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June 7, 2023

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

RE. Ginna Nuclear Power Plant
Renewed Facility Operating License No. DPR-18
NRC Docket No. 50-244

Subject: LER 2023-001, Vital Bus 17 failed to load onto Emergency Diesel Generator B during Load / Safeguard Sequence Testing; corroded breaker shunt trip attachment plunger found which indicated an earlier violation of Technical Specifications 3.8.1.

The attached Licensee Event Report (LER) 2023-001 is submitted in accordance with 10 CFR 50.73 under the provisions of NUREG-1022, Revision 3, Event Reporting Guidelines 10 CFR 50.72 and 50.73. There are no new commitments contained in this submittal. This submittal is for Revision 0 of the LER.

Should you have any questions regarding this submittal, please contact Justin Knowles at (315) 791-3393.

Sincerely,

James D. Blankenship

Attachment: LER 2023-001, Revision 0

cc: NRC Regional Administrator, Region 1
NRC Project Manager, Ginna
NRC Resident Inspector, Ginna (e-mail)

Attachment

LER 2023-001, Revision 0

NRC FORM 366 (03-14-2023) | U.S. NUCLEAR REGULATORY COMMISSION | APPROVED BY OMB: NO. 3150-0104 | EXPIRES: 08/31/2023

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/)

1. Facility Name		2. Docket Number	3. Page
R.E. Ginna Nuclear Power Plant, Unit 1	■ 050 ☐ 052	00244	1 OF 4

4. Title

Vital Bus 17 failed to load onto Emergency Diesel Generator B during Load / Safeguard Sequence Testing; corroded breaker shunt trip attachment plunger found which indicated an earlier violation of Technical Specifications 3.8.1.

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	☐ 050	Docket Number
04	11	2023	2023	- 001 -	00	06	07	2023	Facility Name	☐ 052	Docket Number

9. Operating Mode	10. Power Level
5	000

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)
☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)	☐ 73.1200(b)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)	☐ 73.1200(c)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)	☐ 73.1200(d)
☐ 20.2203(a)(2)(i)	**10 CFR Part 21**	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(A)	**10 CFR Part 73**	☐ 73.1200(e)
☐ 20.2203(a)(2)(ii)	☐ 21.2(c)	☐ 50.69(g)	☐ 50.73(a)(2)(v)(B)	☐ 73.77(a)(1)	☐ 73.1200(f)
☐ 20.2203(a)(2)(iii)		☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(2)(i)	☐ 73.1200(g)
☐ 20.2203(a)(2)(iv)		☑ 50.73(a)(2)(i)(B)	☑ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(ii)	☐ 73.1200(h)
☐ 20.2203(a)(2)(v)		☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)		

☐ **OTHER** (Specify here, in abstract, or NRC 366A).

12. Licensee Contact for this LER

Licensee Contact	Phone Number (Include area code)
Justin Knowles, Regulatory Assurance Manager	315-791-3393

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
D	EB	BKR	W120	Y					

14. Supplemental Report Expected		15. Expected Submission Date	Month	Day	Year
☑ No	☐ Yes (If yes, complete 15. Expected Submission Date)				

16. Abstract (Limit to 1326 spaces, i.e., approximately 13 single-spaced typewritten lines)

On 04/11/2023 at 1320, during an Emergency Diesel Generator (EDG) B Load / Safeguard Sequence Test, safety related Bus 17 did not load onto EDG B following receipt of a Safety Injection signal. As the plant was in MODE 5 where Technical Specifications (TS) 3.8.2 requires only one operable EDG, there was no immediate consequence to plant operation, but a corroded/bound breaker shunt trip attachment (STA) plunger discovered upon investigation indicated that the breaker would not have operated earlier. The last successful trip of the EDG B breaker was in MODE 1 on 04/06/2023 at 0543 during routine surveillance testing.

MODE 5 was achieved at 04/10/2023 at 1507; consequently, for 4 days 9.4 hours, two operable EDGs were required per TS 3.8.1, but only one EDG was operable (except on 04/07/2023 when EDG A was inoperable for identical routine surveillance testing, and, for 4 hours 11 minutes, no EDGs were operable). The resultant violations of TS 3.8.1 Conditions B.1, B.3.1, and B.3.2 are reportable as Conditions Prohibited by TS [50.73(a)(2)(i)(B)] and E.1 as an Event or Condition that Could Have Prevented Fulfillment of a Safety Function [50.73(a)(2)(v)].

Corrective actions include changing breaker maintenance procedures to replace rather than clean corroded STA plungers.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

(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/)

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 08/31/2023

1. FACILITY NAME		2. DOCKET NUMBER	3. LER NUMBER		
			YEAR	SEQUENTIAL NUMBER	REV NO.
R.E. Ginna Nuclear Power Plant, Unit 1	■ 050 ☐ 052	00244	2023	- 001	- 00

NARRATIVE

I. PRE-EVENT PLANT CONDITIONS

At the time the condition was identified, the plant was in MODE 5 at 0% rated thermal power.

II. DESCRIPTION OF EVENT

A. EVENT

On 4/11/2023, the station was in Mode 5 (Cold Shutdown) for a refueling outage. During the performance of Train B surveillance STP-O-R-2.2-TR-B, Diesel Generator Load and Safeguard Sequence Test, Bus 17 did not load onto Emergency Diesel Generator (EDG) B following a Safety Injection (SI) signal. Main Control Board (MCB) alarms L-15 (Bus 17 Under Voltage Safeguards) and L-13 (Safeguard Bus D/G Breaker Overcurrent Trip) were received. The alarm switch for breaker 52/EG1B2 was found actuated but with no Amptector targets indicated. A recorder set up during the test showed that the breaker tripped free (closed and then immediately reopened).

With the breaker racked out, inspection of the STA moving core identified that the plunger was entirely coated in surface rust, was not fully reset from the previous trip of the breaker, and was preventing future breaker closure, thus causing it to be inoperable. Upon identification of the STA moving core rust, the breaker was immediately replaced with a spare breaker of the same type and model. Following a successful test, system operability was restored.

Only one EDG is required in MODE 5 per Technical Specification 3.8.2; thus, there was no immediate consequence to plant operation. Two EDGs are required to supply SI loads during a Design Basis Accident (DBA) in MODES 1-4 based on Technical Specification (TS) 3.8.1.

B. INOPERABLE STRUCTURES, COMPONENTS, OR SYSTEMS THAT CONTRIBUTED TO THE EVENT:

No other Systems, Structures, or Components (SSCs) were inoperable at the start of the event and contributed to the event.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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NARRATIVE

C. DATES AND APPROXIMATE TIMES OF MAJOR OCCURENCES:

04/06/2023 @ 0543 (MODE 1) last successful trip of the breaker 52/EG1B2 (supply breaker for Bus 17 from EDG B).

04/07/2023 @ 1113 EDG 'A' removed from service until 1151 for STP-O-30.10 (Pre-startup Alignment). EDG 'A' declared inoperable.

04/07/2023 @ 1202 EDG 'A' removed from service until 1535 for STP-O-12.1 (EDG 'A' Monthly Testing). EDG 'A' declared inoperable.

04/10/2023 @ 1507 MODE 5 achieved.

04/10/2023 @ 2200 (MODE 5) Began STP-O-R-2.2-TR-B.

04/11/2023 @ 1320 (MODE 5) Self-revealing failure of 52/EG1B2.

04/12/2023 @ 0940 Breaker 52/EG1B2 replaced; EDG B returned to operable status.

D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None

E. METHOD OF DISCOVERY:

Self-revealing: During the performance of STP-O-R-2.2-TR-B, Diesel Generator Load and Safeguard Sequence Test, Bus 17 did not load onto EDG B following SI initiation. At the time MCB alarms L-15, Bus 17 Under Voltage Safeguards, and L-13, Safeguard Bus D/G Breaker Overcurrent Trip, were received.

F. SAFETY SYSTEM RESPONSES:

No safety systems actuated, as expected.

III. CAUSE OF EVENT:

The direct cause of the failure of the circuit breaker to close and remain closed when demanded was the failure of the breaker shunt trip attachment (STA) to reset to its shelf condition following a trip due to surface corrosion on the STA moving core causing friction between the core and coil.

IV. ASSESSMENT OF THE SAFETY CONSEQUENCES OF THE EVENT:

Based on the date/time of the last successful trip of the breaker in MODE 1 on 04/06/2023 at 0543, the plant had one EDG operable when two were required to be operable per TS 3.8.1 until MODE 5 was achieved on 04/10/2023 at 1507, at total of 4 days 9.4 hours, including a 4-hour 11-minute period on 04/07/2023 when no EDG was operable due to EDG A being declared inoperable for surveillance testing.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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			YEAR	SEQUENTIAL NUMBER	REV NO.
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NARRATIVE

The resultant violations of TS 3.8.1 Conditions B.1, B.3.1, and B.3.2 are reportable as Conditions Prohibited by TS [50.73(a)(2)(i)(B)] and E.1 as an Event or Condition that Could Have Prevented Fulfillment of a Safety Function [50.73(a)(2)(v)].

As the plant never lost offsite power during the 4-day 9.4-hour period in MODE 1 when one or no EDG was operable when two were required to be operable, safety related busses always had power resulting in no actual safety consequences of the event. During the time between MODE 5 and discovery of the failed STA, EDG A was always operable, so TS were satisfied. As such, this event is not considered to have had any significant effect on the health and safety of the public.

V. CORRECTIVE ACTIONS

The breaker was replaced with a spare unit under Work Order (WO) C93909101 on 04/12/2023.

Extent of condition was performed under WO C93910116. The EDG A breaker STA was found in excellent condition and cycled as expected.

Add guidance to breaker maintenance procedures to inspect for corrosion and free operation of the STA moving coil. If any STA does not meet acceptance criteria on a Screenhouse breaker, replace the STA.

VI. ADDITIONAL INFORMATION:

This failure was documented in Corrective Action Program Issue Report (IR) 04669299.

A. FAILED COMPONENTS:

52/EG1B2, Supply breaker for Bus 17 from EDG B.

B. PREVIOUS LERs ON SIMILAR EVENTS:

A search of all Ginna LERs submitted to the NRC determined there have been no prior LERs reporting similar breaker failure.

C. THE ENERGY INDUSTRY IDENTIFICATION SYSTEM (EIIS) COMPONENT FUNCTION IDENTIFIER AND SYSTEM NAME OF EACH COMPONENT OR SYSTEM REFERRED TO IN THIS LER:

COMPONENT - Breaker

IEEE 803 FUNCTION NUMBER - BKR

IEEE 805 SYSTEM IDENTIFICATION - EB