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Grand Gulf Nuclear Station
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GNRO-2016/00044

August 29, 2016

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

SUBJECT: Licensee Event Report (LER) 2016-006-00, Multiple Valid Engineered Safety
Feature Actuations
Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

Dear Sir or Madam:

Attached is Licensee Event Report (LER) 2016-006-00, which will be supplemented upon completion of the in-progress root cause evaluation. This report is submitted in accordance with Title 10 Code of Federal Regulations 50.73(a)(2)(iv)(A).

This letter contains no new Regulatory Commitments.

If you have any questions or require additional information, please contact James Nadeau at 601-437-2103.

Sincerely,

A handwritten signature in cursive script that reads "James Nadeau".

JJN/sas

Attachment: Licensee Event Report (LER) 2016-006-00

cc: (See Next Page)

cc: U.S. Nuclear Regulatory Commission
ATTN: Mr. Jim Kim, NRR/DORL (w/2)
Mail Stop OWFN 8 B1
Rockville, MD 20852-2738

U.S. Nuclear Regulatory Commission
ATTN: Mr. Kriss M. Kennedy (w/2)
Regional Administrator, Region IV
1600 East Lamar Boulevard
Arlington, TX 76011-4511

Mr. B. J. Smith (w/2)
Director, Division of Radiological Health
Mississippi State Department of Health
Division of Radiological Health
3150 Lawson Street
Jackson, MS 39213

NRC Senior Resident Inspector
Grand Gulf Nuclear Station
Port Gibson, MS 39150

Attachment to GNRO 2016/00044
Licensee Event Report (LER) 2016-006-00



LICENSEE EVENT REPORT (LER)
(See reverse for required number of digits/characters for each block)

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/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet 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.

1. FACILITY NAME Grand Gulf Nuclear Station, Unit 1	2. DOCKET NUMBER 05000 416	3. PAGE 1 OF 3
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4. TITLE
Multiple Valid Engineered Safety Feature Actuations

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
June	30	2016		2016-006-00		08	29	2016	N/A	05000 N/A
									N/A	05000 N/A

9. OPERATING MODE 4	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)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)						
10. POWER LEVEL 0	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)						
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)						
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)						
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)						
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER						
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A						

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME James Nadeau / Manager, Regulatory Assurance	TELEPHONE NUMBER (Include Area Code) (601) 437-2103
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13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

14. SUPPLEMENTAL REPORT EXPECTED <input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
		11	17	2016

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

On June 30, 2016 at 1715 CDT, Grand Gulf Nuclear Station (GGNS) experienced an electrical power supply loss from Service Transformer 21 which resulted in power supply being lost to Division 2 (16AB Bus) and Division 3 (17AC Bus) ESF buses. This resulted in a valid actuation of Division 2 and Division 3 Diesel Generators on bus under voltage. They both automatically started and energized their respective ESF buses as designed. During this event, the loss of power to the Division 2 (16AB Bus) resulted in a Division 2 RPS bus power loss, which actuated a Division 2 RPS half SCRAM signal.

The power loss also resulted in a loss of the Instrument Air pressure resulting in some Control Rod Scram Valves to drift open. This in turn caused the Scram Discharge Volume to fill to the point where a Division 1 RPS half SCRAM signal was initiated from Scram Discharge Volume level high on Channel 'A'. This resulted in a valid full RPS Reactor SCRAM while not critical. Instrument Air pressure was restored and the SCRAM signal was reset at 1733 CDT. Appropriate off normal event procedures were entered to mitigate the transient. All safety systems performed as expected.

The direct cause was a faulted C phase 34.5 kV Service Transformer power supply cable to the BOP 23 Transformer. A temporary three phase overhead line was installed to bypass the faulted 34.5 kV cable section.



LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV. NO.
Grand Gulf Nuclear Station, Unit 1	05000 416		2016-006-00	

NARRATIVE

PLANT CONDITIONS PRIOR TO THE EVENT

At the time of the event, Grand Gulf Nuclear Station (GGNS) Unit 1 was in Mode 4, Cold Shutdown, with Main Steam Isolation Valves (MSIVs) [SB] closed. Reactor Water Level was maintained in the normal water level band by the Control Rod Drive System (CRDS) [AA]. Residual Heat Removal (RHR) A [BO] was maintained in Shutdown Cooling operation and it was not affected by this event.

DESCRIPTION

On June 30, 2016 at 17:15, Grand Gulf Nuclear Station experienced an electrical power supply loss from Service Transformer 21 (ST21) [XFMR] which resulted in power supply being lost to Division 2 (16AB Bus) and Division 3 (17AC Bus) Engineered Safety Feature (ESF) buses [BU]. This resulted in a valid actuation of Division 2 and Division 3 Standby Diesel Generators (SDGs) [EK] on under-voltage. Both SDGs automatically started and energized their respective ESF buses as designed.

During this event, the loss of power to the Division 2 (16AB bus) resulted in a Division 2 Reactor Protection System (RPS) [JE] bus power loss, which actuated a Division 2 RPS half SCRAM signal. The Division 2 power loss also resulted in a loss of Instrument Air pressure resulting in some Control Rod Scram Valves to drift open. This in turn caused the Scram Discharge Volume to fill to the point where a Division 1 RPS half SCRAM signal was initiated from Scram Discharge Volume level high on Channel A. This resulted in a valid full RPS Reactor SCRAM while not critical. Instrument Air pressure was restored and the SCRAM signal was reset at 1733 hrs.

Appropriate off normal event procedures were entered to mitigate the transient. No ECCS [BM] initiation signals were reached. All safety systems performed as expected.

REPORTABILITY

Event Notification No. 52057 was made to the NRC Operations Center. This LER is being submitted pursuant to Title 10 Code of Federal Regulations 10 CFR 50.73(a)(2)(iv)(A) for the actuation of Engineered Safety Features. Telephonic notification was made to the U.S. Nuclear Regulatory Commission (NRC) Emergency Notification System on June 30, 2016, within 8 hours of the event, pursuant to 10 CFR 50.72(b)(3)(iv) for multiple valid specified system actuations.

CAUSE

Direct Cause: A faulted C phase 34.5 kV Service Transformer 21 power supply cable to the BOP 23 Transformer resulting in the loss of power to the 21R bus.

Apparent Cause: Investigation of the Apparent Cause is ongoing. A supplemental report to this LER will be provided upon completion of the Apparent Cause investigation

NRC FORM
(11-2015)

366A U.S. NUCLEAR REGULATORY COMMISSION



LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

APPROVED BY OMB: NO. 3150-0104

EXPIRES: 10/31/2018

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, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet 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.

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		YEAR	SEQUENTIAL NUMBER	REV. NO.
Grand Gulf Nuclear Station, Unit 1	05000 416	2016-006-00		

NARRATIVE

CORRECTIVE ACTIONS

Temporarily installed a three phase overhead line, to bypass the faulted 34.5 kV cable section.

SAFETY SIGNIFICANCE

The event posed no threat to the health and safety of the general public or to nuclear safety as safety-systems performed as designed. No Technical Specification safety limits were violated. Industrial safety was not challenged, and there was no potential or actual radiological release during the event.

PREVIOUS SIMILAR EVENTS

Previous similar events will be discussed in the supplemental report upon completion of the Apparent Cause investigation.