WOLF CREEK
NUCLEAR OPERATING CORPORATION

John P. Broschak
Vice President Engineering

January 28, 2014
ET 14-0006

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, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident"

2) Letter dated May 31, 2012 from D. L. Skeen, USNRC, to A. P. Heymer, NEI, "Endorsement of Nuclear Energy Institute (NEI) 12-07, Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features"

3) Letter ET 12-0013, dated June 5, 2012, from J. P. Broschak, WCNOC, to USNRC

4) Letter ET 12-0031, dated November 27, 2012, from J. P. Broschak, WCNOC, to USNRC

5) Letter dated December 23, 2013, from R. J. Pascarelli, USNRC, to M. W. Sunseri, WCNOC, "Request for Additional Information Associated with Near-Term Task Force Recommendation 2.3, Flooding Walkdowns"

Subject: Docket No. 50-482: Response to Request for Additional Information Associated with Near-Term Task Force Recommendation 2.3, Flooding Walkdowns

Gentlemen:

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Reference 1 to all power reactor licensees and holders of construction permits in active or deferred status and specifically issued a 10 CFR 50.54(f) letter to Wolf Creek Nuclear Operating Corporation (WCNOC). In Reference 3, WCNOC confirmed that it will use the flooding walkdown procedure endorsed by Reference 2 as the basis for performing flooding walkdowns at Wolf Creek

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Generating Station. Reference 4 provided WCNOC's final response to Reference 1, Enclosure 4, "Recommendation 2.3: Flooding." Reference 5 transmitted a Request for Additional Information (RAI) associated with Recommendation 2.3. The attachment to this letter provides WCNOC's response to the RAI.

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: M. L. Dapas (NRC), w/a
E. J. Leeds (NRC), w/a
C. F. Lyon (NRC), w/a
N. F. O'Keefe (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 January, 2014.

Gayle Shepheard
Notary Public

CAYLE SHEPHEARD
Notary Public - State of Kansas
My Appt. Expires 7/24/2015

Expiration Date 7/24/2015

**Response to Request for Additional Information**

The Nuclear Regulatory Commission (NRC) issued Reference 1 to all power reactor licensees and holders of construction permits in active or deferred status and specifically issued a 10 CFR 50.54(f) letter to Wolf Creek Nuclear Operating Corporation (WCNOC). In Reference 3, WCNOC confirmed that it will use the flooding walkdown procedure endorsed by Reference 2 as the basis for performing flooding walkdowns at Wolf Creek Generating Station. Reference 4 provided WCNOC's final response to Reference 1, Enclosure 4, "Recommendation 2.3: Flooding." Reference 5 transmitted a Request for Additional Information (RAI) associated with Recommendation 2.3. This attachment provides WCNOC's response to the RAI. The specific NRC questions are shown in italic type.

1. *Confirmation that the process for evaluating the APM was reviewed.*

**Response:** Wolf Creek Nuclear Operating Corporation has completed a review of the process used at Wolf Creek Generating Station to evaluate available physical margin (APM).

2. *Confirmation that the APM process is now or was always consistent with the guidance in NEI 12-07 and discussed in this RAI.*

**Response:** The original walkdown effort followed the guidance provided in NEI 12-07, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features." However, a small margin evaluation had not been performed for any of the flood protection features. Although a small margin value was not pre-established, the original walkdown effort confirmed that the seals can perform their intended safety function against floods up to the current licensing basis flood height. Condition Report (CR) 78295 has been entered into the corrective action program to perform a small margin evaluation for specific flood protection features in accordance with NEI 12-07, Section 5.8.

3. *If changes are necessary, a general description of any process changes to establish this consistency.*

**Response:** A small margin value will be defined. APMs calculated during the walkdown will then be compared to the small margin value. Any flood protection feature found to have small margin will be identified and entered into the corrective action program.

*4. As a result of the audits and subsequent interactions with industry during public meetings, NRC staff recognized that evaluation of APM for seals (e.g., flood doors, penetrations, flood gates, etc.) was challenging for some licensees. Generally, licensees were expected to use either Approach A or Approach B (described below) to determine the APM for seals:*

*a) If seal pressure ratings were known, the seal ratings were used to determine APM (similar to example 2 in Section 3.13 of NEI 12-07). A numerical value for APM was documented. No further action was performed if the APM value was greater than the pre-established small-margin threshold value. If the APM value was small, an assessment of "significant consequences" was performed and the guidance in NEI 12-07 Section 5.8 was followed.*

*b) If the seal pressure rating was not known, the APM for seals in a flood barrier is assumed to be greater than the pre-established small-margin threshold value if the following conditions were met: (1) the APM for the barrier in which the seal is located is greater than the small-margin threshold value and there is evidence that the seals were designed/procured, installed, and controlled as flooding seals in accordance with the flooding licensing basis. Note that in order to determine that the seal has been controlled as a flooding seal, it was only necessary to determine that the seal configuration has been governed by the plant's design control process since installation. In this case, the APM for the seal could have been documented as "not small".*

*As part of the RAI response, state if either Approach A or Approach B was used as part of the initial walkdowns or as part of actions taken in response to this RAI. No additional actions are necessary if either Approach A or B was used.*

*If neither Approach A or B was used to determine the APM values for seals (either as part of the walkdowns or as part of actions taken in response to this RAI), then perform the following two actions:*

- *Enter the condition into the CAP (note: it is acceptable to utilize a single CAP entry to capture this issue for multiple seals). CAP disposition of "undetermined" APM values for seals should consider the guidance provided in NEI 12-07, Section 5.8. The CAP disposition should confirm all seals can perform their intended safety function against floods up to the current licensing basis flood height. Disposition may occur as part of the Integrated Assessment. If an Integrated Assessment is not performed, determine whether there are significant consequences associated with exceeding the capacity of the seals and take interim action(s), if necessary, via the CAP processes. These actions do not need to be complete prior to the RAI response.*

- *Report the APM as "undetermined" and provide the CAP reference in the RAI response*

**Response:** Approach A was used to determine the APM values for seals. Seal ratings were used to determine APM and a numerical value for APM was documented. Although a small margin value was not pre-established, the original walkdown effort confirmed that the seals can perform their intended safety function against floods up to the current licensing basis flood height. CR 78295 has been entered into the corrective action program to perform a small margin evaluation for specific flood protection features in accordance with NEI 12-07, Section 5.8.

**References:**

1. Letter from E. J. Leeds and M. R. Johnson, USNRC, to M. W. Sunseri, WCNOC, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," March 12, 2012; ADAMS Accession No. ML12053A340.

2. Letter from D. L. Skeen, USNRC, to A. P. Heymer, NEI, "Endorsement of Nuclear Energy Institute (NEI) 12-07, Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features," May 31, 2012.

3. WCNOC letter ET 12-0013, "Wolf Creek Nuclear Operating Corporation's 90-day Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.3, Flooding, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," June 5, 2012; ADAMS Accession No. ML12165A244.

4. WCNOC letter ET 12-0031, "Wolf Creek Nuclear Operating Corporation 180-day Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Recommendation 2.3 (Flooding) of the Near- Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," November 27, 2012; ADAMS Accession No. ML12340A397.

5. Letter from R. J. Pascarelli, USNRC, to M. W. Sunseri, WCNOC, "Request for Additional Information Associated with Near-Term Task Force Recommendation 2.3, Flooding Walkdowns," December 23, 2013; ADAMS Accession No. ML13325A891.