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Ref: 10 CFR 50.54(f)

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Log # TXX-02103
File # 10119

June 3, 2002

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
30 DAY RESPONSE TO NRC BULLETIN 2002-01, "REACTOR PRESSURE VESSEL HEAD DEGRADATION AND REACTOR COOLANT PRESSURE BOUNDARY INTEGRITY"

REF: Letter logged TXX-02067 from C. L. Terry to the NRC dated April 2, 2002

Letter logged TXX-02094 from C. L. Terry to the NRC dated May 17, 2002

Gentlemen:

In accordance with 10CFR50.54(f), attached is the TXU Generation Company LP (TXU Energy) 30 day response to U.S. Nuclear Regulatory Commission (NRC) Bulletin 2002-01, "Reactor Pressure Vessel Head Degradation and Reactor Coolant Pressure Boundary Integrity" dated March 18, 2002.

If you should have any questions regarding this submittal, please call Mr. J. D. Seawright at (254) 897-0140 (Email - jseawright@txu.com).

A095
D029

No new commitments are identified in this letter.

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

Executed on June 3, 2002.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC,
Its General Partner

C. L. Terry
Senior Vice President and Principal Nuclear Officer

By: Roger D. Walker
Roger D. Walker
Regulatory Affairs Manager

JDS/js
Attachment

c - E. W. Merschoff, Region IV
W. D. Johnson, Region IV
D. H. Jaffe, NRR
Resident Inspectors, CPSES

NRC Bulletin 2002-01 Required Action

Within 30 days after plant restart following the next inspection of the reactor pressure vessel head to identify any degradation, all PWR addressees are required to submit to the NRC the following information:

A. the inspection scope (if different than that provided in response to Item 1.D.) and results, including the location, size, and nature of any degradation detected,

B. the corrective actions taken and the root cause of the degradation.

Commitment Restatement from 02-01 Response

In response to NRC Bulletin 2002-01 (Ref. 1), TXU Energy made the following commitments (Ref. 2) regarding reactor vessel head inspections:

- *CPSES will perform a remote visual inspection of the bare metal upper head of both reactor vessels during their respective next refueling outages. The Unit 2 vessel head inspection will occur during 2RFO6 in April 2002 followed by Unit 1 during 1RFO9 in the fall of 2002. These inspections will be performed to support an engineering evaluation of the condition of the vessel heads with regard to the issues addressed in NRC Bulletin 2002-01.*

- *TXU Energy will submit the inspection scope, results, corrective actions taken and root cause of any degradation found within 30 days after plant restart following the next reactor pressure vessel head inspection. The next inspection is currently planned for the next refueling outage for Units 1 and 2 (1RFO9 and 2RFO6, respectively).*

Pursuant to the second of these commitments, this letter describes the inspection performed during the recently completed refueling outage for Comanche Peak Unit 2 and summarizes the observed condition of the reactor vessel head.

Completed Inspection Description

Scope

During 2RFO6, TXU Energy conducted an inspection of the Comanche Peak Unit 2 reactor vessel head consistent with our response to NRC Bulletin 2002-01. This inspection also met the requirements stated in NRC Bulletin 2001-01 for an Effective Visual Exam. One hundred percent of the general surface area of the reactor vessel head and all penetration tube bases (78 CRDM penetration tubes and one head vent line) at the reactor vessel head outer surface were inspected.

Methods

The inspection employed a remotely controlled crawler to deliver video cameras to all areas of the reactor vessel head surface under the upper tier of reflective metallic insulation. Two

insulation panels were removed that allowed complete access by the crawler to perform a 360°inspection at the base of 62 penetrations. The remaining 17 penetrations are within the lower tier of reflective metallic insulation and were inspected via video probe. The CRDM cooling shroud support ring rests approximately 1-1/2" above the reactor vessel head outer surface providing unfettered inspection access to this area from the reactor vessel head flange.

Summary of Results

The reactor vessel head outer surface was uniformly coated with a thin layer of loose, gray dust. However, this coating was a very thin layer and a definitive conclusion was reached that the outer surface of the reactor vessel head is sound. Most penetration tube bases exhibited little or no accumulations of debris in or near the annular gap and those with minor amounts did not exhibit characteristics indicative of leakage from within the annulus. Minor evidence of drips and runs indicative of low temperature, outage-related spills were observed on a number of tubes with no consequential associated accumulation of boric acid deposits. A few tube bases exhibited a narrow pile of small, randomly-shaped particles, generally with a metallic appearance against the uphill segment of the tube circumference. The largest such accumulation of debris, extending less than ~1/4" radially from the tube wall and around approximately 1/3 of the tube circumference, was manually disturbed with a prod and clearly identified as loose metal chips and wire brush bristles.

One specific peripheral tube exhibited a local, distributed deposit of reddish brown material extending down the tube wall from above and out onto the reactor vessel head. The material was scrapped with a nut on a ¼" threaded rod clearly demonstrating the friable nature of the loosely adherent deposit and providing a dimensional reference indicating the deposit to be relatively thin, generally on the order of 1/16". In addition, the reactor vessel head surface was clearly demonstrated to be sound. This penetration contains Core Exit Thermocouple leads and is closed with a mechanical conoseal. This mechanical joint was observed to be leaking during heatup from 2RFO2 (as identified in the TXU Energy 15 day response to NRC Bulletin 2002-01) and was reworked prior to the return to power operation. The minor deposit of material observed in this inspection was judged insufficient to inhibit subsequent inspections and the current condition was sufficiently documented to support comparison with future observations and therefore no further cleaning was undertaken.

Supplemental dust analysis

A sample of the dust observed to generally coat the head outer surface was obtained by wiping down the crawler and its umbilical cord. This material was analyzed in the site hot chemistry lab with the following constituents and their approximate percentages by weight identified:

Calcium as Calcium Carbonate = 56%
Magnesium as Magnesium Carbonate = 42%
Aluminum as Aluminum Oxide = 2%
Boron as Boric Acid - trace amount

These results are consistent with concrete dust and clearly indicate that boric acid spills / leaks under the upper insulation have generally not affected the reactor vessel head surface.

Conoseal leak during subsequent heatup
During initial heatup in preparation to return to power operation from 2RFO6, one of the conoseal mechanical seals was observed to be leaking. The plant was depressurized and the conoseal was reworked. The boric acid deposit on the reactor vessel head and flange was removed and the affected area of the head was inspected. No degradation was observed and the tube base as-left condition will not inhibit future inspections.

Summary and Conclusion

In summary, an inspection of the Comanche Peak Unit 2 reactor vessel bare metal head upper surface was completed consistent with our commitment in response to NRC Bulletin 2002-01. No degradation of the head was observed and no evidence of reactor coolant system pressure boundary leakage during power operation was found. No limitations were encountered that prevented access or inhibited effective inspection of either the general head surface or the annulus at the base of each penetration tube.

As stated in Reference 2, no further bare metal inspections of the Comanche Peak Unit 2 reactor vessel upper head are currently planned. TXU Energy will continue to monitor this issue through participation in relevant industry organizations. The need for and timing of any future inspection of the Unit 2 reactor vessel head will be based on these inspection results, the Davis-Besse root cause analysis, industry inspection results, and industry initiatives.