



Constellation

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March 7, 2024

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: Supplement to LER 2023-003, Manual Reactor Trip due to Degraded Condenser Vacuum from Lowering Main Steam to Air Ejectors and Auxiliary Feedwater Actuation due to low Steam Generator Level

The attached Licensee Event Report (LER) 2023-003-01 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 01 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 2023-003, Revision 01

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

Attachment

LER 2023-003, Revision 01



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 FOIA, Library, and Information Collections Branch (T-6 A10M), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to Infocollections.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street NW, Washington, DC 20503; email: oir_submission@omb.eop.gov. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

1. Facility Name R.E. Ginna Nuclear Power Plant, Unit 1	<input checked="" type="checkbox"/> 050	2. Docket Number 00244	3. Page 1 OF 4
	<input type="checkbox"/> 052		

4. Title
Supplement to LER 2023-003-00, Manual Reactor Trip due to Degraded Condenser Vacuum from Lowering Main Steam to Air Ejectors and Auxiliary Feedwater Actuation due to low Steam Generator Level

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
10	12	2023	2023	003	01	03	07	2024	<input type="checkbox"/> 050	
									<input type="checkbox"/> 052	

9. Operating Mode 1	10. Power Level 100
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11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

<input type="checkbox"/> 10 CFR Part 20	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 10 CFR Part 50	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> 73.1200(a)
<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<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 checked="" 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)	<input type="checkbox"/> 10 CFR Part 21	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 10 CFR Part 73	<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 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 here, in abstract, or NRC 366A).

12. Licensee Contact for this LER

Licensee Contact Justin Knowles, Regulatory Assurance Manager	Phone Number (Include area code) 315-791-3393
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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
B	LD	PCV	M0120	Y					

14. Supplemental Report Expected

<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date)	15. Expected Submission Date	Month	Day	Year
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16. Abstract (Limit to 1326 spaces, i.e., approximately 13 single-spaced typewritten lines)

On 10/12/2023, Ginna Unit 1 experienced an uncomplicated manual reactor trip due to high Main Condenser back pressure and a valid Auxiliary Feedwater actuation due to low Steam Generator level. At 2116, Operations received a high limit alarm for Air Ejector Mass Flow Rate and observed condenser vacuum degrading and generator output beginning to lower. Field personnel began bypassing the Main Air Ejector Steam Pressure Control Valve to restore steam to the Air Ejectors. Concurrently with actions in the field, the Main Control Room (MCR) Operators began a procedurally directed downpower. At 2127, the five-minute restriction for turbine operation in the 'Back Pressure' region was exceeded and the MCR Unit Supervisor directed a reactor trip as procedurally required.

Loss of supply air to the Main Air Ejector Steam Pressure Control Valve was due to the Instrument Air (IA) Pressure Control Valve (PCV) not providing adequate output pressure to keep the valve open. The IA PCV was replaced and tested satisfactory prior to return to service.



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

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1. FACILITY NAME R.E. Ginna Nuclear Power Plant, Unit 1	<input checked="" type="checkbox"/> 050	2. DOCKET NUMBER 00244	3. LER NUMBER		
	<input type="checkbox"/> 052		YEAR 2023	SEQUENTIAL NUMBER 003	REV NO. 01

NARRATIVE

I. PRE-EVENT PLANT CONDITIONS

At the time of the component failure, the plant was in MODE 1 at 100% rated thermal power.

II. DESCRIPTION OF EVENT

A. EVENT

On 10/12/2023 at 2127, Operations staff at Ginna Unit 1 initiated a manual reactor trip due to high Main Condenser back pressure. The trip was uncomplicated and the operating crew stabilized the plant at the no-load reactor coolant temperature.

The operating crew received a Plant Process Computer System (PPCS) high limit alarm for Air Ejector Mass Flow Rate at 2116. Operators concurrently observed condenser vacuum degrading and generator output beginning to lower. Loss of Condenser Vacuum procedure was entered. The Field Supervisor and Principal Plant Operator (PPO) were dispatched to investigate and found that the Main Air Ejector Steam Pressure Control Air Operated Valve (AOV) was approximately 20% open and closing and steam supply pressure to the Air Ejectors was abnormally low and lowering. Field personnel began bypassing the Main Air Ejector Steam Pressure Control AOV to restore steam to the Air Ejectors. At approximately 2125, field personnel were successful in bypassing the valve and restoring Air Ejector operation. Concurrently with actions in the field, the Main Control Room (MCR) Operators began a procedurally directed downpower. At 2125 the Main Condenser back pressure began to lower, approximately 30 seconds after Air Ejector operation was restored. At 2127, the five minute restriction for turbine operation in the 'Back Pressure' region was exceeded and the MCR Unit Supervisor directed a reactor trip as required per the Loss of Condenser Vacuum procedure.

Loss of supply air to the Main Air Ejector Steam Pressure Control valve was the result of the Instrument Air Pressure Control Valve failing to provide adequate output pressure to maintain the valve in the open position. The Instrument Air Pressure Control Valve was replaced and tested satisfactory prior to return to service.

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

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



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NARRATIVE

C. DATES AND APPROXIMATE TIMES OF MAJOR OCCURENCES:

2116 10/12/2023 PPCS Air Ejector Mass Flow Rate high limit alarm received
 2121 10/12/2023 Loss of Condenser Vacuum entered
 2125 10/12/2023 Main Air Ejector Steam Pressure Control Valve bypassed by field personnel
 2127 10/12/2023 Manual Reactor Trip

D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None

E. METHOD OF DISCOVERY:

Self-revealing: At 2116, MCR received PPCS Air Ejector Mass Flow Rate high limit alarm. Operators were dispatched to the field and found that the Main Air Ejector Steam Pressure Control AOV was approximately 20% open and closing and steam supply pressure to the Air Ejectors was abnormally low and lowering.

F. SAFETY SYSTEM RESPONSES:

The manual reactor trip was not complex, and all systems responded normally post-trip. The Auxiliary Feedwater (AFW) System actuated on low Steam Generator water level.

III. CAUSE OF EVENT:

A Root Cause Investigation performed by the station determined that the loss of supply air to the Main Air Ejector Steam Pressure Control valve was the result of the Instrument Air Pressure Control Valve failing to provide adequate output pressure to maintain the valve in the open position. A failure analysis concluded the supply air flow-path of the Instrument Air Pressure Control Valve was obstructed due to poor manufacturing quality resulting in lowered output pressure. Organizational factors were also investigated and the team identified improvement opportunities during the stations implementation of the Single Point Vulnerability (SPV) project in diverse stakeholder engagement and use of risk-elimination bias.

IV. ASSESSMENT OF THE SAFETY CONSEQUENCES OF THE EVENT:

Per UFSAR 15.0.8.2, this reactor trip falls under Condition II - Faults of Moderate Frequency. The plant was capable of being returned to operation after corrective action. As there was no loss of any barrier to the escape of radioactive products, there was no release of radioactive materials in effluents to unrestricted areas (in conformance with 10 CFR 20, Standards for Protection Against Radiation). The event did not propagate to a more serious incident of the Condition III or Condition IV type.



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NARRATIVE

V. CORRECTIVE ACTIONS

The Instrument Air Pressure Control Valve was replaced and tested satisfactory prior to return to service.

Long-term corrective actions include:

1. Dresser Masoneilan Model 77-20 regulators installed in single point vulnerability (SPV) locations will be replaced to prevent SCRAM recurrence.
2. Creation of independent, cross-functional SPV Challenge team to challenge all existing mitigation and elimination strategies.
3. Conduct a Leadership Training Case Study for Operations, Maintenance, and Engineering focusing on the contributing causes of this event. The training includes all Front Line Supervisors (FLS), Mid Level Managers (MLMs) and Senior Leadership Team (SLT) personnel.
4. Upgrade Air Ejector Steam Control AOV from Low Risk SPV to Medium Risk SPV and implement and elimination strategy.

VI. ADDITIONAL INFORMATION:

LER 2023-003-00 documented the Expected Submission Dated of the Supplemental Report as 03/08/2023 and it should have been dated 03/08/2024.

A. FAILED COMPONENTS:

Instrument Air Pressure Control Valve to the Main Air Ejector Steam Pressure AOV

B. PREVIOUS LERs ON SIMILAR EVENTS:

A LER historical search was conducted and no similar LER events were identified.

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

COMPONENT - Pressure Control Valve
IEEE 803 FUNCTION NUMBER - PCV
IEEE 805 SYSTEM IDENTIFICATION - LD