NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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

TITLE (4)

High Radioactivity in Containment Causes Operation of E.S.F.

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)
1 0	0 8	8 7	8 7	— 0 1 0	— 0 0	1 1	0 7	8 7		0 5 0 0 0
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OPERATING MODE (9): N

POWER LEVEL (10): 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)

20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
20.405(a)(1)(i)	50.36(c)(1)	X 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	
John R. Ellwanger, Senior Licensing Engineer	9 1 4	5 2 6 - 5 1 8 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)

On October 8, 1987, while the plant was at cold shutdown, the Containment noble gas radioactivity level was momentarily elevated. Consequently, the noble gas monitor (MON) inside Containment activated a containment evacuation alarm. Containment ventilation was promptly isolated. In accordance with plant design, isolation of containment ventilation initiated partial operation of the Weld Channel Penetration Pressurization System (WCPPS). The WCPPS is classified as an Engineered Safety Feature (ESF). The logic requirements of the ESF Actuation System (ESFAS) were not required nor fulfilled.

The cause of the radioactivity spike was a momentary release of pressure from the reactor vessel (VSL) during maintenance of a Conoseal connector (CON). A release of radioactivity to the Containment occurred which exceeded the setpoint of the noble gas monitor (MON).

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Plan and System Description:

Westinghouse 4-loop pressurized water reactor

Identification of Occurrence:

Elevated radioactivity level in containment initiated operation of an Engineered Safety Feature (ESF)

Event Date:

October 8, 1987

Report Due Date:

November 7, 1987

Reference:

Significant Occurrence Report (SOR) 87-479

Past Similar Event

None

Description of Occurrence:

On October 8, 1987 while the plant was in cold shutdown for a refueling outage, the noble gas radioactivity level in the Containment spiked momentarily. This elevated level of radioactivity was detected by the noble gas monitor (MON) which activated the Containment evacuation alarm. Consequently, the Containment purge supply and exhaust lines were automatically isolated. Coincident, actuation of that portion of the Weld Channel Penetration Pressurization System (WCPPS) which feeds the Containment purge isolation valves (V), was also initiated. Although the WCPPS is designated an Engineered Safety Feature (ESF), the ESF Actuation System (ESFAS) logic was not fulfilled.

Analysis of Occurrence:

This report is being made since the WCPPS, an ESF, operated as a result of the event. Although the WCPPS did function, it was not required to mitigate the radiological conditions existing in Containment at the time. The release of radioactivity was sufficient to exceed the setpoint of the noble gas monitor within Containment. The setpoint of the Containment monitor is set sufficiently low such that the normal release path (Containment vent) is isolated when the activity level in Containment is at a fraction of the level permitted by Technical Specifications for normal releases. The noble gas radioactivity level inside Containment reached 2 E-4 u Ci/cc

Cause of Occurrence:

The cause of the occurrence has been determined to be a water seal in the pipe run from the reactor vessel head vent causing a slight pressure buildup (1.5 psi) in the reactor vessel. Maintenance on the Conoseal connector on the reactor head released the pressure causing the gaseous radioactivity release.

Corrective Action:

Several evaluations of possible plant design changes are being made. These include (i) providing a connection to the head vent line to permit blowdown of the discharge vent line; (ii) bypassing of two check valves which inhibit pressure equalization of the reactor vessel in the event the head vent is isolated, and (iii) a means of monitoring pressure differences in the Reactor Coolant System.

Murray Selman
Vice President

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Indian Point Station
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Telephone (914) 737-8116

November 9, 1987

Re: Indian Point Unit No. 2
Docket No. 50-247
LER-87-10-00

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555

The attached Licensee Event Report LER-87-10-00 is hereby submitted in accordance with the requirements of 10 CFR 50.73.

Very truly yours,

Murray Selman

25.190.11.9.3
Attachment

cc: Mr. William Russell
Regional Administrator - Region I
U.S. Nuclear Regulatory Commission
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