NRC Form 366 (9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Zion Unit 2	0 5 0 0 0 3 0 4	1 OF 0 2

TITLE (4)
Inadvertent Trip of Unit 2 Purge in Cold Shutdown

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 5 0 0 0
0 9	1 1	8 5	8 5	0 1 9	0 0	1 0	1 1	8 5		0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
5		20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
0 0 0		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
Karen Petrowski	3 1 2 7 4 6 - 2 0 8 4

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	
B	J E	D I E T	N 3 0 5	No							
A				No							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
X YES (If yes, complete EXPECTED SUBMISSION DATE)	NO		1 2	0 1	8 5

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

On 09/11/85 Unit 2 was in cold shutdown and Unit 1 was at power operation. During the process of venting Unit 1 containment to the atmosphere, a high particulate alarm occurred. Per Zion Procedure AOP-5, the vent was secured and the Radiation Chemistry department was notified to sample the discharge. Due to a personnel error, a sample was obtained from Unit 2, which was then in a containment purge at cold shutdown. Pulling this sample interrupted the flow past rad monitor 2RT-PR09C, causing it to fail on low flow. At this point, an as yet undetermined interaction in the rad monitor's alarm circuitry also resulted in tripping of the purge fans and closure of the purge valves.

The exact nature of this circuit defect is still being investigated, and will be documented in a supplemental LER.

There were no safety implications, as radioactivity in excess of Technical Specification limits was not released to the environment. All personnel involved in the event have been counseled on the importance of clear communication.

IE22

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Zion Unit 2	0 5 0 0 0 3 0 4	8 5	0 1 9	0 0	0 2 OF 0 2

TEXT (If more space is required, use additional NRC Form 366A's) (17)

On 09/11/85 Unit 2 was in cold shutdown and undergoing a containment purge; Unit 1 was at power operation and undergoing venting of the containment to the environment. During the process of venting Unit 1, containment purge exhaust stack particulate monitor 1RT-PR09C alarmed. Per Zion procedure AOP-5, the vent was secured and Radiation Chemistry department was notified to pull a sample. Due to a personnel error, a sample was pulled from the incorrect unit, Unit 2. When the sample was pulled from Unit 2, containment purge inlet and outlet valves 2AOV-RV0001, 0002, 0003, 0004 closed, along with the subsequent tripping of the purge fans 2RV006-2A, 007-2B, 008-2A, 009-2B.

The root cause of this automatic action is still under investigation, but it is suspected to be a defect in the alarm circuitry on rad monitor 2RT-PR09C. Pulling the sample interrupted the flow past this monitor, causing it to fail on low flow. At this point, a spurious signal also caused the fans to trip and the valves to close. The exact nature of this interaction is still under study, and will be further documented in a supplemental report.

Station records show one previous instance (DVR 1-83-121) when a containment purge was terminated by a spurious signal on a similar monitor. The cause of that event was said to be circuit defect, but the exact nature of the defect was not known. DVR 2-85-40 also documents intermittent spiking on similar monitor 2RT-PR09A, but attempts to determine the cause of the spiking were not successful.

Immediately following the incident, a sample from 1RT-PR09C was requested and pulled. The results showed the Technical Specification limits had not been exceeded, and that the high radiation alarm on Unit 1 was not valid. The results were comparable with backround readings.

All personnel involved in the incident were counseled on the importance of clear, concise communication. The licensed operator who made the personnel error acted per approved procedure but specified the incorrect unit to sample.

Commonwealth Edison
Zion Generating Station
101 Shiloh Blvd.
Zion, Illinois 60099
Telephone 312/746-2084

October 11, 1985

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

References: 10CFR50

Dear Sir:

The enclosed Licensee Event Report from Zion Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.73 (a)(2)(iv) which requires a 30 day written report when an event or condition results in a manual or automatic actuation of any engineered safety feature.

This report is number 85-019-00, Docket No.50-304/DPR-48.

Very truly yours,

G. J. Pliml
Station Manager
Zion Generating Station

GJP/dn

Enclosure: Licensee Event Report No. 85-019-00

Attachment

cc: J. G. Keppler, NRC Region III Administrator
M. Holzmer, NRC Resident Inspector
INPO Record Center
CECo Distribution List

IE22
1/1