

WOLF CREEK

NUCLEAR OPERATING CORPORATION

John P. Broschak
Vice President Engineering

August 28, 2013
ET 13-0026

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

- References:
- 1) Letter dated March 12, 2012, from E. J. Leeds and M. R. Johnson, USNRC, to M. W. Sunseri, WCNOC, "Issuance of Order to Modify Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation"
 - 2) NRC Interim Staff Guidance JLD-ISG-2012-03, Compliance with Order EA-12-051, "Reliable Spent Fuel Pool Instrumentation," Revision 0, dated August 29, 2012
 - 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
 - 4) Letter ET 12-0028, dated October 29, 2012, from J. P. Broschak, WCNOC, to USNRC
 - 5) Letter WO 13-0015, dated February 28, 2013, from R. A. Smith, WCNOC, to USNRC

Subject: Docket No. 50-482: Wolf Creek Nuclear Operating Corporation's First Six-Month Status Report in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Instrumentation (Order EA-12-051)

Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC, Commission) issued an order (Reference 1) to Wolf Creek Nuclear Operating Corporation (WCNOC). Reference 1 was immediately effective and directs WCNOC to install 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 (OIP) 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.

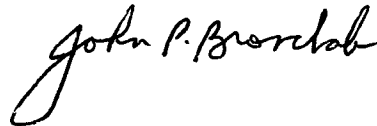
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Reference 4 provided the WCNOC initial status report regarding mitigation strategies. Reference 5 provided the WCNOC OIP.

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. 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. The attached report provides an update of milestone accomplishments since the submittal of the OIP, including any changes to the compliance method, schedule, or need for relief and the basis, if any.

This letter contains no commitments. If you have any questions concerning this matter, please contact me at (620) 364-4085, or Mr. Michael J. Westman at (620) 364-4009.

Sincerely,



John P. Broschak

JPB/rlt

Attachment

cc: C. F. Lyon (NRC), w/a
N. F. O'Keefe (NRC), w/a
S. A. Reynolds (NRC), w/a
Senior Resident Inspector (NRC), w/a

STATE OF KANSAS)
) SS
COUNTY OF COFFEY)

John P. Broschak, of lawful age, being first duly sworn upon oath says that he is Vice President Engineering of Wolf Creek Nuclear Operating Corporation; that he has read the foregoing document and knows the contents thereof; that he has executed the same for and on behalf of said Corporation with full power and authority to do so; and that the facts therein stated are true and correct to the best of his knowledge, information and belief.

By John P. Broschak
John P. Broschak
Vice President Engineering

SUBSCRIBED and sworn to before me this 28th day of August, 2013.

Gayle Shephard
Notary Public



Expiration Date 7/24/2015

Wolf Creek Nuclear Operating Corporation's First Six-Month Status Report for the Implementation of Order EA-12-051, "Issuance of Order to Modify Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation"

Wolf Creek Nuclear Operating Corporation (WCNOC) developed an Overall Integrated Plan (OIP) (Reference 1), documenting the modification with regard to Reliable Spent Fuel Pool (SFP) Instrumentation in response to Reference 2. This attachment provides an update of milestone accomplishments since submittal of the OIP, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

Milestone Accomplishments

WCNOC has selected and entered into a purchase agreement to procure SFP level instruments that, when installed, will meet criteria designated in the OIP (Reference 1).

Milestone Schedule Status

There are no changes to the status of the milestones submitted in the OIP (Reference 1). Provided is the activity status of each item, and whether the expected completion date has changed. The dates are planning dates and are subject to change as design and implementation details are developed.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date
Commence Engineering and Design	1Q2013	Complete	-
Complete Design	4Q2013	In Progress	-
Submit 6 Month Updates:			
Update 1	Aug 2013	Complete	-
Update 2	Feb 2014	Not Started	-
Update 3	Aug 2014	Not Started	-
Update 4	Feb 2015	Not Started	-
Receipt of SFP Instruments	3Q2014	Not Started	-
Complete SFP Instrumentation Procedures & Training	4Q2014	Not Started	-
SFP Instruments Operational	1Q2015	Not Started	-

Changes to Compliance Method

There are no changes to the compliance method as documented in the OIP (Reference 1).

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

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

Open Request for Additional Information (RAI)

The table below lists the open RAI and the responses from Reference 4 requiring additional information in the February 2014 status update. Italicized text denotes that the RAI response requires further activities.

RAI #	Open Request for Additional Information	Response
RAI-6	<p>Please provide the following:</p> <ul style="list-style-type: none"> a) A description of the electrical AC power sources and capacities for the primary and backup channels, demonstrating that the loss of one normal AC power supply will not affect both channels of level instrumentation. b) Since both channels will be powered by independent batteries following a loss of AC power, please 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 [Beyond-Design-Basis] event for the minimum duration needed, consistent with the plant mitigation strategies for BDB external events (Order EA-12-049). 	<p>Responses provided in Reference 4:</p> <ul style="list-style-type: none"> a) <i>A description of the electrical AC power sources and capacities for the primary and backup channels will be developed as part of the detailed design and more information will be provided in the 6-month status update in February 2014.</i> b) Battery sizing is in accordance with IEEE 485-2010. Design criteria applied are: continuous system operation for 72 hours following loss of AC power. Calculation of system power consumption is based on the specified values listed in component manufacturer specifications. A 10% capacity margin is added to battery sizing calculations, following guidelines of IEEE 485-2010, Section 6.2.2. The time to restore AC power to the primary and backup channels will be within 72 hours, and will be established in the diverse and flexible coping strategies (FLEX) Support Guidelines.
RAI-7	<p>Please provide the following:</p> <ul style="list-style-type: none"> a) An estimate of the expected instrument channel accuracy performance (e.g., in percent of span) under both a) normal SFP [Spent Fuel Pool] level conditions (approximately Level 1 or higher) 	<p>Responses provided in Reference 4:</p> <ul style="list-style-type: none"> a) <i>The instrument channel accuracy will be established during the design phase. An estimate of the expected instrument channel accuracy under normal and BDB conditions will be provided in the 6-month update in February 2014.</i>

RAI #	Open Request for Additional Information	Response
	<p>and b) 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.</p> <p>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.</p>	<p>b) <i>The calibration procedure, and the methodology and basis for establishing both the criteria indicating the need for recalibration, and the acceptance criterion to be used with the procedure, will be established during the design phase. The methodology for defining these criteria will be provided in the 6-month status update in February 2014.</i></p>
RAI-8	<p>Please provide the following:</p> <p>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.</p> <p>b) A description of 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.</p> <p>c) A description of how calibration tests and functional checks will be performed and the frequency at which they will be conducted. Please discuss how these surveillances will be incorporated into the plant surveillance program.</p> <p>d) A description what preventative maintenance tasks are 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</p>	<p>Responses provided in Reference 4:</p> <p>a) <i>Details of the capabilities and provisions of the level instrumentation for periodic calibration and testing will be established during the design phase. A description of these features and the way they will support in-situ testing will be provided in the 6-month status update in February 2014.</i></p> <p>b) <i>A description of how the defined 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 will be provided in the 6-month status update in February 2014.</i></p> <p>c) <i>Details of functional checks and instrument channel calibrations will be determined during the design phase. A description of how functional checks and calibration tests will be performed, and the frequency at which they will be conducted, will be provided in the 6-month status update in February 2014. An explanation of how these surveillances will be incorporated into the plant surveillance program will be included.</i></p> <p>d) <i>The preventative maintenance tasks</i></p>

RAI #	Open Request for Additional Information	Response
	functions when needed.	<i>required to be performed during normal operation, and the planned surveillance intervals will be determined during the design phase. A description of these tasks and intervals will be provided in the 6-month status update in February 2014.</i>
RAI-11	<p>Please provide the following:</p> <ul style="list-style-type: none"> 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. Please include a description of the licensee's 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. 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. c) A description of the compensatory actions to be taken in the event that one of the instrument channels cannot be restored to functional status within 90 days. 	<p>Responses provided in Reference 4:</p> <ul style="list-style-type: none"> a) <i>Appropriate quality assurance measures will be applied to the SFPIS [Spent Fuel Pool Instrumentation System], consistent with NEI 12-02, Appendix A-1, which includes criteria for procedures, test control, corrective actions and audit functions. WCNOG will establish and implement procedures for control and scheduling for SFPIS maintenance and testing. The new procedure(s) will include requirements for the necessary tests to be performed, frequency of testing and, acceptance criteria. As these procedures are developed, information will be provided to the NRC in the 6-month status update in February 2014.</i> b) WCNOG will implement measures to minimize the possibility of either the primary or backup channel being out of service for any extended period. Sufficient spare components and materials will be maintained to enable timely repair or replacement of defective components. WCNOG will follow the NEI 12-02 guidance with regard to the time during which one or more channels may be out of service. c) If a channel is non-functional, a corrective action document will be initiated and actions taken to correct the deficiency within 90 days as described in NEI 12-02. The technology selected for level instrumentation is easily replaceable, as components are passive and modular. Sufficient spares will be available on-site and the vendor can supply parts in a timely manner.

References

1. WCNOC Letter WO 13-0015, "Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements For Reliable Spent Fuel Pool Instrumentation," February 28, 2013. ADAMS Accession No. ML13071A419.
2. Letter from E. J. Leeds and M. R. Johnson, USNRC, to M. W. Sunseri, WCNOC, "Issuance of Order to Modify Licenses with Regard to Requirements for Reliable Spent Fuel Pool Instrumentation," March 12, 2012. ADAMS Accession No. ML12056A044.
3. Letter from C. F. Lyon, USNRC to M. W. Sunseri, WCNOC, "Wolf Creek Generating Station - Request for Additional Information RE: Overall Integrated Plan in Response to Order EA-12-051, 'Reliable Spent Fuel Pool Instrumentation' (TAC NO. MF0781)" July 17, 2013. ADAMS Accession No. ML13197A205.
4. WCNOC Letter ET 13-0025, "Wolf Creek Nuclear Operating Corporation's Response to Request for Additional Information Regarding Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Reliable Spent Fuel Pool Level Instrumentation," August 15, 2013.