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CP-201500810
Log # TXX-15122

REF 10 CFR 2.202

August 13, 2015

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

SUBJECT: Comanche Peak Nuclear Power Plant, Docket Nos. 50-445 and 50-446,
Compliance with NRC Order Modifying Licenses with Regard to Reliable Spent Fuel
Pool Instrumentation, Response to Request for Additional Information
(Order Number EA-12-051) (TAC NOS. MF0862 AND MF0863)

REFERENCE: 1. Luminant Generation Company LLC Letter TXX-15087, Response to Request for
Additional Information regarding Compliance with NRC Order Modifying Licenses
with Regard to Reliable Spent Fuel Pool Instrumentation (Order Number EA-12-051),
dated June 11, 2015.

Dear Sir or Madam:

Reference 1 provided a response to an NRC Request for Additional Information dated April 24,
2015 (ML15103A674). Reference 1 also indicated that Luminant Power would provide an
updated response regarding the discussion of transmitter mounting in RAI No. 2 by
August 13, 2015.

The purpose of this letter is to provide Luminant Power's updated response regarding the
discussion of transmitter mounting in RAI No. 2 (Attachment to this letter).

This letter contains no new regulatory commitments.

If you have any questions regarding this response, please contact Carl B. Corbin at (254) 897-0121
or carl.corbin@luminant.com.

ADD
NRR

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

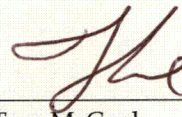
Executed on August 13, 2015.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By: _____



Tom McCool
Vice President
Engineering and Support

Attachment Response to NRC RAIs Regarding CPNPP Compliance Report for
Order EA-12-051

c - William M Dean, Director, Office of Nuclear Reactor Regulation
 Marc L. Dapas, Region IV
 Jessica A. Kratchman, NRR/JLD/PMB
 Stephen A. Monarque, NRR
 Balwant K. Singal, NRR
 Lois M. James, NRR
 Resident Inspectors, Comanche Peak

NRC RAI No. 2:

Order EA-12-051, Attachment 2, Section 1.3 states:

Mounting: Installed instrument channel equipment within the spent fuel pool shall be mounted to retain its design configuration during and following the maximum seismic ground motion considered in the design of the spent fuel pool structure.

In its November 4, 2013, ISE and RAI letter to CPNPP, the NRC staff stated the following in RAI No. 3:

Please provide the results of the analyses used to verify the design criteria and methodology for seismic testing of the SFP instrumentation and the electronics units, including, design basis maximum seismic loads and the hydrodynamic loads that could result from pool sloshing or other effects that could accompany such seismic forces.

By letter dated December 16, 2014, Luminant provided the following response to RAI No 3:

Using the Level Transmitter maximum weight provided by Westinghouse drawing 10116D44 (VDRT-4749939) and the coaxial cable weight provided by Westinghouse specification WNA-DS-02957-GEN (VDRT-4770033), a conservative total load was taken. This load was compared to the allowable bolt loads per DBD-CS-015. Through the result of this comparison, the mounting was determined to adequately meet Seismic Category II requirements. The support and mounting for the Remote Display panels is qualified per site calculation CS-CA-0000-5519, Revision 0.

The SFPLIS conduit is field run and is supported with 0210-TC0-0002 drawing series typical supports. These supports are pre-qualified by calculation CS-CND-TC-TC0-0002 for Seismic Category II requirements.

Based on the response, the NRC staff found that the CPNPP Seismic Category II mounting for SFP level instrument does not meet the Order EA-12-051 mounting requirement. Even though the SFP level instrumentation system is non-safety related, the mounting shall be designed considering the maximum seismic ground motion to the design-basis of the SFPI structures to meet the requirements of the order.

The NRC staff requests additional information demonstrating that the SFP level instrument mountings meet the mounting requirements of Order EA-12-051. For each mounting and mounting support, information should be provided including CPNPP documentation with site specific conditions/assumptions, such as the site's design-basis response spectrum for each elevation, pool sizes (hydraulic/sloshing calculation for the probe and mounting bracket), etc. accounted for. Please make available on e-portal for NRC staff review the site-specific seismic calculations (not Westinghouse's generic calculations) for the following:

- Probes and mounting brackets including sloshing calculation
- Pull Boxes
- Transmitter mountings
- Electronics enclosures
- Conduit supports

Luminant Power Response to RAI No. 2:

TXX-15087 dated June 11, 2015, indicated that Luminant Power would provide relevant information for the transmitter mounting by August 13, 2015. The relevant information for transmitter mounting is provided below. All other information provided in the response to RAI No. 2 in TXX-15087 remains unchanged.

TRANSMITTER MOUNTING:

The four level transmitters, one per SFPLIS channel, provided by Westinghouse are located in the Auxiliary Building, well removed from the SFP and the SFP level instrumentation. The requirement of 1.3 in Attachment 2 of Order EA-12-051, and the guidance provided by Section 3.3 of NEI 12-02, therefore do not apply to the level transmitters. However, the mounting of the level transmitters should provide reasonable assurance that the SFP level instrument channels will be functional following an SSE. The reasonable assurance of functionality is provided by designing and installing the transmitters with a Seismic Category II mounting. Per CPNPP established processes and procedures as described in RAI #1's revised response in letter TXX-15087 dated June 11, 2015, the Seismic Category II mounting is designed for the FSAR described SSE in a manner similar to that of a Seismic Category I application.

The level transmitter mounting details are shown in FDA-2013-000008-25-03 on implementation drawing SK-0009-13-000008-25-01 and in Figure 2-6 below. The Seismic Category II qualification of the level transmitter mounting is documented in site calculation CS-CA-0000-5519, revision 1. The analysis of the SSE loads was conservatively based on the use of 1.5 times the peak of the in-structure acceleration response spectra from the 7% curves shown in Figure 2-3b below.

The weight of the level transmitter, its mounting bracket, tributary weight of cables and the conduit coupler was 30 lbs. The anchorage and mounting evaluations performed in CS-CA-0000-5519, revision 1, were conservatively based on a total weight of 40 lbs. The conservative SSE and self-weight loads resulted in a maximum anchor bolt tension of 163 lbs and a maximum shear of 50 lbs. The combined anchor bolt interaction ratio for the level transmitter was then computed to be 0.03 which is significantly less than the acceptance value of 1.0.

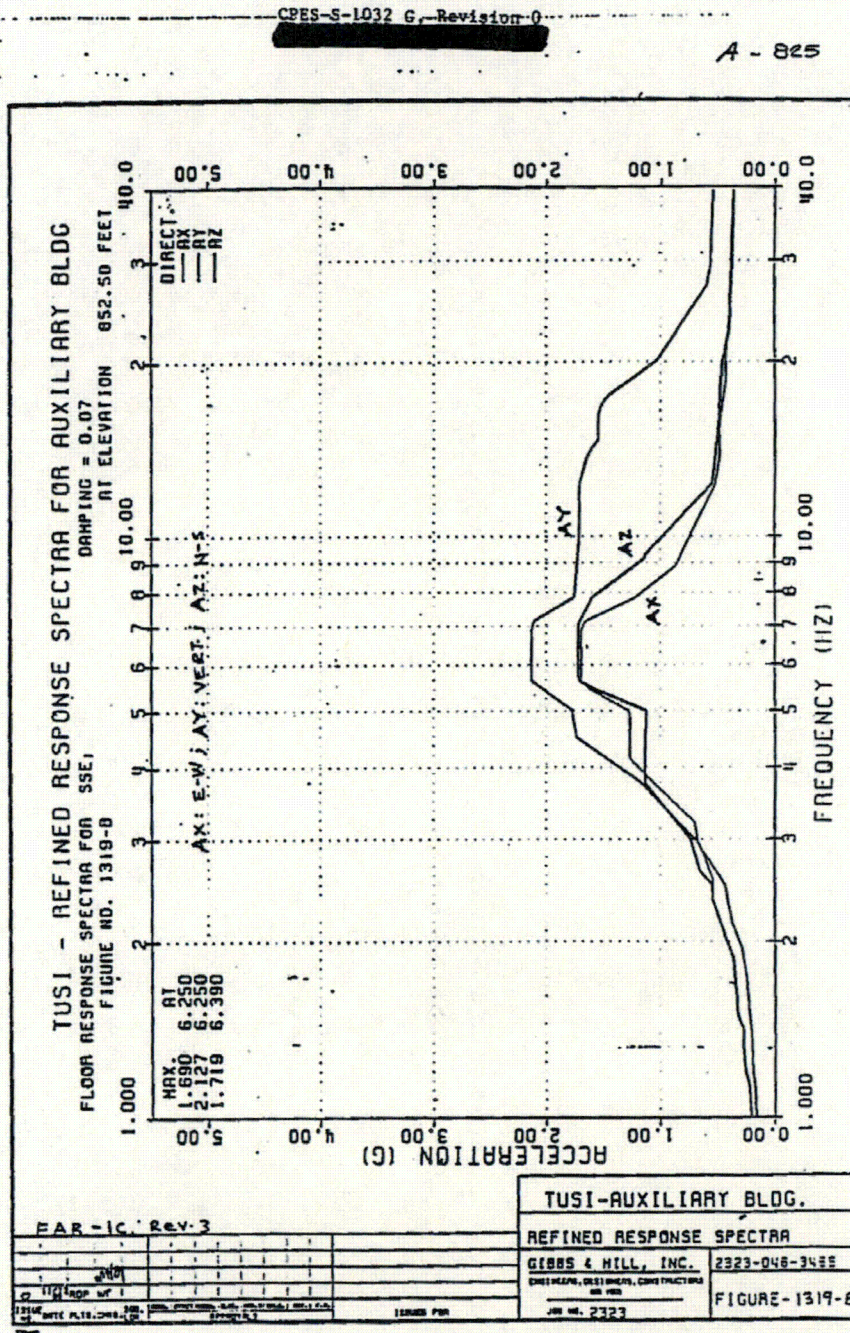
The mounting bolts that connect the level transmitter to the mounting bracket were similarly checked for the SSE and self-weight loads. The conservative SSE and self-weight loads resulted in a maximum mounting bolt tension of 140 lbs and a maximum shear of 100 lbs. The combined mounting bolt interaction ratio for the level transmitter was then computed to be 0.15 which is less than the acceptance value of 1.0.

Based on the information provided above for the SFP level transmitters, the mountings comply with the intent of the requirements of Order EA-12-051.

CONCLUSION:

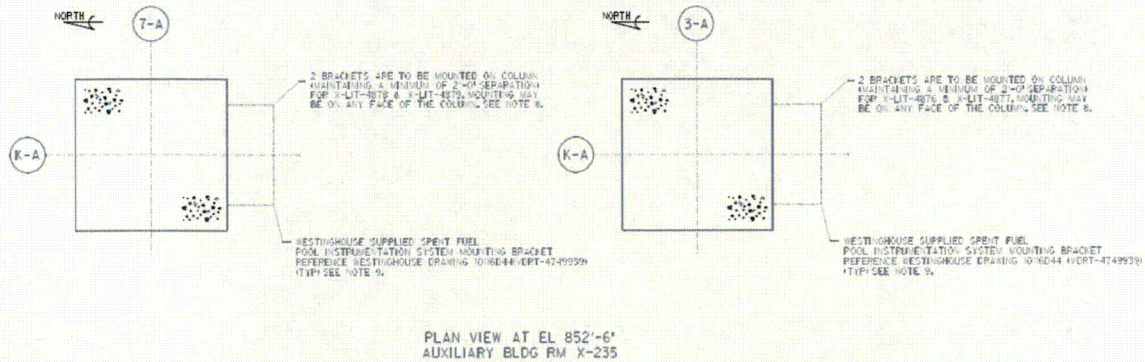
Based on the evaluations above, the SFP level transmitter anchorage and mounting were designed in accordance with the CPNPP requirements as a Seismic Category II component support. Supporting documentation referenced above (i.e., CS-CA-0000-5519 Rev 1, DBD-CS-085) has been uploaded to the Comanche Peak NRC virtual e-portal.

FIGURE 2-3b



Auxiliary Building EL 852' 7% SSE Acceleration Response Spectra Curves

FIGURE 2-6



NOTES:

1. ALL STRUCTURAL STEEL WORK IS NON-SAFETY SEISMIC CATEGORY II.
2. ALL STRUCTURAL STEEL WORK SHALL BE IN ACCORDANCE WITH SPECIFICATION 2323-SS-16B.
3. ALL STRUCTURAL STEEL IS A36/S436 AND HSS IS A500 GR B MATERIAL.
4. PAINTING SHALL BE DONE IN ACCORDANCE WITH SITE APPROVED PROCEDURES.
5. WELDING SHALL BE WITH ELECTRODES E70-XX AND PER SITE WELDING PROCEDURES.
6. CORE BORE ACTIVITY IS SAFETY RELATED SEISMIC CATEGORY I AND SHALL BE PERFORMED IN ACCORDANCE WITH SPECIFICATION 2323-SS-009, REV 16.
7. INSTALL SEALS IN THESE CORE BORES PER DRAWING MI-1900 SH -.
8. VDRT-4844932 SHOWS SENSOR ASSEMBLY CONNECTION AND BRACKET ORIENTATION.
9. BRACKET MOUNTED TO COLUMN USING $\frac{3}{8}$ " \varnothing KB3 $2\frac{1}{2}$ " MIN EMBEDMENT (4 PLACES). MOUNT 5'-0" ABOVE THE FLOOR (EL 852'-6") (+/- 1'-0").

Partials of SK-0009-13-000008-25-01 for Transmitter Mounting

[NOTE: Transmitters are not mounted on the same side of the column.

For column K-A / 7-A, transmitters X-LIT-4878 & X-LIT-4879 are on opposite sides of the column. (East and West)

For column K-A / 3-A, transmitters X-LIT-4876 & X-LIT-4877 are mounted on adjacent sides of the column. (South and West)]