



Entergy Operations, Inc.  
P. O. Box 756  
Port Gibson, MS 39150

**Douglas Neve**  
Manager, Regulatory Assurance  
Grand Gulf Nuclear Station  
Tel. (601) 437-2103

GNRO-2017/00030  
August 16, 2017

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

SUBJECT: Supplemental Licensee Event Report LER 2016-009-01, Entry into Mode of  
Applicability with the OPRM Upscale Settings Incorrectly Set  
Grand Gulf Nuclear Station, Unit 1  
Docket No. 50-416  
License No. NPF-29

Dear Sir or Madam:

Attached is Supplemental Licensee Event Report LER 2016-009-01, Entry into Mode of  
Applicability with the Oscillation Power Range Monitor (OPRM) Upscale Settings incorrectly set.

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

Sincerely,

A handwritten signature in black ink, appearing to read "D. Neve", written over a horizontal line.

Douglas Neve  
Manager Regulatory Assurance  
Grand Gulf Nuclear Station  
DAN/ram


Attachment: Licensee Event Report (LER) 2016-009-01

cc: see next page

U.S. Nuclear Regulatory Commission  
ATTN: Mr. Siva Lingam  
Mail Stop OWFN 8 B1  
Rockville, MD 20852-2738

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

U. S. Nuclear Regulatory Commission  
ATTN: Mr. Kriss Kennedy, NRR/DORL (w/2)  
Mail Stop OWFN 8 B1  
Washington, DC 20555-0001

<b>NRC FORM 366</b> (04-2017)	<b>U.S. NUCLEAR REGULATORY COMMISSION</b>	APPROVED BY OMB: NO. 3150-0104      EXPIRES: 10/31/2020  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 <a href="mailto:Infocollects.Resource@nrc.gov">Infocollects.Resource@nrc.gov</a> , 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.																																																							
 <b>LICENSEE EVENT REPORT (LER)</b> (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 <a href="http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/">http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/</a> )																																																									
<b>1. FACILITY NAME</b> Grand Gulf Nuclear Station, Unit 1		<b>2. DOCKET NUMBER</b> 05000 416																																																							
		<b>3. PAGE</b> 1 OF 3																																																							
<b>4. TITLE</b> Entry into Mode of Applicability with the Oscillation Power Range Monitor Upscale Settings Incorrectly Set																																																									
<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>																																																									
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="3">5. EVENT DATE</th> <th colspan="3">6. LER NUMBER</th> <th colspan="3">7. REPORT DATE</th> <th colspan="2">8. OTHER FACILITIES INVOLVED</th> </tr> <tr> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> <th>YEAR</th> <th>SEQUENTIAL NUMBER</th> <th>REV NO.</th> <th>MONTH</th> <th>DAY</th> <th>YEAR</th> <th>FACILITY NAME</th> <th>DOCKET NUMBER</th> </tr> <tr> <td>03</td> <td>27</td> <td>2016</td> <td>2016</td> <td>009 - 01</td> <td></td> <td>8</td> <td>16</td> <td>2017</td> <td>N/A</td> <td>05000 N/A</td> </tr> <tr> <td colspan="9"></td> <td>FACILITY NAME</td> <td>DOCKET NUMBER</td> </tr> <tr> <td colspan="9"></td> <td>N/A</td> <td>05000 N/A</td> </tr> </table>			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	03	27	2016	2016	009 - 01		8	16	2017	N/A	05000 N/A										FACILITY NAME	DOCKET NUMBER										N/A	05000 N/A
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																																															
03	27	2016	2016	009 - 01		8	16	2017	N/A	05000 N/A																																															
									FACILITY NAME	DOCKET NUMBER																																															
									N/A	05000 N/A																																															
<b>9. OPERATING MODE</b> MODE 1			<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)																																																			
			<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)																																																			
			<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)																																																			
			<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)																																																			
			<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)																																																			
<b>10. POWER LEVEL</b> 100%			<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)																																																			
			<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)																																																			
			<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)(D)	<input type="checkbox"/> 73.77(a)(2)(i)																																																			
			<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)																																																			
			<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER Specify in Abstract below or in NRC Form 366A																																																					
<b>12. LICENSEE CONTACT FOR THIS LER</b>																																																									
FACILITY NAME Douglas Neve / Manager, Regulatory Assurance		TELEPHONE NUMBER (Include Area Code) (601) 437-2103																																																							
<b>13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT</b>																																																									
CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX																																																
A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A																																																
<b>14. SUPPLEMENTAL REPORT EXPECTED</b>					<b>15. EXPECTED SUBMISSION DATE</b>																																																				
<input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)					<input checked="" type="checkbox"/> NO			MONTH	DAY	YEAR																																															
								N/A	N/A	N/A																																															
<b>ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)</b> On March 27, 2016, Entergy, while returning the GGNS Unit 1 to power operations at the conclusion of Refueling Outage 20, reactor thermal power was allowed to exceed 16.8 percent without first calibrating the Oscillation Power Range Monitor (OPRM) to include the new limits required by the adoption and implementation of the Maximum Extended Load Limit Line Plus (MELLLA+) operating range. Specifically, the OPRM Upscale setting requirements specified in Technical Specification 3.3.1.1, Reactor Protection System (RPS) Instrumentation, Table 3.3.1.1-1, Reactor Protection System Instrumentation, Function 2, Average Power Range Monitors, Sub-Function f. OPRM Upscale were not fully met. The direct cause of this event was the failure to ensure the required procedure changes were incorporated and performed prior to the unit entering the mode of applicability. The apparent cause was personnel involved with the modification did not communicate adequately and follow-up to ensure technical information was incorporated into the appropriate procedures. Corrective Actions include: Updating of the procedures, correctly setting and fully testing the OPRM upscale settings, performance of briefings with personnel on the on lessons learned, and conducting follow-up reviews to ensure the briefings were understood. This event is reportable as a licensee event report (LER) in accordance with 10CFR50.73(a)(2)(i)(B).																																																									



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/>)

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](mailto: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	2. DOCKET	3. LER NUMBER		
Grand Gulf Nuclear Station, Unit 1	05000 416	YEAR	SEQUENTIAL NUMBER	REV. NO.
		2016 - 009 - 01		

NARRATIVE

On March 27, 2016, Entergy, while returning the GGNS Unit 1 to power operations at the conclusion of Refueling Outage 20, reactor thermal power was allowed to exceed 16.8 percent without first fully calibrating the Oscillation Power Range Monitor (OPRM) to include the new limits required by the adoption and implementation of the Maximum Extended Load Limit Line Plus (MELLLA+) operating range. Specifically, the OPRM Upscale setting requirements specified in Technical Specification 3.3.1.1, Reactor Protection System (RPS) Instrumentation, Table 3.3.1.1-1, Reactor Protection System Instrumentation, Function 2, Average Power Range Monitors, Sub-Function f. OPRM Upscale were not fully met.

This error was subsequently discovered on November 17, 2016 during a review of General Electric Hitachi (GEH) Report 0000-0158-7807, Revision 0000, PRNM System DSS-CD Settings against the settings in GGNS Procedures 06-IC-1C51-R-0077A/B/C/D, Average Power Range Monitor Calibration. Based on GE analysis GGNS-NE-16-00007 Revision 001 performed for this issue, the deviation in TMIN and TMAX values did not affect the system's ability to safely perform its function. A new TMIN value of 1.05 seconds has been recommended.

REPORTABILITY

This event is reportable as a licensee event report (LER) in accordance with 10CFR50.73(a)(2)(i)(B) as an operation or condition prohibited by Technical Specifications.

An analysis was performed for this issue, the deviation in time minimum (TMIN) and time maximum (TMAX) values did not affect the system's ability to safely perform its function. Therefore, Entergy is retracting the reporting of this LER against 10CFR50.73(a)(2)(v)(A). Based on this re-analysis and a review of the performance indicator reporting criteria this condition does not count against the performance indicator MS05, Safety System Functional Failure. This performance indicator will be supplemented at the end of the second quarter 2017 to remove the reporting of this event.

CAUSE

Direct Cause:

The direct cause of this event was the failure to ensure the required procedure changes were incorporated and performed prior to the unit entering the mode of applicability.

Apparent Cause:

Cause 1:

Entergy failed to maintain an adequate line of sight for this modification. Due to the time required to complete the modification a number of different individuals were assigned as owner of the modification, resulting a loss of important information between owners.

Cause2:

The personnel involved did not communicate efficiently to allow adequate traceability, document important information accordingly, or follow up and assure that changes were completed correctly.



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/>)

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](mailto: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	2. DOCKET	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV. NO.
Grand Gulf Nuclear Station, Unit 1	05000 416	2016 - 009 - 01		

**NARRATIVE**

**CORRECTIVE ACTIONS**

Completed:

Updating the procedure and correctly setting and fully testing the OPRM upscale settings.

Perform a brief with personnel qualified to perform a Design Change on the importance of understanding the full scope of a Mod and what a lack of rigor will result in. Also address the importance of effective communication and documentation.

Perform a brief with applicable personnel to address the importance of effective communication and documentation for obtaining cross-discipline inputs, reviews and comments.

Perform a follow up action 6 months later to review 6 modifications done after the briefing to ensure the issue was corrected and all applicable personnel fully understood the importance of obtaining reviews and comments.

Scheduled

Perform a follow up action 6 months later to review 6 modifications done after the briefing to ensure the issue was corrected and all applicable personnel fully understood the importance of obtaining reviews and comments.

**SAFETY SIGNIFICANCE**

There were no actual nuclear safety consequences or radiological consequences as a result of this calibration error. No Technical Specification Safety Limits were violated.

**PREVIOUSLY SIMILAR EVENTS**

LER 2013-006-00, Primary Containment Inoperable Due to an Inadequate Surveillance Procedure Resulting in a Loss of Safety Function

The causes and corrective actions implemented as a result of LER 2013-006-00 were reviewed and it has been determined that the corrective actions were acceptable and could not have prevented the event documented in this LER.