

JAFP-19-0015  
February 1, 2019

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555-0001

James A. FitzPatrick Nuclear Power Plant  
Renewed Facility Operating License No. DPR-059  
NRC Docket No. 50-333

Subject: LER: 2018-001, Secondary Containment Differential Pressure Exceeded  
the Technical Specification Surveillance Requirement

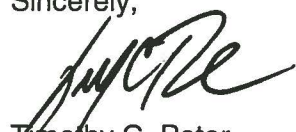
Dear Sir or Madam:

This report is being submitted pursuant to 10 CFR 50.73(a)(2)(v)(D) as an "Event or Condition that Could Have Prevented Fulfillment of a Safety Function."

There are no new regulatory commitments contained in this report.

Questions concerning this report may be addressed to Mr. William Drews, Regulatory Assurance Manager, at (315) 349-6562.

Sincerely,



Timothy C. Peter  
Plant Manager

TCP/WD/hm

Enclosure: LER: 2018-001, Secondary Containment Differential Pressure Exceeded  
the Technical Specification Surveillance Requirement

cc: USNRC, Region I Administrator  
USNRC, Project Manager  
USNRC, Resident Inspector  
INPO Records Center (ICES)



# **LICENSEE EVENT REPORT (LER)**

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form  
http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollections.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

**1. Facility Name**

James A. FitzPatrick Nuclear Power Plant

**2. Docket Number**

05000333

**3. Page**

1 OF 4

**4. Title**

Secondary Containment Differential Pressure Exceeded the Technical Specification Surveillance Requirement

**5. Event Date**

Month	Day	Year
12	05	2018

**6. LER Number**

Year	Sequential Number	Rev No.
2018	001	00

**7. Report Date**

Month	Day	Year
02	04	2019

**8. Other Facilities Involved**

Facility Name	Docket Number
N/A	N/A

**9. Operating Mode**

1

**11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)**

<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
<b>10. Power Level</b>	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)
<b>100</b>	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A

**12. Licensee Contact for this LER****Licensee Contact**

Mr. William Drews, Regulatory Assurance Manager

**Telephone Number (Include Area Code)**

315-349-6562

**13. Complete One Line for each Component Failure Described in this Report**

Cause	System	Component	Manufacturer	Reportable to ICES	Cause	System	Component	Manufacturer	Reportable to ICES
B	LD	CMP	I075	Y					

**14. Supplemental Report Expected**☐ Yes (If yes, complete 15. Expected Submission date) ☒ No**15. Expected Submission Date**

Month	Day	Year

**Abstract** (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

At 1010 on December 5, 2018, Secondary Containment differential pressure exceeded the Technical Specification Surveillance Requirement of greater than or equal to 0.25 inches of vacuum water column. The highest Secondary Containment differential pressure was measured at a positive value of 0.06 inches water column. This condition existed for approximately 3 minutes before the differential pressure was restored to normal when the Standby Gas Treatment system was manually initiated.

This event was caused by a trip of the service air compressor 39AC-2A. The loss of instrument air pressure caused Reactor Building ventilation to isolate and raise Secondary Containment differential pressure. The instrument air pressure was restored when 39AC-2A was isolated and the two backup air compressors started.

This condition did not impact the ability of the Standby Gas Treatment system to establish and maintain the required negative pressure in the containment structure. When Secondary Containment did not meet the Technical Specification Surveillance Requirement 3.6.4.1.1 for differential pressure, the Limiting Condition of Operation (LCO) was not met. Therefore, Secondary Containment was inoperable. This event was being reported under 10 CFR 50.72(b)(3)(v)(C).

**LICENSEE EVENT REPORT (LER)  
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form  
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1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
James A. FitzPatrick Nuclear Power Plant	05000 – 333	2018	– 001	– 00

**NARRATIVE****Background**

The Secondary Containment [EIS identifier: NG] is a structure comprised of the Reactor Building that surrounds the primary containment and refuel equipment. Its safety function is designed to provide containment for postulated accident scenarios: loss-of-coolant accident and refueling accident. This structure forms a control volume that serves to hold up and dilute fission products in the event of an accident. Since pressure may increase in Secondary Containment relative to the environmental pressure, the system was designed to include a differential pressure vacuum such that external atmosphere would leak into containment rather than fission products leak out.

The systems which maintain a differential pressure vacuum inside Secondary Containment are the normal Reactor Building Ventilation (RBV) system [VA] and the safety-related Standby Gas Treatment (SBGT) system [BH]. During a postulated accident scenario, the normal RBV isolates and the SBGT initiates in order to filter gas from Secondary Containment to the environment. SBGT has the capacity to maintain the differential pressure vacuum.

**Event Description**

At 1010 on December 5, 2018, Secondary Containment differential pressure exceeded the Technical Specification Surveillance Requirement of greater than or equal to 0.25 inches of vacuum water gauge. The highest Secondary Containment differential pressure was measured at a positive value of 0.06 inches water column. This condition existed for approximately 3 minutes before the differential pressure was restored to normal when the Standby Gas Treatment system was manually initiated.

This event was caused by a trip of the service air compressor 39AC-2A. The loss of instrument air pressure caused Reactor Building ventilation to isolate and raise Secondary Containment differential pressure. The instrument air pressure was restored when 39AC-2A was isolated and the two backup air compressors started.

**Event Analysis**

Loss of instrument air pressure to the Reactor Building Ventilation system's air operated dampers caused the dampers to move to the closed position. Once air pressure is removed, spring pressure will force the air operator in the closed direction and thus close the damper. The result is the system not maintaining a negative pressure in the Reactor Building as compared to the outside environment.

**Cause**

The cause of this event was a loss of instrument air pressure when the 39AC-2A Service Air Compressor tripping off-line due to high inter-stage pressure and failure of the discharge check valve to close, allowing system pressure to be lost.

**External Events**

Hatch, Unit 1, Condition Prohibited by Tech Specs due to Secondary Containment Inoperability, caused by in-leakage through degraded secondary containment door seals. (ML18080A054)

Fermi, Unit 2, Secondary Containment Pressure Exceeded Technical Specification due to Reactor Building HVAC System Manipulation – This event was caused by a degraded bolt and pivot linkage on a modulating damper. (ML18054A752)

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**Corrective Actions****Future Corrective Actions**

- Engineering Evaluation of installation of an external check valve on discharge of service air compressors (in addition to the compressor internal check valve).
- Procure a spare station air compressor to be stored on site

**Completed Corrective Actions**

- Service Air compressor 39AC-2A was replaced; including internal check valve (JAF Work Order #04662559)

**Safety Significance**

**Nuclear safety** - This event did not have any actual or potential impact on nuclear safety.

**Radiological safety** - There was no radiological consequence during this event.

The potential for a radiological consequence is only applicable during the time that Secondary Containment was below 0.25 inches water vacuum differential pressure. When this condition had occurred at JAF it was momentary excursions.

Secondary Containment maintains a differential pressure vacuum by two of four RBV exhaust fans or one of two SBTG trains. During a postulated accident scenario RBV is placed in isolation and the SBTG is used to maintain differential pressure. The condition does not adversely impact that ability of RBV to isolate or SBTG to initiate. Therefore, the capability of Secondary Containment to mitigate the consequence of an accident is unaffected by this deficiency.

**Industrial safety** - This event did not have any actual or potential impact on industrial safety.

**References**

- JAF Issue Report – IR 04200410 – Equipment Corrective Action Evaluation