

LICENSEE EVENT REPORT (LER)

Facility Name (1) <div style="text-align: center;">Zion, Unit 1</div>										Docket Number (2) <div style="text-align: center;">0   5   0   0   0   2   9   5</div>				Page (3) <div style="text-align: center;">1   of   0   2</div>													
Title (4) Missed Notification to NRC of Quarterly Liquid Release in Excess of 2.5 Curies																											
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	1	8	5	8	5	0	3	5	0	0	1	0	3	1	8	5			0	5	0	0	0		
OPERATING MODE (9)				THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)																							
POWER LEVEL (10) <div style="text-align: center;">0   9   9</div>				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)				X Other (Specify											
				20.405(a)(1)(iii)				X 50.73(a)(2)(i)				50.73(a)(2)(viii)(A)				in Abstract below											
				20.405(a)(1)(iv)				50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)				and in Text)											
20.405(a)(1)(v)				50.73(a)(2)(iii)				50.73(a)(2)(x)				Special Report															
LICENSEE CONTACT FOR THIS LER (12)																											
Name Duane P. Hemmerle, Chemist ext. 557										TELEPHONE NUMBER																	
										AREA CODE																	
										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	MANUFAC-TURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS																	
E				N																							
SUPPLEMENTAL REPORT EXPECTED (14)											Expected Submission Date (15)																
Yes (If yes, complete EXPECTED SUBMISSION DATE)											X NO																
ABSTRACT (Limit to 1400 spaces, i.e, approximately fifteen single-space typewritten lines) (16)																											
<p>In May of 1984 caustic accidentally entered the Radwaste System, releasing radioactive contaminants which had plated out on the piping, and caused increased levels of radioactive contaminants in the liquid waste. The Radwaste System now contained a large volume of liquid waste (which came from a recent Unit 2 startup and other sources) with higher than normal levels of radioactivity. The liquid waste was processed to reduce the radioactivity levels to below 10CFR20 limits and discharged. This resulted in a higher number of discharges with higher than normal radioactivity levels for the third quarter of 1984. The average release rate was 3.45 Curies for the quarter. Technical Specification 3.11.8 requires that when the release rate per quarter exceeds 2.5 Curies, a special report must be Submitted to the Director, Directorate of Licensing within 30 days. This report was not submitted.</p> <p>To prevent recurrence, a log to follow and trend the gross amount of liquid waste released per quarter has been created, and is being maintained by the Chemistry Staff.</p>																											

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					Page (3)		
		Year	///	Sequential Number	///	Revision Number			
Zion, Unit 1	0   5   0   0   0   2   9   5	8   5	-	0   3   5	-	0   0	0   2	OF	0   2

TEXT

Technical Specification 3.11.8 requires a special report to the Director, Directorate of Licensing when the release rate of 2.5 Curies per quarter is exceeded. In the third quarter of 1984 3.45 curies of liquid radwaste was released and during an NRC audit of Zion Station's Radiological Effluent Report in June 1985, it was discovered that this report was not made.

During the time period of this event, Unit 1 was at full power from June 1 through July 18, and was shutdown for the remainder of the third quarter 1984. Unit 2 was shutdown from June 1 through July 10, and at full power for the remainder of the third quarter of 1984.

On May 13, 1984, while Zion electrical maintenance personnel were performing Environmental Qualification (EQ) inspections on a motor operated valve in the containment spray system (2MOVCS0005), they shorted two leads which picked up an interlock to the eductor isolation valve (2MOVCS0009) and caused it to open. This caused caustic to drain from the spray additive tank through the containment spray pump casing drain, out to the floor drains, and into the radwaste system.

As a result, between 2,000 and 3,000 gallons of 30% by weight sodium hydroxide accidentally entered into the radwaste processing system. The sodium hydroxide raised the pH of the liquid waste, which effectively performed a chemical cleaning on various piping in the radwaste system. This cleaning process released much of the radioactive contaminants which had previously plated out on the piping, and elevated the radioactivity levels of the liquid waste. The Radwaste System now contained a large volume of liquid waste (which came from a recent Unit 2 startup and other sources) with higher than normal levels of radioactivity. Had this situation occurred under different plant operating conditions, the results would have been much the same.

During the months of May through August, the liquid waste was processed by recirculating the waste through demineralizers until the levels of radioactivity were within 10CFR20 limits, but were still higher than the normal levels. The waste was then discharged within all specifications. The large volume and the radioactivity levels of the liquid waste discharge, resulted in an average of 3.45 Curies (gross radioactivity) released for the third quarter of 1984.

The Zion Chemistry Staff maintains the records of all radioactive releases and performs the quantification of activity released. This task is one which is not associated with a formal procedure.

This event resulted from the Zion Chemistry Staff not being cognizant of the 2.5 Curies per quarter release rate reporting requirements.

All releases of liquid waste were within 10CFR20 specifications, and the total amount of radioactivity released was within the Technical Specification limit. The health and safety of the public were not affected.

Upon identification of the third quarter 1984 release rate, the Chemistry Staff reviewed the liquid waste release rates for the previous quarters and to the present quarter. No previous occurrences were observed.

To prevent recurrence, a log to follow and trend the gross amount of liquid waste released per quarter has been created, and is being maintained by the Chemistry Staff. Additionally the Chemistry Staff will conduct a review of Technical Specifications pertaining to plant chemistry. The results of this review may require formal plant procedures where applicable to prevent similar incidents. This review is being tracked by Station Commitment 295-200-85-182 and completion of the review is expected by March 30, 1986. The required report is being prepared and will be submitted to the Director, Directorate of Licensing by Nov 8, 1985.



Commonwealth Edison

101 Shiloh Blvd.  
Zion, Illinois 60099

October 31, 1985

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

Reference: 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)(i) which requires a 30 day written report when there has been an operation or condition prohibited by the plant's Technical Specifications.

This report is number 85-035-00, Docket No. 50-295/DPR-39.

Very truly yours,

G. J. Pliml  
Station Manager  
Zion Generating Station

Enclosure: Licensee Event Report No. 85-035-00

Attachment

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

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