 97-05-00

DESCRIPTION OF OCCURRENCE:

On May 1, 1997 at approximately 2:20 AM , with the unit at zero power while preparing for main steam safety valve testing, the steam generator blowdown radiation monitor R-49 alarmed and isolated the blowdown for all four steam generators. Following a determination as directed by Abnormal Operating Instruction A 1.2, Steam Generator Tube Leak, the steam generator blowdown was returned to service.

ANALYSIS OF OCCURRENCE :

Sample lines for the blowdown streams from each of the four steam generators merge into one line monitored by radiation monitor R-49 for an increase in activity, which potentially may be indicative of a steam generator tube leak. The monitor has two setpoints, a "Warn" and an "Alarm." The warn setpoint also actuates an alarm in the control room, and the higher alarm setpoint isolates blowdown and actuates an alarm

in the control room. Blowdown is isolated by the closure of two valves in each blowdown line. During normal plant operation, there is a continuous low-level background or steady-state indication of radioactivity in the blowdown flow, which is well within any release limits. These limits are defined in Technical Specification 3.9.A.1.a.

Prior to the unit shutdown, R-49 had been reading approximately 4×10^{-7} µCi/cc. As the unit was decreasing power on April 30, 1997, R-49 began trending up to a peak of approximately 2×10^{-6} µCi/cc after shutdown. A single spike from approximately 2×10^{-6} µCi/cc to 6×10^{-6} µCi/cc resulted in the high alarm and subsequent isolation of the steam generator blowdown.
When the steam generator blowdown isolation occurs, the sample valves are also isolated preventing further monitoring of the activity in the steam generators.

Subsequent to the blowdown isolation the operators cleared the alarm by raising the alarm setting to a higher value in accordance with Operator Aid, OA 96-01, which provides the operators with the allowable settings for the process monitors. After R-49 was reset, the measured concentration of steam generator activity returned to the same readings as before the spike to 6×10^{-6} µCi/cc. R-49 and analyses of manual grab samples of the steam generator blowdown confirmed that there was no evidence of increased primary to secondary leakage. In addition, there were no further spikes on R-49 resulting in alarm actuations after the monitor was reset.

This observed behavior is consistent with the release of particulate material from the steam generator sludge pile, typically contaminated with Co-60, due to the changing blowdown and flow conditions associated with shutdown.

The monitor performed as designed and provided the isolation of the blowdown lines for all four steam generators.

The eight blowdown isolation valves also function as containment isolation valves, and the containment isolation system is an ESF. These events are reportable under 10 CFR 50.73(a)(2)(iv) because they involve automatic actuations of ESF components. The actuation of the ESF components was not in response to an ESF signal and was not required to mitigate any adverse radiological event.

CAUSE OF OCCURRENCE :

The steam generator blowdown isolation resulted from a combination of low level activity in the blowdown stream from particulate material released due to the changes in blowdown flow, the unit shutdown and the conservatively low setting of the steam generator blowdown radiation monitor R-49 alarm setpoint. The steam generator blowdown radiation monitor R-49 alarm setpoints have been adjusted as a function of background as directed by plant procedures. During periods of high blowdown flow such as startup and shutdown the use of background increases the probability for alarms and the initiation of blowdown isolations since the above known effects are not compensated for in the setpoint calculations.

CORRECTIVE ACTIONS:

The steam generator blowdown was reestablished using plant procedures.

The applicable operating procedures will be revised to provide guidance to increase the high alarm setpoint for R-49 to compensate for the effects of increased activity from increased blowdown flow during planned transients or evolutions. These revisions have been scheduled for completion on or before June 15, 1997.