

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) Auto Start Of Penetration Pressurization Air Compressors																			
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	2	1	9	8	5	8	5	0	4	0	0	0	0	1	1	7	8	6	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 8 3</div>			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			
			20.405(a)(1)(iii)			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)										
LICENSEE CONTACT FOR THIS LER (12)																			
Name <div style="text-align: center;">John Hutsebaut, Tech. Staff Engineer Ext. 328</div>										TELEPHONE NUMBER AREA CODE <div style="text-align: center;">3 1 2 7 4 6 - 2 0 8 4</div>									
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										
A	B	D		N															
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)																			

Penetration Pressurization Air Compressors #1 and #0 auto started due to low supply pressure from the Instrument Air (IA) System. The cause of the low pressure condition was 2A IA Air Dryer malfunction resulting in Instrument Air being directly vented to atmosphere. This occurred while the Electrical Maintenance Department was troubleshooting problems with the air dryer.

This is a reportable occurrence since the start of the PP compressors represents an automatic actuation of an engineered safety feature.

There were no safety consequences or implications because the Penetration Pressurization System had sufficient system pressure at all times. The system is designed so that the Instrument Air System supplies air at 100 psi to large receiving tanks, which in turn supply air through pressure regulators to the weld channels and selected containment isolation valves at a minimum pressure of 47 psi. The PP air compressors performed as designed in backing up the Instrument Air Compressors, so that PP pressure was maintained.

Corrective Actions

Service Air was cross connected with Instrument Air to restore system pressure and 2A IA air dryer was isolated. The PP compressors were secured and returned to auto. The consequences of a loss of IA pressure were stressed to the Electrical Maintenance Department.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)					Page (3)		
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TEXT									

On December 19, 1985 at 1300 hours Zion Unit 1 was operating at 100% power. The IA Instrument Air Compressor (IA, EIIIS code LD) was out of service for maintenance. This left two of Zion's three IA compressors still operating.

At 1302 hours, the Penetration Pressurization (PP, EIIIS code BD) Air Compressors #1 and #0 auto-started. The PP system supplies air at a minimum pressure of 47 psig (design basis post LOCA containment pressure) to the piping between selected series containment isolation valves and to containment liner weld channels to prevent leakage from containment to atmosphere in the event of an accident. The air compressors which auto started are one of the backups to the station Instrument Air System, which is the normal supply to the PP system. The PP compressors represent a seismic class I supply exclusively for the PP system.

At 1300 hours an IA Low Pressure Alarm (setpoint 90 psig) was received in the control room. An operator was dispatched to cross connect IA with the Service Air (SA, EIIIS code LF) system. Before this could be accomplished pressure had dropped to the point where the PP compressors #0 and #1 auto started. (Compressor #1 auto starts at 80 psig and compressor #0 auto starts at 75 psig.) PP compressor #2 was out of service for the Unit 2 refueling outage.

Cause of Event

The immediate cause of the event was the decrease in IA system pressure. This was caused by work being performed by the Electrical Maintenance Department on 2A IA Air Dryer. During the course of troubleshooting problem with the air dryer, a sequencing solenoid valve opened out of sequence providing a direct path from the IA system to atmosphere.

Analysis Of Event

This event is being reported under 10CFR50.73(a)(2)(iv) because the autostart of the PP air compressors is an actuation of an Engineered Safety Feature (ESF).

There were no safety consequences or implications because the Penetration Pressurization System had sufficient system pressure at all times. The system is designed so that the Instrument Air System supplies air at 100 psi to large receiving tanks, which in turn supply air through pressure regulators to the weld channels and selected containment isolation valves at a minimum pressure of 47 psi. The PP air compressors performed as designed in backing up the Instrument Air Compressors, so that PP pressure was maintained.

Corrective Actions

Service Air was cross connected with Instrument Air to restore system pressure and 2A IA air dryer was isolated. The PP compressors were secured and returned to auto. The consequences of a loss of IA pressure were stressed to the Electrical Maintenance Department.

Additional Information

Previous occurrences of this type of event were reported in LERs 295/85-042, 295/85-043 and 295/85-045.



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

January 17, 1986

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 manual or automatic actuation of any Engineered Safety Features (ESF).

This report is number 85-040-00, Docket number 50-295/DPR-39.

Very truly yours,

G. J. Pliml

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G. J. Pliml
Station Manager
Zion Generating Station

GJP/dn

Enclosure: Licensee Event Report No. 85-040-00

Attachment

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

TE22
1/1