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August 26, 2013

AEP-NRC-2013-72
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Docket Nos.: 50-315
50-316

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

Donald C. Cook Nuclear Plant Units 1 and 2
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)

References:

1. Letter from E. J. Leeds and M. R. Johnson, U. S. Nuclear Regulatory Commission (NRC) to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status, "Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation," NRC Order Number EA-12-051, dated March 12, 2012, ML12054A682
2. NRC Interim Staff Guidance JLD-ISG-2012-03, Compliance with Order EA-12-051, Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation, Revision 0, dated August 29, 2012, ML12221A339
3. 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
4. Letter from J. P. Gebbie, Indiana Michigan Power Company, to U. S. Nuclear Regulatory Commission, "Donald C. Cook Nuclear Plant Units 1 and 2, Initial Status Report in Response to March 12, 2012, Commission Order Modifying Licenses with Regard to Reliable Requirements for Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)," AEP-NRC-2012-85, dated October 26, 2012, ML12312A473
5. Letter from J. P. Gebbie, Indiana Michigan Power Company, to U. S. Nuclear Regulatory Commission, "Donald C. Cook Nuclear Plant Unit 1 and Unit 2, Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051)," dated February 27, 2013, ML 13071A323.

ADD
NRR


On March 12, 2012, the Nuclear Regulatory Commission issued an order (Reference 1) to Indiana Michigan Power Company (I&M), the licensee for the Donald C. Cook Nuclear Plant (CNP) Units 1 and 2. Reference 1 was immediately effective and directed I&M to establish reliable spent fuel pool 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 overall integrated plan pursuant to Section IV, Condition C. Reference 2 endorses industry guidance document NEI 12-02, Revision 1 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided I&M's initial status report regarding mitigation strategies. Reference 5 provided I&M's overall integrated plan.

Reference 1 requires submission of a status report at six-month intervals following submittal of the overall integrated plan. Reference 3 provides direction regarding the content of the status reports. The purpose of this letter is to provide the first 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. Enclosure 1 to this submittal provides an affirmation. Enclosure 2 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 or revised regulatory commitments. Should you have any questions, please contact Mr. Michael K. Scarpello, Regulatory Affairs Manager, at (269) 466-2649.

Sincerely,

FOR 
Joel P. Gebbie
Site Vice President

DMB/kmh

Enclosure:


1. Affirmation
2. Indiana Michigan Power company's First 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

c: S. R. Jones, NRR/DSS/SBPB, NRC
J. T. King, MPSC
S. M. Krawec, AEP Ft. Wayne, w/o enclosure
MDEQ – RMD/RPS
NRC Resident Inspector
C. D. Pederson, NRC Region III
T. J. Wengert, NRC Washington DC

AFFIRMATION

I, Joel P. Gebbie, being duly sworn, state that I am Site Vice President of Indiana Michigan Power Company (I&M), that I am authorized to sign and file this request with the Nuclear Regulatory Commission on behalf of I&M, and that the statements made and the matters set forth herein pertaining to I&M are true and correct to the best of my knowledge, information, and belief.

Indiana Michigan Power Company


FOR Joel P. Gebbie
Site Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 26 DAY OF August, 2013


Notary Public

My Commission Expires 04-04-2018

DANIELLE BURGOYNE
Notary Public, State of Michigan
County of Berrien
My Commission Expires 04-04-2018
Acting in the County of Berrien

ENCLOSURE 2 TO AEP-NRC-2013-72

Indiana Michigan Power Company's First 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

Indiana Michigan Power Company (I&M), the licensee for Donald C. Cook Nuclear Plant (CNP), developed an Overall Integrated Plan (OIP) (Reference 1 in Section 8), documenting the requirements to install reliable spent fuel pool (SFP) level instrumentation, in response to (Reference 2 in Section 8). This enclosure provides an update of milestone accomplishments since submittal of the OIP. There are no changes to the compliance method, schedule, or need for relief/relaxation at this time.

2 Milestone Accomplishments

The following milestone(s) have been completed since the development of the OIP, and are current as of July 30, 2013.

- Commence Engineering Modification Design, order electronics - Engineering commenced on June 6, 2013, and electronics were ordered on July 2, 2013, by issuance of Purchase Order (PO) 01560122.

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.

The revised milestone target completion dates do not impact the order implementation date.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Submit 60 Day Status Report	Oct 2012	Complete	
Submit OIP	Feb 2013	Complete	
Unit 1 refueling outage (1 st RFO) start	March 2013	Outage Completed	
Submit 6 Month Updates:			
Update 1	Aug 2013	Complete with this submittal	
Update 2	Feb 2014	Not Started	
Update 3	Aug 2014	Not Started	

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Update 4	Feb 2015	Not Started	
Modifications:			
Commence Engineering Modification Design	April 2013	Complete	Commenced June 6, 2013
Order Electronics	April 2013	Complete	PO issued July 2, 2013
Complete Design	December 2013	In Progress	
Receive electronics	December 2013	Not Started	April 2014
Commence Installation	June 2014	Not Started	
Complete functional test	November 2014	Not Started	
Procedures:			
Issue Maintenance Procedures	August 2014	Not Started	
Training:			
Implement Training	September 2014	Not Started	
Submit Completion Report	February 2015	Not Started	

4 Changes to Compliance Method

There are no changes to the compliance method as documented in the OIP.

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

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

6 Open Items from Overall Integrated Plan and Draft Safety Evaluation

The following table provides a summary of the open items documented in the OIP as discussed in the Request for Additional Information (RAI) (Reference 6) and the subsequent RAI response (Reference 7) and the status of each item. Currently there is no Draft Safety Evaluation (SE).

Overall Integrated Plan Open Item			Status
RAI-1 (Ref 6)	a)	The specific functional reasons for identification of the elevation of Level 1. Specify how the identified elevation represents the HIGHER of the two points described in the NEI 12-02 guidance for this level.	Complete. Response submitted July 11, 2013 (Reference 7)
	b)	Provide a clearly labeled sketch depicting the elevation view of the proposed typical mounting arrangement for the portions of instrument channel consisting of permanent measurement channel equipment (e.g., fixed level sensors and/or stilling wells, and mounting brackets). Indicate on this sketch the datum values representing Level 1, Level 2, and Level 3, as well as the top of the fuel. Indicate on this sketch the portion of the level sensor measurement range that is sensitive to measurement of the fuel pool level, with respect to the Level 1, Level 2, and Level 3 datum points.	Complete. Sketch attached to this enclosure as Figure 1.
	c)	The OIP refers to drawings 12-3801, OP-12-5136, and DC-06033. Provide these drawings and, if they do not provide the necessary information requested in this RAI, please provide additional drawings.	Complete. Response submitted July 11, 2013 (Reference 7)
RAI-2 (Ref 6)		Please provide a clearly labeled sketch or marked-up plant drawing of the plan view of the SFP area, depicting the inside dimensions, the planned locations / placement of the primary and back-up level sensors, and the proposed routing of the cables that will extend from the sensors toward the location of the read-out/display device.	Sketches attached to this enclosure as Figure 2 and Figure 3
RAI-3 (Ref 6)	a)	The design criteria that will be used to estimate the total loading on the mounting device(s), including static weight loads and dynamic loads. Describe the methodology that will be used to estimate the total loading, inclusive of design basis maximum seismic loads and the hydrodynamic loads that could result from pool sloshing or other effects that could accompany such seismic forces.	CNP plans to provide this information in the February 2014 update.

Overall Integrated Plan Open Item		Status
	b) A description of the manner in which the level sensor (and stilling well, if appropriate) will be attached to the refueling roof and/or other support structures for each planned point of attachment of the probe assembly. Indicate in a drawing the portions of the level sensor that will serve as points of attachment for mechanical/mounting and electrical connections.	CNP plans to provide this information in the February 2014 update.
	c) A description of the manner by which the mechanical connections will attach the level instrument to permanent SFP structures so as to support the level sensor assembly.	CNP plans to provide this information in the February 2014 update.
RAI-4 (Ref 6)	a) A description of the specific method or combination of methods that will be applied to demonstrate the reliability of the permanently installed equipment under Beyond Design Basis (BDB) ambient temperature, humidity, shock, vibration, and radiation conditions.	CNP plans to provide this information in the February 2014 update.
	b) A description of the testing and/or analyses that will be conducted to provide assurance that the equipment will perform reliably under the worst-case credible design basis loading at the location where the equipment will be mounted. Include a discussion of this seismic reliability demonstration as it applies to: 1) the level sensor mounted in the SFP area, and 2) any control boxes, electronics, or read-out and re-transmitting devices that will be employed to convey the level information from the level sensor to the plant operators or emergency responders.	CNP plans to provide this information in the February 2014 update.
	c) A description of the specific method or combination of methods that will be used to confirm the reliability of the permanently installed equipment such that, following a seismic event, the instrument will maintain its required accuracy.	CNP plans to provide this information in the February 2014 update.
RAI-5 (Ref 6)	a) A description of how the two channels of the proposed level measurement system meet this requirement so that the potential for a common cause event to adversely affect both channels is minimized to the extent practicable.	CNP plans to provide this information in the February 2014 update.

Overall Integrated Plan Open Item		Status
	b) Further information on how each level measurement system, consisting of level sensor electronics, cabling, and readout devices will be designed and installed to address independence through the application and selection of independent power sources, independence of signals sent to the location(s) of the readout devices, and the independence of the displays.	CNP plans to provide this information in the February 2014 update.
RAI-6 (Ref 6)	a) If the level measurement channels are to be powered through a battery system (either directly or through an Uninterruptible Power Supply), provide the design criteria that will be applied to size the battery in a manner that ensures, with margin, that the channel will be available to run reliably and continuously following the onset of the BDB event for the minimum duration needed, consistent with the plant mitigation strategies for BDB external events (Order EA-12-049).	CNP plans to provide this information in the February 2014 update.
	b) The location where the batteries will be located, indicating the accessibility, and the distance from the related instrument display.	CNP plans to provide this information in the February 2014 update.
RAI-7 (Ref 6)	a) An estimate of the expected instrument channel accuracy performance (e.g., in percent of span) under both: 1) normal SFP level conditions (approximately Level 1 or higher), and 2) at the BDB conditions (i.e., radiation, temperature, humidity, post-seismic and post-shock conditions) that would be present if the SFP level were at the Level 2 and Level 3 datum points.	CNP plans to provide this information in the February 2014 update.
	b) A description of the methodology that will be used for determining the maximum allowed deviation from the instrument channel design accuracy that will be employed under normal operating conditions as an acceptance criterion for a calibration procedure to flag to operators and to technicians that the channel requires adjustment to within the normal condition design accuracy.	CNP plans to provide this information in the February 2014 update.

Overall Integrated Plan Open Item			Status
RAI-8 (Ref 6)	a)	A description of the capability and provisions the proposed level sensing equipment will have to enable periodic testing and calibration, including how this capability enables the equipment to be tested in-situ.	CNP plans to provide this information in the February 2014 update.
	b)	A description how such testing and calibration will enable the conduct of regular channel checks of each independent channel against the other, and against any other permanently-installed SFP level instrumentation.	CNP plans to provide this information in the February 2014 update.
	c)	A description of the calibration and functional checks that will be performed, the frequency at which they will be conducted with a discussion on the measures taken to detect when the instrumentation is operable but degraded, and how these surveillances will be incorporated into the plant surveillance program.	CNP plans to provide this information in the February 2014 update.
	d)	A description of the preventative maintenance tasks required to be performed during normal operation, and the planned maximum surveillance interval that is necessary to ensure that the channels are fully conditioned to accurately and reliably perform their functions when needed.	CNP plans to provide this information in the February 2014 update.
RAI-9 (Ref 6)	a)	The specific location for the primary and backup instrument channel display.	Complete. One instrument channel display is located in the Unit 1 control room; the second channel display is located in the Unit 2 control room. The channels are identical, and both are suitable for a primary or backup function.
	b)	If the primary or backup display location is other than the main control room, then provide justification for prompt accessibility to displays including primary and alternate route evaluation, habitability at display location(s), continual resource availability for personnel responsible to promptly read displays, and provisions for communications with decision-makers for the various SFP drain-down scenarios and external events.	Complete. One instrument channel display is located in the Unit 1 control room, the second channel display is located in the Unit 2 control room, no additional justification is required.

Overall Integrated Plan Open Item		Status
	c) The reasons justifying why the locations selected enable the information from these instruments to be considered "promptly accessible" to various drain-down scenarios and external events.	Complete. Both control rooms will be manned during normal, event, and post-event conditions and will facilitate display observation during normal operation and during implementation of post-event FLEX strategies.
RAI-10 (Ref 6)	Please provide the following: A list of the operating (both normal and abnormal response) procedures, calibration/test procedures, maintenance procedures, and inspection procedures that will be developed for use of the spent fuel pool instrumentation in a manner that addresses the Order requirements. Please include a brief description of the specific technical objectives to be achieved within each procedure. If your plan incorporates the use of portable spent fuel level monitoring components, please include a description of the objectives to be achieved with regard to the storage location and provisions for installation of the portable components, when needed.	CNP plans to provide this information in the February 2014 update.
RAI-11 (Ref 6)	a) Further information describing the maintenance and testing program the licensee will establish and implement to ensure that regular testing and calibration is performed and verified by inspection and audit to demonstrate conformance with design and system readiness requirements. Include a description of your plans for ensuring that necessary channel checks, functional tests, periodic calibration, and maintenance will be conducted for the level measurement system and its supporting equipment.	CNP plans to provide this information in the February 2014 update.
	b) A description of how the guidance in NEI 12-02, Section 4.3, regarding compensatory actions for one or both non-functioning channels will be addressed.	CNP plans to provide this information in the February 2014 update.
	c) A description of what compensatory actions are planned in the event that one of the instrument channels cannot be restored to functional status within 90 days.	CNP plans to provide this information in the February 2014 update.

Draft Safety Evaluation Open Item	Status
None	

7 Potential Draft Safety Evaluation Impacts

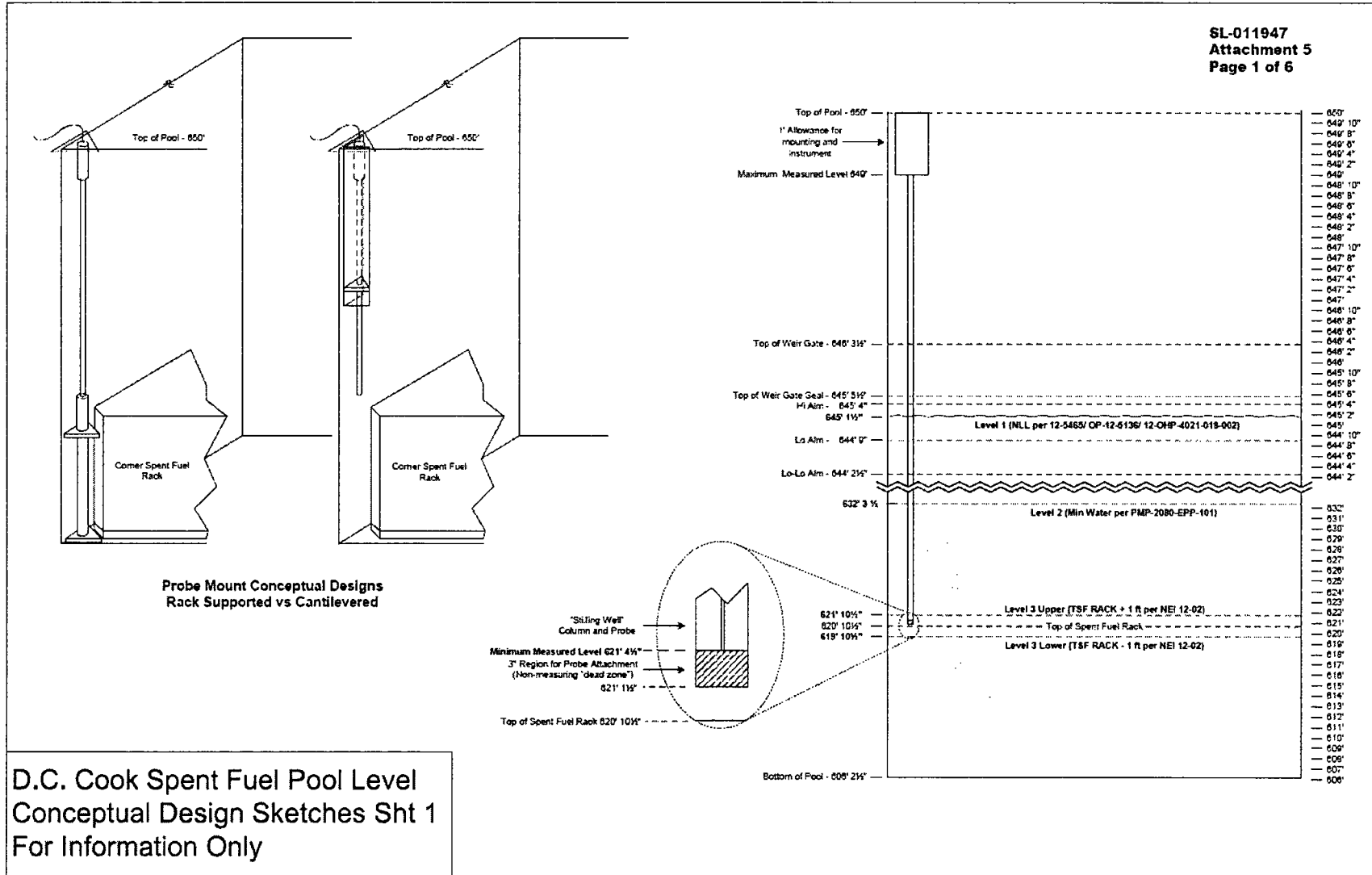
CNP has not yet received a Draft Safety Evaluation; therefore, no potential impacts can be determined.

8 References

The following references support the updates to the OIP described in this attachment.

1. I&M’s Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051),” dated February 27, 2013 (AEP-NRC-2013-14).
2. NRC Order Number EA-12-051, “Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation,” dated March 12, 2012.
3. Sargent & Lundy Project No. 12105-405 Notes of Meeting, “Spent Fuel Pool Level Conceptual Design Kick-off – June 6, 2013.”
4. I&M Purchase Order (PO) 01560122 issued July 2, 2013 to Mohr Test and Measurement LLC.
5. I&M EC-52892 “Conceptual Design - Spent Fuel Pool Level for NRC Order EA-12-051”.
6. Letter from Thomas J. Wengert, NRC, to Lawrence J. Weber, I&M, “Donald C. Cook Nuclear Plant, Units 1 and 2 – Request for Additional Information on the Overall Integrated Plan in Response to Order EA-12-051 Concerning Reliable Spent Fuel Pool Instrumentation (TAC Nos. MF0761 and MF0762),” dated June 19, 2013 (ADAMS Accession No. ML13164A381).
7. Donald C. Cook Nuclear Plant Units 1 and 2 Response to Request for Additional Information Regarding the Overall Integrated Plan in Response to Order EA-12-051, “Issuance of Order to Modify Licenses with Regard to Reliable Spent Fuel Pool Instrumentation”, dated July 11, 2013 (AEP-NRC-2013-57).

Figure 1



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**Figure 2
Enclosure To
AEP-NRC-2013-72**

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AEP-NRC-3013-72**

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