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Ref. # 10CFR50.59
10CFR72.48

August 22, 2011

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

SUBJECT: COMANCHE PEAK NUCLEAR POWER PLANT
DOCKET NOS. 50-445 AND 50-446 AND 72-74
10CFR50.59 EVALUATION SUMMARY REPORT 016,
10CFR72.48 EVALUATION SUMMARY REPORT 001, AND
COMMITMENT MATERIAL CHANGE EVALUATION REPORT 010

Dear Sir or Madam:

Please find attached the report required by 10CFR50.59(d)(2) for those activities which were completed or partially completed at Comanche Peak Units 1 and 2 between August 1, 2009, and February 1, 2011, and which were not reported to the Nuclear Regulatory Commission (NRC) in a previous submittal. This report contains a brief description of the changes, tests and experiments implemented or performed pursuant to 10CFR50.59(c), including a summary of the evaluations for each. Items in this report are referenced by their 10CFR50.59 Evaluation Numbers. In addition, please find attached the report required by 10CFR72.48(d)(2) for those activities which were completed or partially completed at Comanche Peak Units 1 and 2 between August 1, 2009, and February 1, 2011. This report also includes certain activities completed pursuant to 10CFR50.59 and 10CFR72.48 after February 1, 2011.

Luminant Generation Company LLC (Luminant Power) did not make commitment material changes which require reporting for Comanche Peak Units 1 and 2 per the recommendations of Nuclear Energy Institute (NEI) document, "Guideline for Managing NRC Commitments," Revision 2. Therefore, no descriptions are provided for Commitment Material Change Evaluation Report 010.

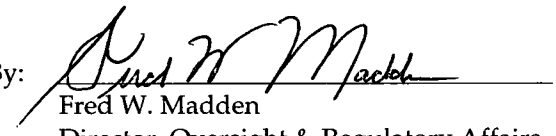
This communication contains no new commitments regarding Comanche Peak Units 1 and 2.

Should you have any questions, please contact J. D. Seawright at (254) 897-0140.

Sincerely,

Luminant Generation Company LLC

Rafael Flores

By: 
Fred W. Madden
Director, Oversight & Regulatory Affairs

Attachment-

c - E. E. Collins, Region IV
B. K. Singal, NRR
Resident Inspectors, Comanche Peak

10CFR50.59 Evaluations:

59EV-2007-003164-01-00

59EV-2007-003164-02-00

59EV-2009-000859-01-00

59EV-2011-000012-01-00

10CFR72.48 Evaluations:

EV-CR-2011-007002-00-15

EV-CR-2011-007002-00-14

CMCE Evaluations:

None

50.59 Evaluation No. - 59EV-2007-003164-01-00 **Units 1 and 2**

Title:
Replace existing Fuel Handling Bridge Crane with a new crane utilizing digital controls

Activity Description:
Design Modification DMA-2007-003164-01 (FDA-2007-003164-01 and FDA-2007-003164-02) replaces existing Fuel Handling Bridge Crane with a new crane because of long-standing operational problems with the existing crane. The 10CFR50.59 Screen performed determined the modification changes functionality of digital equipment in a way that increases complexity and makes changes to Human Machine Interface (HMI), and must be considered adverse. This evaluation addresses this issue.

Summary of Evaluation:
The digital equipment controlling the replacement Fuel Handling Bridge Crane (FHBC) underwent analysis, review, and testing in accordance with a Comanche Peak Nuclear Power Plant (CPNPP) procedure that addresses standards authorized for development of software systems discussed in Electric Power Research Institute (EPRI) technical report TR-102348 R1/Nuclear Energy Institute (NEI) 01-01, Guidelines for Licensing Digital Upgrades.

The results of this evaluation conclude that malfunctions of the digital equipment do not introduce new failure modes. The replacement FHBC, like the existing FHBC, is Seismic Category II. Design features added to the replacement FHBC enhance the ability of the crane to perform its design function discussed in Final Safety Analysis Report (FSAR) Section 9.1.4 of handling fuel assemblies within the spent fuel pools, refueling canal, and cask pits by means of a long-handled tool suspended from the hoist.

Automatic features added have been determined to enhance the controlling ability of the fuel handler without increasing the likelihood of an accident or malfunction. The limitation of crane motions, as described in FSAR Section 9.1.4, remains unchanged. Existing physical interlocks preventing the fuel handling upender from colliding with the fuel handling bridge crane have been replaced with electronic interlocks which have been determined to not increase the likelihood of an accident or malfunction.

This modification has been evaluated to not increase the likelihood of a fuel handling accident as evaluated in FSAR Chapter 15 or to create malfunctions of equipment such as electrical or heating ventilation and air conditioning (HVAC) systems previously evaluated in the FSAR. This evaluation concludes no new accidents, failure modes, or malfunctions are created by digital controls provided with the new FHBC.

50.59 Evaluation No. - 59EV-2007-003164-02-00 **Units 1 and 2**

Title:
Replaces existing Fuel Handling Bridge Crane with a new crane having two trolley/hoist assemblies

Activity Description:
Design Modification DMA-2007-003164-01 (FDA-2007-003164-01 and FDA-2007-003164-02) replaces existing Fuel Handling Bridge Crane with a new crane because of long-standing operational problems with the existing crane. The 10CFR50.59 Screen determined that installation of two trolley/ hoist assemblies resulted in the modification fundamentally altering existing means of controlling the loads above spent fuel which is considered adverse. This evaluation addresses this issue.

Summary of Evaluation:
Although the replacement Fuel Handling Bridge Crane (FHBC) has two trolley-hoist assemblies, redundant and diverse interlocks are provided to ensure the FHBC will not have ability to suspend more than one load (e.g. fuel assembly) at a time. No bypass functions are provided for these interlocks. In addition, the replacement FHBC complies with the same design requirements as the existing FHBC except as noted in design modification, and the same procedural controls are utilized. Consequently, there is no increase in the frequency of occurrence of accidents previously evaluated, and no more than a minimal increase in the frequency of occurrence of a malfunction of a SSC important to safety previously evaluated in the FSAR. No new accidents, failure modes, or malfunctions are created by having two trolley/hoist assemblies on the new FHBC.

50.59 Evaluation No. - 59EV-2009-000859-01-00 **Units 1 and 2**

Title:
Evaluate use of ANSYS versions 12.0, 12.1 and 13.0 by the Dry Cask vendor in lieu of ANSYS version 5.4

Activity Description:
Seismic and structural analyses were performed on ancillary equipment provided under 10 CFR 72 in order to demonstrate conformance with the Comanche Peak Final Safety Analysis Report (FSAR) requirements. Those ancillary equipment that are "special lifting devices" required analyses to demonstrate conformance with the Comanche Peak FSAR Heavy Loads Program per the Certificate of Compliance (CoC)1014, Revision7, Condition 5. Other ancillary equipment were required to demonstrate that they would not impact a safety related structures systems and components (SSC) or function through conformance with the Comanche Peak FSAR requirements for compliance with Position C.2 of Regulatory Guide 1.29 as Seismic Category II components. The required analyses were performed with ANSYS versions 12.0, 12.1 and 13.0. The Comanche Peak FSAR, Appendix 3.7B(A) described ANSYS version 5.4 as a general purpose finite element program used for seismic analyses and it is the most current version of the program. To use ANSYS versions 12.0, 12.1 and 13.0 for seismic analyses is a change in a methodology described in the Comanche Peak FSAR.

Summary of Evaluation:
The three versions of ANSYS used by the vendor to support the Dry Cask Storage Project were different than the versions described in the Comanche Peak FSAR. The newest Comanche Peak FSAR described version of ANSYS was version 5.4. The versions of ANSYS used for the Dry Cask Storage Project are versions 12.0, 12.1 and 13.0. A comparative evaluation was performed using the results obtained from the different versions executing a set of verification problems provided by ANSYS. The verification problems for the four different versions spanned a period of 13-years, three different computer operating systems, and several changes to the Fortran compiler. A set of 24 verification problems were identified as the basis for providing a like-for-like comparison between the four versions. The only time a verification problem common to all four versions was excluded from the comparison was when the problem changed from one finite element type to a newly developed element type, i.e., SHELL93 (version 5.4) to SHELL181 (version 12.0). The set of verification problems included solutions from static, transient and modal analyses. The initial comparison of the validation results found that the results for 17 validation problems were exactly identical in all four versions. Further review determined that the differences in 3 of the remaining 7 verification problems were within the 1-percent tolerance on accuracy expected by the ANSYS technical support staff. The differences in the results for the remaining 4 verification problems were attributed by the ANSYS technical staff to changes made either to improve program performance or to a change made to the verification problem which is not a change to the program. The conclusion of the evaluation was that the performance of ANSYS versions 12.0, 12.1 and 13.0 produce results that are essentially the same as ANSYS version 5.4 and their use does not constitute a change or departure in methodology as described in the Comanche Peak FSAR.

50.59 Evaluation No. - 59EV-2011-000012-01-00 **Units 1 and 2**

Title:
Technical Requirements Manual and procedure change for Maintenance activities which temporarily operate 'open' the hinged middle panel of Emergency Diesel Generator [EDG] tornado missile barrier.

Activity Description:
A Technical Requirements Manual (TRM) change (LDCR-TR-2011-001 under EV-CR-2010-004974-5) and procedure change to ODA-308-13.7.39-S01-R1-P0 is required for Maintenance activities which temporarily operate 'open' the hinged middle panel of Emergency Diesel Generator [EDG] tornado missile barrier with the EDG Operable. The change is needed to allow the door to be open for no greater than 12 hours under administrative controls. The Tornado Missile Barrier assembly consists of three structural steel plate panels joined together with splice plates to form a single missile resistant structure attached to the EDG building structural frame via bolted connections. The middle panel has an exterior hinge connection to facilitate ease and timeliness of opening/closing a section of the barrier. The evaluation is limited only to the middle panel to be unbolted and swing open for a limited duration of no greater than 12 hrs. The purpose of the limitations and controls established for opening the panel and closing it in a timely manner is to assure that the EDG Tornado Missile Barrier continue to perform its FSAR described design function.

Summary of Evaluation:
A change to TRM 13.7.29 and procedure ODA-308-13.7.39 will permit bolting for the middle missile barrier steel panel to be removed to swing open the panel at the hinged connection. This activity will be performed under administrative controls and strict conditions that must be met for the EDG to remain operable to perform its intended design function for at power operation.

The increase in the likelihood of a malfunction (i.e., inability to prevent a missile from entering the structure) is less than minimal since it is considered that adequate capability exist to secure the EDG Tornado Missile Barrier to perform its FSAR design function (FSAR Sections 3.5.1.4 and 3.1.1.2, structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions....) by restoring all bolting for the middle panel with its associated spliced plates in a timely manner. From the moment the unbolting occurs until the last bolt is secured, the time duration shall not exceed 12 hours with no forecast for Severe Weather up to 36 hours once unbolting of the middle panel structural bolts is initiated.

In the open configuration under administrative controls and conditions the missile resisting panels will maintain structural integrity during a seismic event as Seismic Category II per FSAR Section 3.2.1.2 and Table 17A-1 Sheet 39 & Notes B & 23.

72.48 Evaluation No. - EV-CR-2011-007002-00-15 **Rev. No. 0**

Activity Title:
Site-Specific Tornado Missile Evaluation (HI-2104637, Rev. 0, "Environment Hazard Evaluation for Comanche Peak HI-STORM")

Activity Description:
The tornado missile evaluation required per 10CFR72.212(b)(6) indicated that the site-specific tornado missiles and associated wind speeds specified in the Comanche Peak Nuclear Power Plant (CPNPP) Final Safety Analysis Report (FSAR) are not bounded by those described in the Final Safety Analysis Report for the HI-STORM 100 Cask System, Sections 2.2.3.5 (Tornado), 3.4.8 (Tornado Wind and Missile Impact), 11.2.3 (Tip Over), and 11.2.6 (Tornado). A site-specific analysis was performed to address this deviation.

Summary of Evaluation:
The deviation from the generic HI-STORM 100 Cask System FSAR by use of larger site-specific tornado missiles and velocities for CPNPP does not require prior Nuclear Regulatory Commission (NRC) approval. An analysis was performed using the larger site-specific tornado missile masses and velocities using the same methodology as described in the Final Safety Analysis Report for the HI-STORM 100 Cask System, Sections 2.2.3.5 (Tornado), 3.4.8 (Tornado Wind and Missile Impact), 11.2.3 (Tip Over), and 11.2.6 (Tornado). The site-specific tornado missile analysis shows that the cask can withstand the impact of site-specific tornado missiles without tipping over, suffering significant deformation or damage, or penetration which is consistent with the conclusions described in the HI-STORM 100 Cask System FSAR. The analysis demonstrated that the HI-STORM 100S at CPNPP does not require any change to the design in order to withstand the site-specific tornado missiles and that it would continue to perform all of its HI-STORM 100 Cask System FSAR described functions without a change in methodology or consequence.

72.48 Evaluation No. - EV-CR-2011-007002-00-14 **Rev. No. 0**

Activity Title:
Site-Specific Fire Hazard Evaluation (13769701-R-M-00002, Rev. 1, "Comanche Peak ISFSI Project Evaluation of Fire Hazards")

Activity Description:
The site-specific fire hazard at Comanche Peak Nuclear Power Plant (CPNPP) is not bounded by the generic fire hazard described in the HI-STORM 100 Cask System FSAR. The activity being evaluated is the site-specific fire hazard analysis, which represents a deviation from the cask FSAR. The fire analysis at CPNPP considers, in addition to the generically analyzed 50 gallons of diesel fuel from the cask transporter, the heat input from combustion of the Vertical Cask Transport (VCT) tires, lubricating oil, and hydraulic fluid in the VCT lifting system.

Summary of Evaluation:
This deviation from the generic HI-STORM 100 Cask System FSAR does not require prior NRC approval. There are no changes to the operating procedures in HI-STORM 100 Cask System FSAR Chapter 8 for carrying a loaded cask with a VCT or the design of the VCT or cask system that would make a fire accident more likely. Therefore, the frequency of the accident and the likelihood of a malfunction with a different result are not changed from those contemplated in the HI-STORM 100 Cask System FSAR. The results of the site-specific fire accident show that the Multi-Purpose Canister (MPC) confinement boundary remains intact and the potential loss of shielding due to fire damage to the overpack remains small. Therefore, the consequences of a fire accident or malfunction remain the same. Because the fire accident is already described in the cask FSAR, there is no new accident and no malfunction with a different result. The fuel cladding and MPC confinement boundary continue to meet the existing numerical design basis limits for performance. Therefore, a design basis limit for a fission product barrier as described in the HI-STORM 100 Cask System FSAR is not exceeded or altered. The analysis for the site-specific fire conditions was performed using the same methodology as described in the HI-STORM 100 Cask System FSAR; therefore, there is no departure from a method of evaluation in the HI-STORM 100 Cask System FSAR.