

LICENSEE EVENT REPORT (LER)																		
Facility Name (1) Zion, Unit 1												Docket Number (2) 0 5 0 0 0 2 9 5				Page (3) 1 of 0 3		
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 1	2 2	8 5	8 5	---	0 4 5	---	0 0	1 2	2 0	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) 0 8 2			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)					
			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 John Hutsebaut, Tech. Staff Engineer Ext. 328												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							
X	L D	C M P	W 2 9 9	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)																		

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 a trip of #2A IA compressor due to high intercooler condensate level. #2B IA compressor was out of service for maintenance. This left only #1A IA compressor on the line which was insufficient to handle the system load.

The intercooler condensate was Lled off and the condensate trap bypass valve was adjusted to provide increased flow and prevent a recurrence of this trip.

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

The Instrument Air Compressor Maintenance Program is being studied in an effort to minimize compressor trips.

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TEXT												

On November 22, 1985 at 0350 hours, Zion Unit 1 was operating at 82% power and Unit 2 was in cold shutdown for refueling. The 2B Instrument Air Compressor (IA, EIIS code LD) was out of service for maintenance. This left two of Zion's three IA compressors still operating.

At 0350 hours, the Penetration Pressurization (PP, EIIS code BD) Air Compressors #1 and #0 autostarted. The PP system supplies air at a minimum pressure of 47 pounds per square inch (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 (IA) which is the normal supply to the PP system. The PP compressors represent a seismic class I supply exclusively for the PP system. At 0345 hours IA compressor #2A tripped off due to high condensate level. This left only one compressor still operating which was not sufficient to maintain design system pressure of 100 psig. By 0350, IA supply pressure to the PP system had decayed to 80 psig, at which point the #1 PP air compressor auto started, as designed. Moments later pressure reached 70 psig causing the #0 PP compressor to also auto start.

The Instrument Air compressor trip caused a breaker mismatch alarm in the control room. To restore IA system pressure, the IA system was cross connected with the Service Air (SA, EIIS code LF) system. This requires opening one manual valve. By approximately 0400, Instrument Air pressure had been restored. The PP compressors were then secured and returned to automatic mode.

Cause Of Event

The immediate cause of the event was the trip of the Instrument Air Compressor which caused the pressure drop resulting in the PP compressors auto start. 2A IA compressor tripped on high intercooler condensate level.

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.

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Corrective Actions

To prevent future occurrences of this type the IA compressor maintenance program is being studied in an effort to minimize IA compressor trips. This program will be tracked by station commitment 295-200-85-222. In addition, 2A IA compressor condensate trap bypass valve was adjusted to prevent condensate backup and 2A IA compressor is scheduled to be overhauled when 2B IA compressor is returned to service.

Additional Information

Previous occurrences of this type were reported in LER 295/85-030, LER 295/85-042, and LER 295/85-043.

The Instrument Air Compressor which caused this event is a Worthington Compressor Company 2 stage piston type compressor, type YCBH2. No further action is required.



Commonwealth Edison

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

December 20, 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 manual or automatic actuation of Engineered Safety Features (ESF).

This report is number 85-045-00, Docket number 50-295/DPR-39.

Very truly yours,

J. A. Pliml

for

G. J. Pliml
Station Manager
Zion Generating Station

GJP/dn

Enclosure: Licensee Event Report No. 85-045-00

Attachment

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

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