



James A. FitzPatrick NPP  
P.O. Box 110  
Lycoming, NY 13093

**Timothy C. Peter**  
Site Vice President– JAF

JAFP-23-0032  
June 23, 2023

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: 2023-003, Procedure Error in Emergency Diesel Generator Fuel Oil Supply "B" Subsystem

Dear Sir or Madam:

This report is being submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) and 10 CFR 50.73(a)(2)(v)(A).

There are no new regulatory commitments contained in this report.

Questions concerning this report may be addressed to Mr. Mark Hawes, Regulatory Assurance, at (315) 349-6659.

Sincerely,

A handwritten signature in black ink, appearing to read "Timothy C. Peter".

Timothy C. Peter  
Site Vice President

TCP/MH

Enclosure: LER: 2023-003, Emergency Diesel Generator Fuel Oil Supply Procedure Error "B" Subsystem

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



# LICENSEE EVENT REPORT (LER)

(See Page 3 for required number of digits/characters for each block)

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**1. Facility Name**

James A. FitzPatrick Nuclear Power Plant

050  
 052

**2. Docket Number**

05000333

**3. Page**

1 OF 4

**4. Title**

Emergency Diesel Generator Fuel Oil Supply Procedure Error "B" Subsystem

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Revision No.	Month	Day	Year	Facility Name	Docket Number
04	24	2023	2023	003	00	06	23	2023	N/A	N/A
									N/A	N/A

**9. Operating Mode**

1

**10. Power Level**

100

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

10 CFR Part 20	20.2203(a)(2)(vi)	10 CFR Part 50	50.73(a)(2)(ii)(A)	50.73(a)(2)(viii)(A)	73.1200(a)
<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/>	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> 73.1200(b)
<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)	<input type="checkbox"/> 73.1200(c)
<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)	<input type="checkbox"/> 73.1200(d)
<input type="checkbox"/> 20.2203(a)(2)(i)	<b>10 CFR Part 21</b>	<input type="checkbox"/> 50.46(a)(3)(ii)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(A)	<b>10 CFR Part 73</b>	<input type="checkbox"/> 73.1200(e)
<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 21.2(c)	<input type="checkbox"/> 50.69(g)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.77(a)(1)	<input type="checkbox"/> 73.1200(f)
<input type="checkbox"/> 20.2203(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(2)(i)	<input type="checkbox"/> 73.1200(g)
<input type="checkbox"/> 20.2203(a)(2)(iv)		<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(ii)	<input type="checkbox"/> 73.1200(h)
<input type="checkbox"/> 20.2203(a)(2)(v)		<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)		

OTHER (Specify in Abstract below or in NRC Form 366A).

**12. Licensee Contact for this LER**

**Licensee Contact**

Mr. Mark Hawes, Regulatory Assurance

**Telephone Number (Include Area Code)**

315-349-6659

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

Cause	System	Component	Manufacturer	Reportable to IRIS	Cause	System	Component	Manufacturer	Reportable to IRIS

**14. Supplemental Report Expected**

No  Yes (If yes, complete 15. Expected Submission date)

**15. Expected Submission Date**

Month Day Year

**Abstract** (Limit to 1560 spaces, i.e., approximately 15 single-spaced typewritten lines)

On April 24, 2023, with the James A. FitzPatrick Nuclear Power Plant (JAF) at 100 percent power, Operators identified that the "B" Emergency Diesel Generator (EDG) subsystem fuel oil supply table in surveillance test (ST) ST-9AB contained incorrect information. This ST is performed to satisfy Surveillance Requirement (SR) 3.8.3.1. Due to the incorporate information contained in the ST, some previous SR performances for EDG fuel oil tanks 93TK-6B and 93TK-6D resulted in fuel quantities that should have led to surveillance testing not meeting acceptance criteria. Therefore, circumstances for an operation prohibited by Technical Specifications occurred, reportable in accordance with 10 CFR 50.73(a)(2)(i)(B); and when reviewed with overlapping maintenance periods on the "A" EDG subsystem a condition that could have potentially prevented the fulfillment of a safety function, reportable per 10 CFR 50.73(a)(2)(v)(A), occurred. The cause of the event was an administrative error during the procedure revision to a new format. Once recognized, prompt action was taken to restore fuel oil quantities to meet surveillance test acceptance criteria. Corrective actions have been completed to perform a revision to the ST, completed an extent of condition on operations STs, and performance an engineering evaluation to determine the impact to safety function.



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

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1. FACILITY NAME  James A. FitzPatrick Nuclear Power Plant	<input checked="" type="checkbox"/> 050	2. DOCKET NUMBER  05000333	3. LER NUMBER		
	<input type="checkbox"/> 052		YEAR  2023	SEQUENTIAL NUMBER  - 003	REV NO.  - 00

**NARRATIVE**

**Background**

The Emergency Onsite Power Supply System [EISS identifier: EK] consists of two redundant Emergency Diesel Generator (EDG) [DG] subsystems. Each EDG subsystem consists of two EDG units. Each EDG is provided with an independent Fuel Oil Storage and Transfer System [DE] consisting of a Diesel Fuel Oil Storage Tank (FOST), a Diesel Fuel Oil Day Tank (FODT) and two full-capacity motor-driven Fuel Oil Transfer Pumps. The Fuel Oil Transfer Pumps provide the capability to transfer fuel from the FOST to the FODT.

Stored diesel fuel oil is required to have sufficient supply for 7 days of full load operation. This requirement, in conjunction with an ability to obtain replacement supplies within 7 days, supports the availability of EDGs required to shut down the reactor and to maintain it in a safe condition for an abnormal operational transient or a postulated Design Bases Accident with loss of power. Technical Specification (TS) Surveillance Requirement (SR) 3.8.3.1 verifies the capacity of the FOST. The acceptable quantity is calculated for each FOST and accommodates different fuel properties for American Petroleum Institute (API) gravity and tank geometry. SR 3.8.3.1 is performed monthly by procedure ST-9AB, EDG System B Fuel/Lube Oil Monthly Test, for the "B" EDG subsystem for FOST tanks 93TK-6B and 93TK-6D.

**Event Description**

On April 24, 2023, James A. FitzPatrick Nuclear Power Plant (JAF) was at 100% power, when a satisfactory performance of ST-9AB was reviewed by a Senior Reactor Operator (SRO) and the measured level was verified against the field support supervisor's fuel ordering calculation spreadsheet, which recommended ordering fuel. The prompt investigation revealed the incorrect 6-day fuel oil supply table in place of the 7-day fuel oil supply table in ST-9AB. This procedure error affected the acceptable quantity of fuel oil in the "B" EDG subsystem, specifically, 93TK-6B and 93TK-6D FOST only. It was confirmed that procedure ST-9AA for the "A" EDG subsystem, 93TK-6A and 93TK-6C FOST, was not affected by this error and those fuel oil quantities met the required 7-day supply.

Upon discovery, SR 3.8.3.1 was declared not met based on the required quantity of fuel oil being less than 7 days but greater than 6 days; the Limited Condition for Operation (LCO) 3.8.3 was declared not met on April 24 at 1406, a fuel delivery restored the required quantity, and the LCO was restored on April 25 at 0913.

**Event Analysis**

ST-9AB was converted to a electronic procedure with revision 9 on November 18, 2021. TS Bases 3.8.3 specifies a 6-day and a 7-day EDG Fuel Oil Supply table; however, these two tables were swapped.

Between November 2021 and April 2023, this procedure error was effective. A review of records identified that the 7-day fuel oil supply requirement of SR 3.8.3.1 was not met for the "B" EDG subsystem between June 20, 2022 to September 12, 2022; November 7, 2022 to December 1, 2022; and March 27, 2023 to April 25, 2023. However, there was always a greater than 6-day supply.

When SR 3.8.3.1 was not met, LCO 3.8.3 was not met. Action "A" states, when one or more EDGs with fuel oil level < a 7-day supply and > a 6-day supply in storage tank, then restore it within 48 hours. If this was not



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completed, then Condition F states to declare the associated EDG inoperable. In accordance with TS 3.8.1 Condition B, an inoperable EDG subsystem needs to be restored within 14 days or in accordance with Condition F, be in Mode 3 within 12 hours. Therefore, the "B" EDG subsystem was inoperable for longer than allowed by TS, which is reportable as an operation prohibited by TS in accordance with 10 CFR 50.73(a)(2)(i)(B).

A review of the 93TK-6A and 93TK-6C FOST levels was performed for all performances of ST-9AA over the period of time in which the procedure error existed on ST-9AB. One instance of fuel oil not being within limits on the "A" EDG subsystem was identified between 4/13/2022 0822 and 4/14/2022 1425, following the 8-hour endurance run of the "A" EDG subsystem. During this interval, "B" EDG subsystem fuel oil was at a satisfactory level.

In addition, during the periods when "B" subsystem fuel tanks fuel level did not meet SR 3.8.3.1 coincided with "A" EDG subsystem maintenance or testing, then both "A" and "B" EDG subsystems were inoperable. These circumstances are reportable in accordance with 10 CFR 50.73(a)(2)(v)(A) as a condition which could have prevented the fulfillment of the EDG safety function. However, it should be noted the lowest inventory recorded during the effected period corresponds with approximately 6 days, 18 hours of operations. At the most limiting bus accident load, there was no challenge to the design function of the "B" EDG subsystem for the required mission time. Additionally, 93TK-6A and 93TK-6C EDG FOSTs were operable for all low fuel oil inventory periods and procedures were in place for transferring fuel between the divisions for an extended loss of AC power (ELAP).

**Cause**

An error during the conversion of procedure ST-9AB to a new format led to the incorrect table with a lower fuel oil quantity to be included which caused invalid surveillance test performances.

**Similar Events**

No previous similar events.

**Corrective Actions**

**Completed Actions**

Fuel oil was restored to a greater than 7-day minimum level.

ST-9AB revised to correct the minimum fuel oil level tables.

Engineering evaluation for safety function impact.

An extent of condition review of digital procedure conversions validated all Level 1 and Level 2 Acceptance Criteria were accurately transferred.

**Planned Actions**

Update AP-02.01, Procedure Writing Manual, to include a quality checklist.



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**Safety Significance**

Nuclear safety – **There were no actual nuclear consequences.** This procedure deficiency did not impact the ability of the EDGs to start automatically and pickup loads as designed. It is also concluded that there was sufficient fuel oil onsite in all four fuel oil storage tanks and that it could be transferred as needed to run all four EDGS for the required 7-day mission time. The calculation for a 7-day fuel supply assumes full load operation amongst other high standards for performance. This requirement, in conjunction with an ability to obtain replacement supplies within 7 days, supports the availability of EDGs required to shut down the reactor and to maintain it in a safe condition for an abnormal operational transient or a postulated Design Bases Accident with loss of power. The potential effect on nuclear safety is confined to certain periods between November 2021 and April 2023, only for the “B” subsystem and only for postulated run times greater than 6 days. During this period the Offsite Power supply remained Operable.

**References**

- Issue Report - IR 04672634, EDG “B” Subsystem Fuel Oil Not Within 7 Day Supply, dated April 24, 2023
- Issue Report - IR 04672886, ST-9AB Tables Inaccurate, dated April 25, 2023