



**Commonwealth Edison**

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

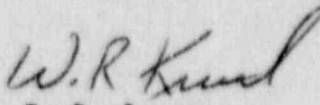
October 23, 1989

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

Dear Sir:

The enclosed Licensee Event Report number 89-015-00, Docket No. 50-295/DPR-39 from Zion Generating Station is being transmitted to you as a Special Report.

Very truly yours,

*for*   
T. P. Joyce  
Station Manager  
Zion Generating Station

TPJ/rmd

Enclosure: Licensee Event Report

cc: NRC Region III Administrator  
NRC Resident Inspector  
INPO Record Center  
CECo Distribution List

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Zion Unit 1	Docket Number (2) 0   5   10   0   10   2   9   5	Page (3) 1   of   0   3
Title (4) Loss of Containment Closure During Refueling Operations Due to Inadequate Procedures		

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	9	2	1	0	1	5	0	0	1	0	2	3	8	9	N/A	

OPERATING MODE (9) 6

POWER LEVEL (10) 0 | 0 | 0

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input checked="" type="checkbox"/> Other (Specify
<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	in Abstract
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	below and in
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	Text)
			Special Report

LICENSEE CONTACT FOR THIS LER (12)

Name Paul Geddes, LER Coordinator	ext. 201	TELEPHONE NUMBER AREA CODE 3   1   2   7   4   6   -   2   0   8   4
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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
				N					

SUPPLEMENTAL REPORT EXPECTED (14)

Yes (If yes, complete EXPECTED SUBMISSION DATE)  NO

Expected Submission Date (15) \_\_\_\_\_

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

This special report is being submitted because this event violates an interpretation of Technical Specifications outlined in an On-Site-Review, dated February 3, 1978, which committed to meeting the intent of Standardized Technical Specifications regarding Containment Integrity during Core Alterations.

Unit 1 was in Mode 6 for refueling and the core was being offloaded. Auxiliary feedwater check valves were disassembled for maintenance. At approximately 2030 on September 20, 1989 Steam Generator draining was commenced by opening the blowdown and atmospheric relief valves. At approximately 1330 on September 21, 1989 it was realized that the open check valves through the atmospherics constituted a direct containment vent path to atmosphere. The shift was called and instructed to shut the atmospherics.

The cause of the event was a combination of procedure deficiency and improper planning that allowed the concurrent activities.

The safety significance of this event was minimal due to the fact that no radioactive release occurred during the time the vent path existed, and no driving force existed to cause exfiltration of the activity had there been a release.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

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   9	-   0   1   5	-	0   0	0   2	OF 0   3

TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]

A. CONDITION PRIOR TO EVENT

MODE 6 - Refueling RX Power 0 RCS [AB] Temperature/ Pressure -- °F/ -- psig

B. DESCRIPTION OF EVENT

Unit 1 was in Mode 6 for refueling. The vessel head was removed, the refueling cavity was flooded, and the reactor core was being completely offloaded. The core offload had started several days prior to the event and was in progress essentially continuously. On September 19-20, 1989, Auxiliary Feed Water (AFW) [BA] check valves 1FW-0D66, 67, 68, 69 were disassembled for inspection and repair due to back leakage problems. The openings were covered with plastic and sealed with duct tape. At approximately 2030 on September 20, 1989, steam generator (S/G) [SB] draining was commenced by opening S/G blowdown valves. The S/G atmospherics were also opened to prevent drawing a vacuum in the S/G. The AFW check valves being disassembled and S/G atmospherics being open constituted a potential vent path from containment to outside atmosphere. The potential vent path is contrary to an On-Site Review dated 2/3/78 which committed to maintaining Containment Integrity as defined in Standardized Technical Specifications during fuel movements. At approximately 1330 on 9/21/89 it was realized that the potential vent path existed and that fuel was being moved. The Operating Department was immediately notified and the atmospherics were taken out of service closed.

C. APPARENT CAUSE OF EVENT

The cause of the event was a combination of procedural deficiency and improper planning which allowed concurrent S/G draining, AFW checks valve disassembly, and fuel movement. The subject of containment closure is addressed by procedure, but only as a general reference.

D. SAFETY ANALYSIS OF EVENT

No incidents involving fuel movements that resulted in a radioactive release occurred during the time the vent path existed. The check valves were covered with plastic and taped. While not providing a perfect seal, it would have slowed the rate of release. Also, in at least two of the check valve cases, the elevation of the check valves and piping runs are such that a loop seal probably existed between the check valve and the S/G, which also would have served to reduce the release rate. Additionally, most of the time the vent path existed S/Gs were draining, which would have resulted in net airflow into the S/Gs.

Finally, it should be noted that Zion Station does not recognize the need for containment closure beyond ventilation considerations during core alterations as a Tech Spec requirement. In a letter dated 2/7/89 from G. Pliml to J. S. Bitel, Zion Station's position is outlined. Essentially, because a fuel handling accident is a non-steam producing accident, there is no driving force to cause exfiltration of any radioactive release inside containment. Thus only the containment purge and auxiliary building ventilation system warrant evaluation as potential release points. This position is consistent with the NRC's SER of the 1979 Tech Spec change which removed the restrictions on the equipment hatch/personnel doors during fuel moves and incorporated a Fuel Handling Accident Inside Containment for the updated FSAR.

Based on the above considerations, the safety significance of this event is minimal, and the health and safety of the public was not jeopardized.

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E. CORRECTIVE ACTIONS

The immediate corrective action was to close the S/G atmospheric valves and take them out of service. Additionally, Operations and Planning Departments reviewed work in progress to ensure no additional vent paths exist. An evaluation will be made of methods used by other plants with standardized Technical Specifications to ensure no direct pathway from containment to outside atmosphere for implementation prior to the next refueling outage (Commitment #295-200-89-127).

F. PREVIOUS EVENTS

None

G. COMPONENT FAILURE DATA

None