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Tel. (601) 437-7500

GNRO-2016/00008

February 25, 2016

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

SUBJECT: Entergy's Sixth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)  
Grand Gulf Nuclear Station, Unit 1  
Docket No. 50-416  
License No. NPF-29

- REFERENCES:
1. NRC Order Number EA-12-051, *Order to Modify Licenses with Regard to Reliable Spent Fuel Pool (SFP) Instrumentation*, dated March 12, 2012 (ML12054A682)
  2. Entergy Letter to NRC, *Overall Integrated Plan in Response to March 12, 2012, Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 26, 2013 (GNRO-2013/00016, ML13064A417)
  3. Entergy Letter to NRC, *Entergy's First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated August 28, 2013 (GNRO-2013/00061)
  4. Entergy Letter to NRC, *Entergy's Second Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 28, 2014 (GNRO-2014/00013)
  5. Entergy Letter to NRC, *Entergy's Third Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated August 27, 2014 (GNRO-2014/00055)

6. Entergy Letter to NRC, *Entergy's Fourth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated February 18, 2015 (GNRO-2015/00005)
7. Entergy Letter to NRC, *Entergy's Fifth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)*, dated August 28, 2015 (GNRO-2015/00050)

Dear Sir or Madam:

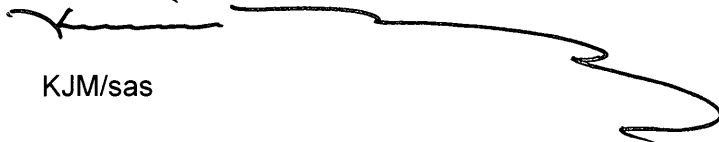
On March 12, 2012, the U.S. Nuclear Regulatory Commission (NRC) issued an order (Reference 1) to Entergy Operations, Inc. (Entergy). Reference 1 was immediately effective and directs Entergy to install reliable spent fuel pool level instrumentation.

Reference 1 requires submission of a status report at six-month intervals following submittal of the overall integrated plan (Reference 2). The purpose of this letter is to provide the sixth six-month status report pursuant to Section IV, Condition C.2, of Reference 1, that delineates progress made in implementing the requirements of Reference 1. The attached report provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief and the basis, if any.

This letter contains no new regulatory commitments. Should you have any questions regarding this submittal, please contact Mr. James J. Nadeau, Regulatory Assurance Manager, at (601) 437-2103.

I declare under penalty of perjury that the foregoing is true and correct; executed on February 25, 2016.

Sincerely,



KJM/sas

Attachment: Grand Gulf Nuclear Station's Sixth Six Month Status Report for the Implementation of Order EA-12-051, Order Modifying Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation

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

U.S. Nuclear Regulatory Commission  
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Regional Administrator, Region IV  
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Mr. B. J. Smith  
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Mississippi State Department of Health  
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NRC Senior Resident Inspector  
Grand Gulf Nuclear Station  
Port Gibson, MS 39150

Attachment to GNRO-2016/00008

Grand Gulf Nuclear Station's Sixth Six Month Status Report for the Implementation of  
Order EA-12-051, Order Modifying Licenses with Regard to Requirements for Reliable  
Spent Fuel Pool Instrumentation

## 1 Introduction

Grand Gulf Nuclear Station (GGNS) developed an Overall Integrated Plan (OIP - Reference 1 in Section 8), documenting the requirements to install reliable spent fuel pool level instrumentation (SFPI), in response to Reference 2 of section 8. This attachment provides an update of milestone accomplishments since the last status report, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

## 2 Milestone Accomplishments

The following milestone(s) have been completed since July 31, 2015 and are current as of January 31, 2016.

- Install reliable SFPI

## 3 Milestone Schedule Status

The following provides an update to the schedule identified in Section 2 of the Overall Integrated Plan. It provides the activity status of each item, and whether the expected completion date has changed. The dates are planning dates subject to change as design and implementation details are developed.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Install reliable SFPI	Spring 2016 Refueling Outage	Completed	N/A
Respond to NRC RAIs (received July 30, 2013)	August 29, 2013	Submitted August 29, 2013	N/A
Respond to ISE RAIs (received November 25, 2013)	September 30, 2015	Submitted February 27, 2015	N/A

## 4 Changes to Compliance Method

There are no additional changes to the compliance method.

## 5 Need for Relief/Relaxation and Basis for the Relief/Relaxation

There is no need for Relief/Relaxation at this time.

## 6 Open Items from the Overall Integrated Plan, Interim Staff Evaluation, and Onsite Audit

GGNS has received an Interim Staff Evaluation (ISE) that includes 19 RAIs. Four additional RAIs were received during the onsite audit. The following table provides a status of these RAIs. Responses to any open RAIs are provided in Section 9.

<b>RAI #</b>	<b>Response Status</b>
1	Closed via Audit Report (Reference 11)
2	Closed via Audit Report (Reference 11)
3	Closed via Audit Report (Reference 11)
4	Closed via Audit Report (Reference 11)
5	Closed via Audit Report (Reference 11)
6	Closed via Audit Report (Reference 11)
7	Closed via Audit Report (Reference 11)
8	Closed via Audit Report (Reference 11)
9	Closed via Audit Report (Reference 11)
10	Closed via Audit Report (Reference 11)
11	Closed via Audit Report (Reference 11)
12	Closed via Audit Report (Reference 11)
13	Closed via Audit Report (Reference 11)
14	Closed via Audit Report (Reference 11)
15	Closed via Audit Report (Reference 11)
16	Closed via Audit Report (Reference 11)
17	Closed via Audit Report (Reference 11)
18	Closed via Audit Report (Reference 11)
19	Closed via Audit Report (Reference 11)
20 (new)	Closed via Audit Report (Reference 11)
21 (new)	Closed via Audit Report (Reference 11)
22 (new)	Closed via Audit Report (Reference 11)
23 (new)	In Progress (See Section 9)

## **7 Potential Interim Evaluation Impacts**

There are no potential impacts to the Interim Staff Evaluation identified at this time.

## **8 References**

The following references support the updates to the Overall Integrated Plan described in this Attachment.

1. "Overall Integrated Plan in Response to March 12, 2012, Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)," dated February 26, 2013 (GNRO-2013/00016, ML13059A316).
2. NRC Order Number EA-12-051, "Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," dated March 12, 2012 (ML12054A679).
3. "Grand Gulf Nuclear Station, Unit 1 – Interim Staff Evaluation and Request for Additional Information Regarding Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051) (TAC NO. MF0955)," dated November 25, 2013 (ML13316B986).
4. "Summary of the November 26, 2013, Public Meeting to Discuss Industry Responses to Staff Interim Evaluations for Spent Fuel Pool Instrumentation," dated December 26, 2013 (ML13347B030).
5. "Request for Additional Information Regarding Overall Integrated Plan for Reliable Spent Fuel Pool Instrumentation (Order EA-12-051)," dated July 30, 2013 (GNRI-2013/00129).
6. Entergy Letter to NRC, Entergy's First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated August 28, 2013 (GNRO-2013/00061).
7. Entergy Letter to NRC, Entergy's Second Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 28, 2014 (GNRO-2014/00013).
8. Entergy Letter to NRC, Entergy's Third Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated August 27, 2014 (GNRO-2014/00055).
9. NEI 12-02, Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," Revision 1, dated August 2012 (ML12240A307).

10. Entergy Letter to NRC, Entergy's Fourth Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying License with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051), dated February 18, 2015 (GNRO-2015/00005).
11. "Grand Gulf Nuclear Station, Unit 1 – Report for the Onsite Audit Regarding Implementation of Mitigating Strategies and Reliable Spent Fuel Pool Instrumentation Related to Orders EA-12-049 AND EA-12-051 (TAC NOS, MF0954 AND MF0955)," dated November 24, 2015 (ML15308A298).



## **9 Responses to Open Items**

### **RAI #23**

During the onsite audit, the NRC staff noted that the metal conduits for the two SFP level channels were routed within 3 feet of each other (and sometimes less than that) on the north and west walls of the SFP operating floor in the auxiliary building. This does not appear to meet the requirements of Order EA-12-051 that:

**"The spent fuel pool level instrument channels shall be arranged in a manner that provides reasonable protection of the level indication function against missiles that may result from damage to the structure over the spent fuel pool. This protection may be provided by locating the primary instrument channel and fixed portions of the backup instrument channel, if applicable, to maintain instrument channel separation within the spent fuel pool area, and to utilize inherent shielding from missiles provided by existing recesses and corners in the spent fuel pool structure."**

A response to this open item has been provided in ePortal along with a response to two additional requests for information concerning the submitted ePortal response.