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OCAN021406

February 27, 2014

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Rockville, MD 20852

SUBJECT: Second Six-Month Status Report in Response to March 12, 2012,
Commission Order Modifying Licenses with Regard to Reliable Spent
Fuel Pool (SFP) Instrumentation (Order Number EA-12-051)
Arkansas Nuclear One – Units 1 and 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6

- REFERENCES:
1. NRC Order Number EA-12-051, *Order to Modify Licenses with Regard to Reliable SFP Instrumentation*, dated March 12, 2012 (OCNA031207) (ML12054A679)
 2. NRC Interim Staff Guidance JLD-ISG-2012-03, *Compliance with Order EA-12-051, Reliable SFP Instrumentation*, Revision 0, dated August 29, 2012 (ML12221A339)
 3. Nuclear Energy Institute (NEI) 12-02, *Industry Guidance for Compliance with NRC Order EA-12-051, "To Modify Licenses with Regard to Reliable SFP Instrumentation,"* Revision 1, dated August 2012 (ML12240A307)
 4. Entergy letter to NRC, *Initial Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Requirements for Reliable SFP Instrumentation (Order Number EA-12-051)*, dated October 26, 2012 (OCAN101204) (ML12305A274)
 5. Entergy letter to NRC, *Overall Integrated Plan (OIP) in Response to March 12, 2012, Commission Order Modifying License with Regard to Reliable SFP Instrumentation (Order Number EA-12-051)*, dated February 28, 2013 (OCAN021303) (ML13063A015)

6. Entergy letter to NRC, *First Six-Month Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable SFP Instrumentation (Order Number EA-12-051)*, dated August 28, 2013 (OCAN081303)

Dear Sir or Madam:

On March 12, 2012, the NRC issued an order (Reference 1) to Entergy Operations, Inc. (Entergy). Reference 1 was immediately effective and directs Entergy to install reliable SFP level instrumentation. Specific requirements are outlined in Attachment 2 of Reference 1.

Reference 1 required submission of an initial status report 60 days following issuance of the final interim staff guidance (Reference 2) and an OIP pursuant to Section IV, Condition C. Reference 2 endorses industry guidance document NEI 12-02, Revision 1 (Reference 3). Reference 4 provided the initial status report regarding SFP instrumentation, and Reference 5 provided the OIP.

Reference 1 requires submission of a status report at six-month intervals following submittal of the OIP. Reference 3 provides direction regarding the content of the status reports. Reference 6 provided the first six-month status report. The purpose of this letter is to provide the second 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 Stephanie Pyle at 479.858.4704.

I declare under penalty of perjury that the foregoing is true and correct; executed on February 27, 2014.

Sincerely,

Original signed by Jeremy G. Browning

JGB/nbm

Attachment: Arkansas Nuclear One Units 1 and 2 Second Six Month Status Report for the Implementation of Order EA-12-051, Order to Modify Licenses with Regard to Reliable SFP Instrumentation

cc: Mr. Marc L. Dapas
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Attachment to

0CAN021406

**Arkansas Nuclear One (ANO) Units 1 and 2 (ANO-1 and ANO-2) Second Six Month
Status Report for the Implementation of Order EA-12-051, Order to Modify
Licenses with Regard to Reliable Spent Fuel Pool (SFP) Instrumentation**

**ANO-1 and ANO-2 Second Six Month Status Report for the Implementation of
Order EA-12-051, Order to Modify Licenses with Regard to Reliable SFP
Instrumentation**

1. Introduction

Entergy Operations, Inc. developed an overall integrated plan (OIP) provided via Reference 1 for ANO-1 and ANO-2, documenting the requirements to install reliable SFP instrumentation (SFPI), in response to Reference 2. 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 August 28, 2013, and are current as of January 31, 2014:

- Although not part of the original milestone schedule, the NRC Interim Safety Evaluation (ISE) was received October 29, 2013 (Reference 3). The ISE included 17 requests for additional information (RAIs) for the NRC to complete its review. The NRC clarified during the November 26, 2013, public meeting that the ISE questions supersede any previous requests for information issued by the Staff concerning the SFP instrumentation (Reference 4). Therefore, the RAIs received June 26, 2013 (Reference 5) are considered superseded by the RAIs contained in the ISE received October 29, 2013.

3. Milestone Schedule Status

The following provides an update to the milestone schedule to support the OIP. This section provides the activity status of each item and the expected completion date noting any change. 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
ANO-1 Reliable SFPI Design Modification Package Developed/Issued	October 2013	In Progress	March 2014
ANO-1 Reliable SFPI Installed	1R25 Early 2015 Refueling Outage	Pending	
ANO-2 Reliable SFPI Design Modification Package Developed/Issued	July 2014	In Progress	September 2014
ANO-2 Reliable SFPI Installed	2R24 Fall 2015 Refueling Outage	Pending	
NRC RAIs (Received June 26, 2013)	July 25, 2013	Submitted (Superceded)	N/A
ISE RAIs (Received October 29, 2013)	September 30, 2014	In Progress	

[†]Target Completion Date is the last submitted date from either the overall integrated plan or previous six-month update.

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

Entergy expects to comply with the order implementation date and no relief/relaxation is required at this time.

6. Open Items from OIP and ISE

As discussed in Section 2, Entergy has received an ISE for ANO that includes 17 RAIs. Responses to the RAIs are due September 30, 2014, and are provided in Section 9 of this six-month status report. The following table provides a status of the RAIs.

RAI #	ANO-1 Response Status	ANO-2 Response Status
1	In Progress	In Progress
2	In Progress	In Progress
3	In Progress	In Progress
4	See Section 9	In Progress
5	In Progress	In Progress
6	In Progress	In Progress
7	In Progress	In Progress
8	In Progress	In Progress
9	In Progress	In Progress
10	In Progress	In Progress
11	See Section 9	In Progress
12	In Progress	In Progress
13	In Progress	In Progress
14	In Progress	In Progress
15	In Progress	In Progress
16	In Progress	In Progress
17	In Progress	In Progress

7. Potential ISE Impacts

There are no potential impacts to the ISE identified at this time except for those identified in Section 6.

8. References

1. *OIP in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable SFP Instrumentation (Order Number EA-12-051)*, dated February 28, 2013 (OCAN021303) (ML13063A015)
2. NRC Order Number EA-12-051, *Order Modifying Licenses with Regard to Reliable SFP Instrumentation*, dated March 12, 2012 (OCNA031207) (ML12054A679)
3. *Arkansas Nuclear One, Units 1 and 2 – ISE and RAI Regarding the Overall Integrated Plan for Implementation of Order EA-12-051, Reliable SFP Instrumentation (TAC NOs. MF0944 and MF0945)*, dated October 29, 2013 (OCNA101407) (ML13281A502)
4. *November 26, 2013, Public Meeting Summary for the Discussion Between the NRC Staff and Industry Concerning Responses to ISEs for SFP Instrumentation*, dated December 26, 2013 (ML13347B030)
5. *RAI for the OIP in Response to the Commission Order Modifying Licenses with Regard to Requirements for Reliable SFP Instrumentation (Order Number EA-12-051)*, dated June 26, 2013 (OCNA061308) (ML13156A313)

9. Responses to two of the ISE RAIs for ANO-1:

RAI #4: Please provide the results of the evaluation performed to ensure that other hardware stored in the SFP cannot adversely interact with the SFP level instrumentation.

For ANO-1, the new instruments are being mounted in the east and west corners on north side of the SFP to take advantage of missile and debris protection inherent in the corners of the SFP and from SFP curbs and SFP bridge tracks/rails. Current plant procedures and practices would not result in a need to move spent fuel into these locations either during insertion or removal of spent fuel. Normal activities associated with the SFP racks would not be impacted by mounting the instruments in these locations. An exclusion zone of two square feet around the probe is the minimum clearance required to prevent any tools or devices from disturbing the function of the probe.

RAI #11: Please provide the NRC staff with the final configuration of the power supply source for each channel so that the staff may conclude that the two channels are independent from a power supply assignment perspective.

For ANO-1, the primary channel (Instrument Channel 3) 120 volt alternating current (VAC) power is being supplied from Panel RS3, which is a Class 1E inverter-backed panel supplied from 125V direct current (VDC) Bus D01. The backup channel (Instrument Channel 4) 120 VAC power is being supplied from Panel RS4, which is a Class 1E inverter-backed panel supplied from 125 VDC Bus D02.