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10 CFR 50.73

GNRO-2019/00047

November 7, 2019

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

SUBJECT: Licensee Event Report 2019-005-00, Primary Containment Personnel Airlock Potential Loss of Safety Function due to Inadequate Door Closure

Grand Gulf Nuclear Station, Unit 1
NRC Docket No. 50-416
Renewed Facility Operating License No. NPF-29

Dear Sir or Madam:

Attached is Licensee Event Report 2019-005-00, Primary Containment Personnel Airlock Potential Loss of Safety Function due to Inadequate Door Closure. This report is being submitted in accordance with 10 CFR 50.73(a)(2)(v)(C) for an event or condition that could have prevented the fulfillment of a safety function.

This letter contains no new commitments. If you have any questions or require additional information, please contact Jim Shaw at 601-437-2103.

Sincerely,

E. A. Larson

Eric A. Larson
EAL/ram

Attachment: Licensee Event Report 2019-005-00

cc: NRC Region IV - Regional Administrator
NRC Senior Resident Inspector, Grand Gulf Nuclear Station
NRR Project Manager

Attachment
Licensee Event Report 2019-005-00

NRC FORM 366 (04-2018) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020

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 Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.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.

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
Grand Gulf Nuclear Station Unit 1	05000416	1 OF 3

4. Title

Primary Containment Personnel Airlock Potential Loss of Safety Function due to Inadequate Door Closure

5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Rev No.	Month	Day	Year	Facility Name	Docket Number
									N/A	05000N/A
09	11	2019	2019	005	00	11	07	2019	Facility Name	Docket Number
									N/A	05000N/A

9. Operating Mode	11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*			
1	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. Power Level	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
100	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☒ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(ii)
	☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(iii)
		☐ 50.73(a)(2)(i)(C)	☐ Other (Specify in Abstract below or in NRC Form 366A	

12. Licensee Contact for this LER

Licensee Contact	Telephone Number (Include Area Code)
Jim Shaw, Manager Regulatory Assurance	601-437-2103

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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

Abstract (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)

On September 11, 2019 at 5:19pm, the Grand Gulf Nuclear Station primary containment was unable to fulfill its safety function because both doors on one airlock were open simultaneously for approximately thirty seconds.

The cause of this event is that the 208 primary containment airlock inner door latch pin position is not included in the electrical interlock or indication circuits. This caused the condition by allowing the outer airlock door open permissive to be met when the inner airlock door was not properly latched in the closed position. The 208-foot elevation airlock doors were immediately closed and verified latched and sealed. Additional corrective actions include revising the system operating procedure and the local operating placard instructions and a modification to ensure the proper closure, latching, and sealing of the 208-elevation airlock door.

This report is made pursuant to 10 CFR 50.73(a)(2)(v)(C) for an event or condition that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident.

There were no consequences to the general safety of the public, nuclear safety, industrial safety and radiological safety for this event.

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/)

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Grand Gulf Nuclear Station Unit 1	05000-416	2019	- 005	- 00

NARRATIVE

Plant Conditions:
Grand Gulf Nuclear Station Unit 1 was operating at approximately 100 percent power in MODE1. There were no structures, systems, or components that were inoperable that contributed to the event.

Description:
On September 11, 2019, at 5:19pm, a Grand Gulf Nuclear Station Radiation Protection technician exited the primary containment building [NH] through the personnel airlock located on 208-foot elevation. The individual opened the containment-side (inner) airlock door and entered the airlock. Once inside the airlock the technician closed the inner door using the established work practices and door operating instructions. The technician then opened the auxiliary building side (outer) door and exited the airlock and reclosed the outer door.

As the Radiation Protection technician was exiting the outer door, Maintenance Personnel approached the inner door in preparation to exit containment through the airlock. The Maintenance Personnel noticed that the inner door locking pins were extended to their locking position but outside the locking pin keepers. They also noticed the inner door's seals were inflated. They waited for the outer door to close before operating the containment airlock doors and exiting the containment building. Both airlock doors were left in a closed, latched, and sealed configuration upon the successful exit of the Maintenance Personnel.

The time period that both doors were open, which prevented the containment from fulfilling its safety function, was approximately 30 seconds.

What Happened:
When the Radiation Protection technician began the automatic closing cycle of the inner door by depressing the CLOSE push button in the barrel, the hydraulic system did not provide adequate pressure to the rotary actuator to close the door unassisted. The technician pulled the door handle to assist the door closed, which required significant effort. The technician assisted the door to what they believed was a full closed position and held it there. The door's full-closed limit switch was satisfied, and the subsequent time delay began. The door was not actually in a full-closed position at the end of the time delay, but the door had not reached an open position sufficient to reset the limit switch. The same-door mechanical interlocking pawl was also lifted from the ratchet. The seal mechanism began closing. The pins extended outside of the keeper, and the seals were inflated. The pressurized seals energized the green permissive lights in the barrel. The door-to-door Mechanical interlocking pawl was lifted. The red "door operating" light was de-energized, and all electrical interlocks were satisfied. Seeing that all permissives were met, the technician depressed the open pushbutton for the outer door. The outer door operated as designed, and the technician exited the airlock barrel and closed the outer door.

Reportability:
This event was reported to the NRC via the emergency notification system (ENS) at 0049 hours on September 12, 2019, in accordance with 10 CFR 50.72(b)(3)(v)(C). Reference ENS notification 54271 for the details.

A Licensee Event Report is required pursuant to Title 10 Code of Federal Regulations (10 CFR) 50.73(a)(2)(v)(C) for an event or condition that had the potential to prevent the fulfillment of the safety function to control the release of radioactive material or mitigate the consequences of an accident.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Grand Gulf Nuclear Station Unit 1	05000-416	2019	- 005	- 00

Cause:
The cause of this event is that the containment airlock door latch pin position is not included in the electrical interlock or indication circuits. This caused the condition by allowing the outer airlock door open permissive to be met when the inner airlock door was not properly latched in the closed position.

Corrective Actions:
Immediate Corrective Actions:
- The 208-foot elevation airlock doors were immediately closed and verified latched and sealed.

Planned Corrective Actions:
- Revise system operating instructions to provide guidance for ensuring the airlock doors are fully closed, audible or visual verification that the latch pins have extended, and the door operator challenges the door prior to operating the opposite door in the airlock.
- Revise the airlock local permanent information placard to align with the revised system operating instruction.
- Development of a modification to ensure proper closure, latching, and sealing of the 208-elevation airlock door.

Safety Significance:
There were no actual consequences for this event. There was no radiological release from the primary containment as a result of this event. There were no other actual consequences to safety of the general public, nuclear safety, industrial safety and radiological safety.

Previous Similar Events:
LER 2019-004-00, Secondary Containment Personnel Door Failure Due to Broken Hinges
LER 2018-005-00, Secondary Containment Door Misaligned, Due to Inadequate Criteria, Could Have Prevented Fulfillment of a Safety Function
LER 2018-006-00, Secondary Containment Roof Hatch Left Open Due To Inadequate Corrective Actions
LER 2016-003-00, Loss of Secondary Containment Secondary Containment Safety Function During Routine Roof Inspection
The causal analysis and correctives actions for the above identified events were reviewed and it has been determined that the causes and corrective actions for these event could not have prevented the event documented in Grand Gulf Nuclear Station LER 2019-005-00.