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10 CFR 50.54(f)

January 30, 2014

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-001

SUBJECT: Comanche Peak Nuclear Power Plant (CPNPP) Docket Nos. 50-445 And 50-446 Submittal of Requested Information Regarding Near-Term Task Force Recommendation 2.3 Flooding – Review of Available Physical Margin (APM) Assessments

- References:**
1. NRC Letter, 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; dated March 12, 2012, Accession No. ML12073A348.
 2. NRC Letter to Nuclear Energy Institute, Endorsement of Nuclear Energy Institute (NEI) 12-07, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features," dated May 31, 2012, Accession No. ML12144A142.
 3. Luminant Generation Company LLC's Letter TXX-12177, 120-Day Response to NRC Request for Information Pursuant to 10CFR50.54(f) Regarding the Flooding Aspects of Recommendation 2.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident, dated November 27, 2012 Accession No. ML12340A433
 4. NRC Letter, Request for Additional Information Associated with Near-Term Task Force Recommendation 2.3, Flooding Walkdowns; dated December 23, 2013, Accession No. ML13325A891

Dear Sir or Madam:

On March 12, 2012, the U. S. Nuclear Regulatory Commission (NRC) staff issued Reference 1 requesting information pursuant to 10 CFR 50.54(f). In Enclosure 4 of Reference 1, the NRC staff requested that licensees perform flood protection walkdowns associated with Near-Term Task Force Recommendation 2.3 for Flooding, and report the results to the NRC. By Reference 2, the NRC endorsed Nuclear Energy Institute (NEI) 12-07 as providing acceptable guidelines for performing walkdowns of plant flood protection features. By Reference 3, Luminant Generation Company, LLC (Luminant Power) submitted a final walkdown report for Comanche Peak Nuclear Power Plant (CPNPP) Units 1 & 2 in response to the Reference 1 request for information.

Following the NRC staff's initial review of reports documenting the results of licensee flood protection walkdowns, regulatory site audits were conducted at a sample of plants. Based on the walkdown report reviews and site audits, the staff identified additional information necessary to allow the staff to complete

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its assessments. The NRC observed that several licensees did not always determine and document Available Physical Margin (APM) in a consistent manner that met the expected interpretation of NEI 12-07. Reference 4 transmitted an NRC request for additional information (RAI) regarding the determination and documentation of APM. Luminant Power's response to the Reference 4 RAI for Comanche Peak Nuclear Power Plant (CPNPP) Units 1 & 2 is attached to this letter.

This letter contains no new regulatory commitments.

If there are any questions regarding this plan, please contact Mr. Carl B. Corbin at (254) 897-0121 carl.corbin@luminant.com.

I state under penalty of perjury that the foregoing is true and correct.

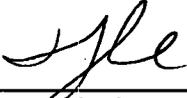
Executed on January 30, 2014.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By:



Thomas P. McCool
Vice President, Station Support

Attachment: Comanche Peak Nuclear Power Plant (CPNPP) Response to
Request for Additional Information Regarding Flooding Walkdown APM
Assessments

c - E. J. Leeds, Director, Office of Nuclear Reactor Regulation
Marc L. Dapas, Region IV
Jessica A. Kratchman, NRR/JLD/PMB
Balwant K. Singal, NRR
Resident Inspectors, Comanche Peak

**Comanche Peak Nuclear Power Plant (CPNPP) Response to
Request for Additional Information Regarding Flooding Walkdown APM Assessments**

The specific information requests as stated in the Reference 1 RAI are presented in italics below, followed by the corresponding Luminant Generation Company, LLC (Luminant Power) response. The list of reference is provided at the end of this attachment.

Please provide the following:

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

Response – Luminant Power confirms that it has reviewed the process for evaluating 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 – Luminant Power confirms that the APM evaluation process was, and remains, consistent with the guidance provided in NEI 12-07 (Reference 2) and discussion in the Reference 1 RAI.

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

Response – No changes are necessary to establish consistency with the guidance in NEI 12-07 and discussion in the Reference 1 RAI.

4. *[First Part] 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.

Response – Luminant Power inspected penetrations in below-grade exterior walls, floors and ceilings of safety related buildings as part of the flood protection walkdowns. As detailed below, the determination of APM for subgrade penetration seal locations is not required for Comanche Peak Nuclear Power Plant (CPNPP) Units 1 & 2 by NEI 12-07.

Details - The flood protection features that are within the scope of the NEI 12-07 walkdowns are those features credited for protection and mitigation from external flood events in a plant's current licensing basis (CLB). This is explicitly stated in several sections of NEI 12-07 (e.g. Section 4.1.1). As stated in NEI 12-07 Section 3.13, APM describes the flood margin available for applicable flood protection features. Based on the stated scope of NEI 12-07, the "applicable flood protection features" for which APM determinations are required are those credited in the plant's CLB.

The CLB for CPNPP conforms to the guidelines of Regulatory Guide 1.102 (Reference 3). As documented in CPNPP FSAR (Reference 4) Section 1.0, Appendix 1A(B) regarding conformance to NRC Regulatory Guides, plant grade for the CPNPP site is located above the PMF level, and Category I structures, with the exception of the Service Water Intake Structure and the Electrical and Control Building, are not subject to flooding. The operating deck and safety-related equipment in the Service Water Intake Structure are located above the PMF level. Flooding of the Electrical and Control Building is prevented by the use of incorporated barriers (i.e., isolation valves and/or stop-gates) and operating procedures to verify credited flood protection features/barriers are in place.

As discussed in FSAR Section 3.4.1 regarding external flood events and flood protection, seismic Category I equipment, systems, and components are enclosed within structures that are either:

- Located above the probable maximum flood (PMF) level and do not require protection from flooding, or
- Located within structures where the plant grade is at a higher elevation than the PMF level or ground flooding condition and doors and entries into these structures are located above plant grade, or
- Protected from flooding by administrative controls to verify flood protection features that are out of service for maintenance are installed in their credited configuration to preclude flooding propagation to any plant area located below the PMF.

Consistent with CPNPP design, subgrade penetration seals located in the exterior walls, floors and ceilings of seismic Category I structures are not required to be leak tight at full design differential pressure. Therefore, no credit was taken for the seals' pressure retaining capability and APM values were not required by NEI 12-07. Such seal locations are required to maintain their structural integrity to ensure that the seal itself does not provide a flow path for the transmission of sufficient fluid to an adjacent area to substantially change the environment in that adjacent area. Where seismic Category I equipment, systems, and components are located below plant grade, the design relies on gravity flow and the existing floor drain and sump pump system to handle the minute amounts of water which could leak into the structures due to groundwater seepage.

The Flooding Walkdown Report transmitted by Reference 5 noted that, although not explicitly credited in the CLB as a flood protection feature, subgrade penetration locations were considered within the scope of CPNPP flood protection walkdowns. The penetration locations were visually inspected for seal material degradation and integrity and for evidence of water penetration.

Subgrade penetrations found to be in a condition where seal integrity was questionable or where there was evidence of groundwater seepage were entered into the Corrective Action Program for further evaluation. No conditions were observed that indicated rooms in seismic Category I structures below the design groundwater levels or the equipment contained within them could

be inundated by groundwater. Below grade seismic Category I design features including penetration seals are designed, installed and controlled in accordance with the plant's design configuration control processes.

4. *[Second Part] 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 – As described above, determination of seal APM values for Comanche Peak Nuclear Power Plant (CPNPP) Units 1 & 2 is not required by NEI 12-07. Luminant Power therefore considers that no condition adverse to quality exists with respect to the processes used to determine and document APM values for penetration seals, and that a Corrective Action Program entry is not required.

References:

1. NRC Letter, Request for Additional Information Associated with Near-Term Task Force Recommendation 2.3, Flooding Walkdowns; dated December 23, 2013, Accession No. ML13325A891
2. Nuclear Energy Institute (NEI) 12-07, Revision 0, "Guidelines for Performing Verification Walkdowns of Plant Flood Protection Features," dated May 2012, Accession No. ML12144A401.
3. NRC Regulatory Guide 1.102, "Flood Protection for Nuclear Power Plants," Revision 1, September 1976
4. CPNPP Final Safety Analysis Report
5. Luminant Generation Company LLC's Letter TXX-12177, 120-Day Response to NRC Request for Information Pursuant to 10CFR50.54(f) Regarding the Flooding Aspects of Recommendation 2.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident, dated November 27, 2012 Accession No. ML12340A433