May 1, 2009

MEMORANDUM TO: Carey Bickett, Acting Chief
US-APWR Projects Branch
Division of New Reactors Licensing
Office of New Reactors

FROM: Stephen Monarque, Project Manager ***/RA/***
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SUBJECT: TRIP REPORT: MARCH 23 - 25, 2009, SITE SAFETY AUDIT OF THE COMANCHE PEAK NUCLEAR POWER PLANT COMBINED LICENSE APPLICATION

This report summarizes the U.S. Nuclear Regulatory Commission (NRC) Staff's travel to Somervell County, Texas, during the period of March 23 - 25, 2009, to conduct a site safety audit of Luminant Generation Company's (Luminant) combined license (COL) application. The NRC Staff requested this audit to confirm the information described in the COL Final Safety Analysis Report. During this period, the NRC Staff met with officials from Hood and Somervell Counties, toured both counties, and performed a site audit at Comanche Peak Nuclear Power Plant (CPNPP).

On March 23, 2009, the NRC Staff met with the Granbury Hood County Economic Development Corporation (GHCEDC). The purpose of this meeting was to discuss the projected population growth and the types of industries that exist and are anticipated to exist in the future. GHCEDC stated that the population of Hood County was projected to grow rapidly over the next ten years. GHCEDC also described the industrial activities as 'soft' industrial. Gas drilling and processing plants are examples of typical industrial activities that already exist. During this meeting, GHCEDC presented the NRC Staff with the City of Granbury Zoning Map (Enclosure 1), Future Land Use Plan for the City of Granbury (Enclosure 2), and Thoroughfare Plan Map for the City of Granbury (Enclosure 3). These enclosures can also be found in the Agencywide Documents and Management System (ADAMS) under Accession Numbers: ML090910205 (Enclosure 1), ML090910204 (Enclosure 2) and ML090920466 (Enclosure 3).

On March 23 and 24, 2009, the NRC Staff met with the Hood and Somervell County Sheriffs and Judges for a general discussion on emergency planning. Officials from both counties described how they communicated with their government counterparts from Hood and Somervell Counties during emergency drills. Somervell County also gave an overview of their interactions with Luminant. The Hood and Somervell Counties officials stated that they wanted to ensure a smooth transition during emergency activities. Additionally, both county officials discussed their plans for notifying residents in the event of an emergency.

On March 24, 2009, the NRC Staff also met with the Somervell County Economic Development Commission. Somervell County stated that they did not anticipate a tremendous amount of growth, rather they were expecting a steady controlled growth rate of about 1000 residents per year. Tourism is the major industry for Somervell County. The NRC Staff was informed that

retirees and second home owners were typical of individuals who were moving to Somervell County. Additionally, Somervell County did not foresee major home construction activities as large portions of land tracts were already privately owned.

On March 25, 2009, the NRC Staff met with Luminant and their consultants at CPNPP. The individuals participating in this meeting are listed in Enclosure 4 and can also be found in ADAMS under Accession Number ML090910202. The information needs, and the NRC Staff's observations were discussed and are included in Enclosure 5 (Information Request to Support Site Hazards Audit at Comanche Peak Nuclear Power Plant (CPNPP), Units 3 and 4 FSAR Section 2.2, "Nearby Industrial Transportation, and Military Facilities").

At the conclusion of the audit, the NRC Staff and Luminant discussed the NRC Staff's observation findings and unresolved issues. The NRC Staff noted that unresolved observations may require the NRC to prepare a request for additional information. In addition, the NRC Staff informed Luminant that it may request a copy of inputs to Habit Model, Version 1.1 in order for the NRC Staff to perform an independent verification of Luminant's analyses.

Docket Nos. 52-034
52-035

Enclosures:
As stated

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INFORMATION REQUEST TO SUPPORT SITE HAZARDS AUDIT AT COMANCHE PEAK NUCEAR POWER PLANT (CPNPP), UNITS 3 AND 4 FINAL SAFETY ANALYSIS REPORT SECTION 2.2, "NEARBY INDUSTRIAL, TRANSPORTATION, AND MILITARY FACILITIES"

1. FSAR Section 2.2.3.1.1.1 Transportation Routes

   - Rail spur is used for transport of materials to and from site. The NRC staff plans to verify if hazardous chemical shipments were to be included as a part of the rail spur shipments.

NRC Staff Observation

The NRC staff may formulate a request for additional information (RAI) to clarify the distance from the railroad line on the Tolar Route to Comanche Peak Nuclear Power Plant and to determine if Luminant considered a shipment of hazardous materials in its evaluation.

2. FSAR Section 2.2.3.1.1.2 Nearby Industrial Facilities

   - FSAR Table 2.2-205 lists chemicals at Wolf Hollow 1, LP without any quantities. However, on page 2.2-12 of the FSAR it is mentioned that the quantity is too small to pose a hazard. Please provide clarification relating to FSAR Table 2.2-205 and page 2.2-12 of the FSAR.

NRC Staff Observation

On FSAR Figure 2.2-201, the NRC staff observed that the location of the DeCordova Steam Electric Station was not accurate. This also impacts FSAR Section 2.2.2.2.8, which discusses the location of the DeCordova Steam Electric Station. The NRC staff may formulate an RAI to address this error.

FSAR Section 2.2.2.2.7 refers to FSAR Table 2.2-205, which lists the chemicals at Wolf Hollow 1. The NRC staff performed a cursory review of the calculations for a selection of chemicals that Luminant analyzed. The NRC staff observed that there were no analyses in the FASR that described why Luminant determined that these chemicals were a potential hazard to the habitability of the main control room. As a result, the NRC staff may formulate an RAI to address this issue.

3. FSAR Section 2.2.3.1.2 Flammable Vapor Clouds

   - The information in FSAR Section 2.2.3.1.2.1 states that gasoline and propane were analyzed. It is also mentioned that other less popular commodities (acetylene, ethyl acetylene, ethylene oxide, propylene oxide) were analyzed. The NRC staff plans to examine information relating to these chemicals and the amounts.

NRC Staff Observation

The NRC staff performed a cursory review of Luminant's calculations, and as a result, did not have any observations.

4. FSAR Section 2.2.3.1.3 Toxic Chemicals

- FSAR Table 2.2-214 summarizes the chemicals that do not meet the Regulatory Guide 1.78, Revision 1 "Evaluating the Habitability of a Nuclear Power Plant Control Room During a Postulated Hazardous Chemical Release," screening criteria. FSAR

- Table 2.2-214 states that these chemicals were further evaluated to the control room habitability analysis in FSAR Section 6.4, "Habitability Systems." After reviewing Section 6.4, it is not clear to the NRC staff whether all identified chemicals were analyzed with actual amounts, whether the immediately dangerous to life and health (IDLH) value of any chemical was exceeded at the control room intake, or was lower in the control room as no quantitative results were presented or any other chemical than chlorine. The NRC staff requests to review these analyses.

NRC Staff Observation

The NRC staff observed that on FSAR page 6.4-2, Luminant stated that the postulated chlorine concentration was below 5.2 parts per million (ppm). However, the NRC staff performed a cursory review of Luminant's calculations and found that the postulated chlorine concentration was actually below 5.7ppm. The NRC staff may formulate an RAI to address this error. The NRC staff suggested the applicant add information to FSAR Table 2.2-214 that listed the limiting and calculated concentrations of chemicals at the intake to the main control room for each chemical that was considered.

5. FSAR Section 3.5.1.6 Aircraft Hazards

- In FSAR Section 2.2.2.7.1, the information contained in the Final Safety Analysis states that Granbury Municipal Airport "exceeds 500d operations a year". This is not consistent with the information presented in FSAR Section 3.5.1.6 on page 3.5-2 that states that Granbury Municipal Airport "will not exceed $500d^2$ operations a year".

NRC Staff Observation

The NRC staff noted that Luminant also used the equation 1000d on FSAR page 2.2-9 for four Hood County airports, and this equation was not consistent with the equation $1000d^2$ presented in Standard Review Plan 3.5.1.6, "Aircraft Hazards." The NRC staff may formulate an RAI to address these editorial errors.