TXU Electric
Comanche Peak
Steam Electric Station
P.O. Box 1002
Glen Rose, TX 76043
Tel: 254 897 8920
Fax: 254 897 6652
lterry1@txu.com

C. Lance Terry
Senior Vice President & Principal Nuclear Officer

Ref. # GL 95-07

CPSES#200100267
Log # TXX-01001
File # 10035

January 22, 2001

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NUMBERS 50-445 AND 50-446
INFORMATION REGARDING GENERIC LETTER 95-07,
"PRESSURE LOCKING AND THERMAL BINDING OF
SAFETY RELATED POWER OPERATED GATE VALVES"

REF: 1) TXU Electric letter, logged TXX-99149, from C. L. Terry to the NRC dated June 24, 1999

2) TXU Electric letter, logged TXX-00060, from C. L. Terry to the NRC dated March 24, 2000

3) TXU Electric letter, logged TXX-99120, from C. L. Terry to the NRC dated May 25, 1999

Gentlemen:

Via the referenced letters TXU Electric provided information to the NRC with respect to how and when certain valves impacted by the Generic Letter 95-07 will be modified. Via this letter, TXU Electric wishes to update the aforementioned information. The referenced letters are enclosed to accommodate NRC staff's review.

In Reference 2, TXU Electric stated that, "[T]hrough further analysis a refined transient thermal model indicates that the temperature increase at the valve would be much less than 40° F over the short period of Emergency Core Cooling System (ECCS) Cold Leg recirculation prior to opening the valves for Hot Leg recirculation.

A056

While there are some uncertainties in the analysis, these can be confirmed via field data collection during the next refueling outage for Unit 2 when the post-LOCA mode can be simulated. Since it can be shown that the expected temperature increase would be well below the originally estimated 40° F, the modification may not be necessary. Therefore, TXU Electric's current position with respect to valves 1/ 2-8716-A/B, is that thermally induced bonnet Pressure Locking is not an issue . . . "

TXU Electric further stated that it was expected that obtaining temperature data at the next refueling outage [which was the fifth refueling outage for Unit 2] would confirm the refined analysis that would alleviate the need to install the relief valves.

After review of the temperature data from CPSES Unit 2 fifth refueling outage, it was concluded that TXU Electric's position as described above was not substantiated via subsequent empirical data collected during the recent outage. Hence, TXU Electric has opted to modify the Residual Heat Removal (RHR) System crosstie isolation valves 1/ 2-8716-A/B.

The modifications will be installed at the first available opportunity. The installation must be performed during an outage. The design and procurement lead time will exceed the time available prior to the upcoming eighth refueling outage for Unit 1 (1RF08). The subject valves for Unit 1 will be modified during the ninth refueling outage (1RF09), and for Unit 2 during the sixth refueling outage (2RF06). TXU Electric has reviewed its position with respect to safety significance, which was described in Reference 3, and has deemed that the previous evaluation remains valid.

This communication contains the revised commitment regarding CPSES Units 1 and Unit 2.

Commitment Number	Commitment
27179	TXU Electric has opted to modify the Residual Heat Removal (RHR) System crosstie isolation valves 1/ 2-8716-A/B. The subject valves for Unit 1 will be modified during the ninth refueling outage (1RF09), and for Unit 2 during the sixth refueling outage (2RF06).

The Commitment number is used by TXU Electric for the internal tracking of CPSES commitments.

Should you have any questions regarding this matter, please contact Obaid Bhatty at (254) 897-5839 to coordinate this effort.

Sincerely,

C. L. Terry

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

OAB/oab
Enclosures

cc: E. W. Merschoff, Region IV
J. I. Tapia, Region IV
D. H. Jaffe, NRR
Resident Inspectors, CPSES

ENCLOSURES TO TXX-01001

TXX-99149
TXX-00060
TXX-99120

CPSES-9990 2119

TUELECTRIC

Log # TXX-99120
File # 10035
Ref. # 10CFR50.54(f)
GL 95-07

May 25, 1999

C. Lance Terry
Senior Vice President
& Principal Nuclear Officer

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES) UNITS 1 AND 2
DOCKET NUMBERS 50-445 AND 50-446
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING GENERIC LETTER 95-07, "PRESSURE LOCKING AND THERMAL BINDING OF SAFETY RELATED POWER OPERATED GATE VALVES"

REF:
1. Generic Letter 95-07, "Pressure Locking and Thermal Binding of Safety Related Power Operated Gate Valves," dated August 17, 1995
2. TU Electric letter logged TXX-95263 from Mr. C. L. Terry to NRC dated October 16, 1995
3. TU Electric letter logged TXX-95278 from Mr. C. L. Terry to NRC dated November 6, 1995
4. TU Electric letter logged TXX-96046 from Mr. C. L. Terry to NRC dated February 13, 1996
5. TU Electric letter logged TXX-97056 from Mr. C. L. Terry to NRC dated March 14, 1997

On August 17, 1995, the NRC issued Generic Letter 95-07, "Pressure Locking and Thermal Binding of Safety Related Power Operated Gate Valves" (Reference 1).

Pursuant to Section 182a of the Atomic Energy Act of 1954, as amended, and 10 CFR 50.54(f), TU Electric committed to implement the requested actions in Generic Letter 95-07. Via Reference 3, TU Electric provided clarification to Reference 2 as requested by the NRC.

In Reference 4, TU Electric provided a proposed schedule for modification and conclusion of TXU Electric's (previously known as TU Electric) analysis. Reference 5 stated that based on industry test verification results, TXU Electric had concluded that Commonwealth Edison's

analytical method used to calculate the additional stem thrust requirement above the pull out thrust anticipated by the typical design calculations is conservative. TXU Electric had applied this aforementioned method to predict stem thrust to overcome pressure locking on several susceptible valves. This additional thrust combined with the pullout thrust, when compared with the available motor capability, both from the GL 89-10 program, demonstrated adequate margin and valve operability. Therefore, TXU Electric concluded that valve modification plans stated in Reference 4, were not warranted.

Subsequent to submittal of Reference 5 and review of TXU Electric's submittal, NRR Staff (during a teleconference) verbally requested additional information on certain valves in the form of eight (8) questions. Two (2) questions were answered satisfactorily during the teleconference, however, additional verification/evaluation was needed for the remaining six (6) questions, which included approximately thirty two (32) valves.

As a result of the teleconference, TXU Electric initiated a SMART Form (a document used to identify issues at CPSES) SMF-1999-000241-00 and appropriately classified the issue as a potential adverse condition. To determine if the 32 motor operated valves (MOVs) were operable under the postulated pressure locking scenarios, TXU Electric implemented a methodology developed by the Commonwealth Edison Company[1] that used the actual MOV characteristics to calculate the required thrust to pull the valve out of its seat under the postulated pressure-locking situation. After the thrust required to pull the valve disc out of its seat is calculated, this value is compared to the available thrust provided to the valve by the actuator and a margin is determined. The Commonwealth Edison Company methodology allows the user to conclude that for the short-term, the power-operated valve is operable as long as the margin is greater than zero for stiff valve bodies and greater than twenty (20) percent for flexible valve bodies. To ascertain how long the valve would remain operable, an estimate of valve degradation over time was considered, and the valve operability period was determined. Long-term operability requires a 20 percent margin for stiff valve bodies and a forty (40) percent margin for flexible valve bodies.

The six (6) questions as we understand them, and a response to each question is as follows. It should be noted if it was concluded that stiff body valves had a 20 percent margin and flexible body valves had a 40 percent margin using the Commonwealth Edison Company methodology, the valve was considered not to be susceptible to pressure locking.

Question 1

The TXU Electric submittal states that the charging pump discharge to the cold leg valves, 1/ 2 - 8801A/B, are not susceptible to pressure locking because the charging pump is

---

1 Commonwealth Edison Company letter dated May 29, 1998 from R. M. Krich to the USNRC, "Commonwealth Edison Company (ComEd) Response to NRC Generic Letter (GL) 95-07, Pressure Locking and Thermal Binding of Safety-Related Power-Operated Gate Valves"

operating when the valves open. On a loss of off-site power do the valves open when the charging pumps are not operating or are the valves sequenced to open after the charging pumps are operating? Are there any pressure locking scenarios where the valves will operate at locked rotor conditions until the charging pump develops full discharge pressure?

Response

1/ 2 8801 A/B (stiff body valve) are safety injection header isolation valves, which are in a closed position pre design basis accident (DBA). These valves open automatically when a safety injection signal is received. Considering the question, it was deemed that the valves 1/ 2 - 8801A/B were operable. Margins were determined to be 18, 30, 48, and 35 percent respectively, under actual operating conditions. Since Valve 1-8801A had an operability margin of 18 percent, TXU Electric is evaluating long-term modification of this valve.

Question 2

Explain why the RHR to charging pump suction isolation valves, 1/ 2 - 8804A/B, and RHR to SI pump suction isolation valves, 1/ 2 - 8807A/B, are not susceptible to pressure locking. The bonnets of these valves could be pressurized during shutdown cooling, RHR pump surveillances, and ECCS injection evolutions and these valves would be opened later at a lower RHR pump discharge pressure.

Response

1/ 2 - 8804A/B (stiff body valve) are Residual Heat Removal (RHR) heat exchanger outlet injection header to charging pump suction and RHR to safety injection pump recirculation header valves. These valves are in a closed position pre DBA, and are opened by plant operators to complete the switchover from emergency core cooling injection mode to cold leg recirculation mode. The subject valves were deemed operable. Margins were determined to be 2, 5, 116 and 8 percent respectively, under actual operating conditions. The Unit 1 Valve 1- 8804A , Train A RHR heat exchanger outlet injection header to charging pump suction header isolation valve was determined to have a 2 percent margin for operability. The evaluation for this valve includes the actual valve factor determined through static testing plus a 10 percent margin. The 10 percent margin added to the valve factor was equivalent to about an additional 7 percent overall margin. The stem factor used for the operability review was the actual stem factor measured after Valve 1- 8804A was refurbished in October 1996. No additional margin was added for possible stem factor degradation between October 1996 and October 1999. It is TXU Electric engineering's judgment that, following a valve refurbishment, stem factor typically decreases notably for some months as the actuator grease became distributed around the actuator gears. This judgment is based on review of available data for Valve 1- 8804A, where the stem factor decreased from 0.00922 to 0.007305 from October 1991 to October 1993 following a valve refurbishment in October 1991.

1/ 2 - 8807A/B (stiff body valve) are charging pump to safety injection pump isolation valves,

which are in a closed position pre DBA. These valves are opened by plant operators to complete switchover from emergency core cooling injection mode to cold leg recirculation mode. Margins were determined to be 90, 40, 50, and 21 percent. The subject valves were deemed operable.

Question 3

Explain why containment spray pump discharge valves, 1/2HV4776 and 1/2HV4777, are not susceptible to pressure locking following operation of the containment spray pumps with the discharge valves shut.

Response

1/ 2 - HV4776 and 1/ 2 - HV4777 (flexible body valve) are containment spray discharge valves. These valves are in a closed position pre DBA, and are opened automatically by a containment spray actuation signal. These valves have greater than 40 percent margin using the Commonwealth Edison Company methodology. These valves were deemed operable. No hardware modification is required for these valves.

Question 4

Technical Specifications require an operable emergency core cooling system (ECCS) injection flow path from the refueling water storage tank (RWST) to the reactor coolant system (RCS) via the RHR pump when RCS temperature is less that 350°F. During the shutdown cooling mode of operation, the RWST suction valve to the RHR pump, 1/ 2 - 8812A or B, is shut. Is the valve required to be opened to realign the RHR pump to inject into the RCS. If so, why isn't the valve susceptible to pressure locking?

Response

1/ 2 - 8812A/B (stiff valve body) are RHR pump suction valves. They are in the open position pre DBA. These valves are closed after switchover from emergency core cooling injection mode to cold leg recirculation mode to provide redundant isolation of the RWST from the RHR emergency sumps and are not required to reopen. During shutdown cooling one of these valves may be closed. Margin for these valves were determined to be 28, 64, 31 and 29 percent respectively. These valves were deemed operable. No additional actions are warranted for these valves.

Question 5

The TXU Electric submittal states that the containment spray containment sump suction valves, 1/ 2 - HV4782 and 1/ 2 - HV4783, and RHR pump containment sump suction valves, 1/ 2 - 8811A/B were modified by installation of pressure relief valve in the bonnet to prevent the valves from pressure locking. What is the setpoint of the relief valve and how do you demonstrate that the valves will not become pressure locked at pressure less than the relief valve setpoint?

Response

1/ 2 - HV4782 and 1/ 2 - HV4783 (flex valve body) are containment spray pump containment sump isolation valves. These valves are in closed position pre DBA. They are opened by the plant operators when the RWST level reaches the containment spray pump switchover level setpoint. These valves have a bonnet relief valve set at 76 psid, the minimum margin of 49 percent was derived when Commonwealth Edison Company methodology was utilized. Therefore, these valves were considered to be operable, and no additional analysis was warranted.

1/ 2 - 8811A/B (stiff valve body) are RHR pump containment recirculation sump isolation valves. These valves are in closed position pre DBA, and open when the RWST level reaches the lo-lo setpoint. Valves 1-8811A/B and 2-8811A/B are deemed operable for the following reasons:

a) using the worst possible pressure locking conditions (489 psid), the Commonwealth Edison Company methodology did show an equal to or greater than 5 percent positive margin;

b) the actual maximum pressure locking pressure these valves have been subjected to prior to power ascension was 350 psid which yields an equal to or greater than 24 percent margin;

c) these valves are stroked with conditions worse than DBA conditions (days after shutdown cooling with the piping drained) and have not pressure locked;

d) these valves are mounted upside down and are not closed under water solid conditions; and

e) an air bubble would be trapped even if water leaked into the bonnet during shutdown cooling.

The presence of an air bubble would allow the contained water to expand under constant pressure conditions. The maximum theoretical expansion for a DBA would be for the 200° F difference between the max sump temperature and normal ambient conditions at the valves or a 7 percent increase in volume. The actual temperature increase in the valve would be

significantly less due to heat transfer to the concrete and the surrounding environment. 3.5 percent would be the approximate maximum expected expansion, and an air bubble of this size is a reasonable expectation.

During the CPSES Unit 2 fourth refueling outage (2RF04) a repair to replace the Unit 2 relief valve internals to allow a 76 psid set point has been completed. A design change has been initiated and will be completed during the upcoming CPSES Unit 1 seventh refueling outage (1RF07). This design change will repair or replace the Unit 1 relief valve internals to allow a 76 psid set point.

Question 6

The July 18, 1996, submittal states that the RHR pump crosstie valves, 1/ 2 - 8716A/B, are not susceptible to thermal induced pressure locking because of small temperature changes at the valve. Attachment 3 of the submittal indicated that temperatures could increase as much as 40° F. Explain why this increase in temperature will not create a thermal induced pressure locking condition. These valves have pressure locked at Vogtle and Clinton.

Response

1/ 2 - 8716A/B (stiff valve body) are RHR crosstie isolation valves. These valves are in the open position pre DBA, and are closed by operators after 1/ 2 - 8811A valves are opened to prevent damage to an RHR pump if only one pump is running. These valves are also reopened later to initiate hot leg recirculation mode to remove any crystalized boron in the core. The subject valves are considered operable because they are open and are required to be open for ECCS injection mode, and closed for the cold leg recirculation mode. These valves are operable for the depressurization pressure mode, because a positive margin was indicated when Commonwealth Edison Company methodology was applied. However, these valves may not be operable post DBA for hot leg recirculation as the Commonwealth Edison Company methodology application did not result in a positive margin for thermally induced pressure locking.

It was also concluded that CPSES Technical Specification operability is not affected for ECCS operation, the RHR crosstie valves are required to be open to meet the requirements of Tech Spec 3.5.2 (Modes 1,2, and 3) and of Technical Specification 3.5.3.1 (Mode 4). These operability requirements are predicated on the requirement to provide ECCS injection to all four cold legs. Additionally, the RHR crosstie valves do not affect the required Tech Spec operability of the RHR loops required by Technical Specification 3.4.1.3, 3.4.1.4.1 and 3.4.1.4.2.

The plant capability for hot leg recirculation is still available as described in the TXU Electric's "Hot Leg Recirculation" discussion below.

Hot Leg Recirculation

Thermally-induced pressure locking scenario for valves 8716A & 8716B:

The premise for this scenario is that the valve bonnet is completely full of fluid. As the valve heats up, the fluid expands, creating a large pressure in the valve bonnet that cannot be overcome by the valve operator (while maintaining the integrity of the valve).

The 8716A/B valves are potentially susceptible to this phenomenon during a loss of coolant accident (LOCA) event, where relatively cold ECCS water from the RWST (minimum temperature of 40°F) initially flows through the injection lines from the RHR pumps to the cold legs through the 8809A/B valves. Although the RHR pumps are "flow balanced," there may be some flow through the open 8716A/B valves. Alternatively, if one RHR pump fails, there will be flow through the 8716A/B valves as the operating RHR pump provides flow to all four RCS cold legs. It is assumed that during the ECCS injection phase, the temperatures of the valves are at the same temperature as the RWST water (equal to or greater than 40°F) and the bonnet completely fills with fluid.

Upon transfer to the cold leg injection phase, the RHR crosstie valves (8716A/B) are closed. The sump recirculation fluid will not impinge directly on the 8716 valves, but will flow through the RHR-RCS cold leg injection lines through the 8809 valves. Near the time of switchover to sump recirculation, the maximum RHR heat exchanger outlet temperature is predicted to be approximately 192°F. Based on "preliminary calculations," the steady-state temperatures of the 8716 valves are expected to rise by approximately 40°F. The expansion of the 40°F fluid in the valve bonnets is expected to result in significant bonnet pressures that result in the failure of the valves to open upon demand when transferring to the ECCS hot leg injection mode of operation. An evaluation of the effect of the valve failure to open is provided below.

During hot leg recirculation:

> During the transfer from cold leg recirculation to hot leg recirculation per Emergency Operating Procedures, only one train of RHR is transferred at a time. Should hot leg flow not be verified, the train is returned to the cold leg recirculation mode of operation. An attempt is made to transfer the second train to hot leg recirculation. As before, if hot leg recirculation flow is not verified, the train is returned to the cold leg recirculation mode of operation. In addition, the system can provide hot leg recirculation via the safety injection pumps using the RHR pumps to supply water to the Safety Injection Pump suctions.

The requirement to transfer to hot leg recirculation is based on the perceived need to prevent boron precipitation in the core. During the recovery phase of a large break LOCA, boiling in the core is expected to result in the concentration of boron in the core regions. The precipitation of boron has been postulated to hinder the heat transfer from the core to the

recirculating ECCS fluid. Localized depositions could result in flow blockages and "hot spots" with additional clad failures. This issue is primarily driven by the assumption that the core boil-off rate is equal to the ECCS mass injection rate. Lower core boil off rates and higher ECCS injection rates will result in increased core recovery and reduced potential for boron precipitation. In a 1992 "Reasonable Assurance of Safe Operation" report generated by Westinghouse to support continued operations of their plants while an issue associated with the failure of valve 8840 was investigated. It was concluded the ECCS injection rates at Westinghouse plants were sufficiently high as to minimize the potential for significant boron precipitation in the core regions. This conclusion was later confirmed for CPSES (WPT-15131, 1/13/93, & NSAL 92-010) and is maintained in current calculations. Given the current flow capabilities of the CPSES ECCS, boron precipitation is not expected to occur following a LOCA.

The safety function of the ECCS is to provide sufficient fluid such that the 10CFR50.46 LOCA criteria are satisfied. Valves 8716A/B can only affect the long term cooling requirement of the 10CFR50.46, and only then if the delivered ECCS flow is not sufficient to preclude or minimize boron precipitation. Current calculations have concluded that sufficient flow is available at CPSES; therefore, it is concluded that the ECCS will meet its intended long term cooling safety function, even with the assumed failures of valves 8716A/B in the closed positions.

If you have any questions, please contact Obaid Bhatty at (254) 897-5839.

Sincerely,

C. L. Terry

C. L. Terry

By: Roger D. Walker

Roger D. Walker
Regulatory Affairs Manager

OB/ob

cc: Mr. E. W. Merschoff, Region IV
Mr. J. I. Tapia, Region IV
Mr. D. H. Jaffe, NRR
Resident Inspectors, CPSES

CPSES-9990 2392

TUELECTRIC

Log # TXX-99149
File # 10035
Ref. # 10CFR50.54(f)
GL 95-07

June 14, 1999

C. Lance Terry
Senior Vice President
& Principal Nuclear Officer

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES) UNITS 1 AND 2
DOCKET NUMBERS 50-445 AND 50-446
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION REGARDING GENERIC LETTER 95-07, "PRESSURE LOCKING AND THERMAL BINDING OF SAFETY RELATED POWER OPERATED GATE VALVES"

REF:
1. Generic Letter 95-07, "Pressure Locking and Thermal Binding of Safety Related Power Operated Gate Valves," dated August 17, 1995

2. TXU Electric[1] letter logged TXX-99022 from Mr. C. L. Terry to NRC dated May 25, 1999

Via Reference 2 TXU Electric responded to information requested for TXU Electric's submittal for Reference 1. During a teleconference on June 4, 1999, the NRC staff requested that TXU Electric provide information with respect to certain valves which had a lower margin than expected, as to how and when these valves will be modified.

The valve information requested by the NRC is as follows:

1) Valve 1-8801A will have torque switch adjustment performed on it. This adjustment will increase the unseating margin. This modification will be completed during 1RFO7, which is the upcoming outage for CPSES Unit 1.

2) Valves 1-8804 A/B modification will be an actuator gear change. This modification will increase actuator capability to provide additional unseating margin. This modification will be completed during 1RFO7, which is the upcoming outage for CPSES Unit 1.

1. TXU Electric was formerly TU Electric. A license amendment request (LAR 99-003) was submitted per TXX-99122, dated May 14, 1999, to revise the company name contained in the CPSES operating licenses.

3) Valve 2-8804B modification was a limit switch adjustment, which was completed during the last refueling outage for CPSES Unit 2 (2RFO4). This adjustment will increase the unseating margin.

4) Valves 1-8716A/B modifications will consist of adding a relief valve and associated piping to the valve bonnets. These modifications will be completed during 1RFO8, which is the outage after this upcoming outage or CPSES Unit 1.

5) Valves 2-8716A/B modifications will consist of adding a relief valve and associated piping to the valve bonnets. These modifications will be completed during 2RFO5, which is upcoming outage for CPSES Unit 2.

This communication contains the following new commitment which will be completed as noted:

CDF Number	Commitment
[27179]	[The commitment provides the dates of modification as stated above.]

If you have any questions, please contact Obaid Bhatty at (254) 897-5839.

Sincerely,

C. L. Terry

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

OAB/oab

cc: Mr. E. W. Merschoff, Region IV
Mr. J. I. Tapia, Region IV
Mr. D. H. Jaffe, NRR
Resident Inspectors, CPSES

TXU Electric
Comanche Peak
Steam Electric Station
P.O. Box 1002
Glen Rose, TX 76043
Tel: 254 897 8920
Fax: 254 897 6652
lterry1@txu.com

C. Lance Terry
Senior Vice President & Principal Nuclear Officer

CPSES-200000733

Log # TXX-00060
File # 10035
Ref. # GL 95-07

March 24, 2000

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION(CPSES)
DOCKET NUMBERS 50-445 AND 50-446
INFORMATION REGARDING GENERIC LETTER 95-07,
"PRESSURE LOCKING AND THERMAL BINDING OF
SAFETY RELATED POWER OPERATED GATE VALVES"

REF: TXU Electric letter, logged TXX-99149, from C. L. Terry to the NRC dated June 24, 1999

Via the referenced letter (enclosed) TXU Electric provided information to the NRC with respect to how and when certain valves impacted by the Generic Letter 95-07 will be modified. Via this letter, TXU Electric wishes to update the aforementioned information.

In the referenced letter TXU Electric stated that it will modify Unit 1 and Unit 2 Residual Heat Removal (RHR) System crosstie isolation valves 1/ 2 - 8716A/B, by adding a relief valve and associated piping to the valve bonnets. Additionally, TXU Electric stated that these valves will be modified during the up coming refueling outages for both CPSES Units.

Through further analysis a refined transient thermal model indicates that the temperature increase at the valve would be much less than 40° F over the short period of Emergency Core Cooling System(ECCS) Cold Leg recirculation prior to opening the valves for Hot Leg recirculation. While there are some uncertainties in the analysis, these can be confirmed via field data collection during the next refueling

outage for Unit 2 when the post-LOCA mode can be simulated. Since it can be shown that the expected temperature increase would be well below the originally estimated 40° F, the modification may not be necessary. Therefore, TXU Electric's current position with respect to valves 1/ 2-8716-A/B, is that thermally induced bonnet Pressure Locking is not an issue. This position will be supported by the following actions:

1) Finalization of the refined thermal model calculation documented in accordance with CPSES procedures.

2) Confirmation of calculation results provided by field temperature measurements taken at the actual valve locations during the next refueling outage during the initiation of RHR system operation.

The basis for the change in TXU Electric's position is based on; 1) the initially calculated 40° F rise in valve temperature indicated that pressure locking thermal binding was likely if the valve bonnet temperature reached a steady state maximum, and that a modification at the next refueling outage was necessary, and, 2) a refined transient analysis indicates that only a very small temperature rise is expected over the short period of ECCS Cold Leg recirculation, therefore a modification may not be required. Pushing forward with a modification that may not be required would be costly and could introduce new potential failure avenues through the added relief valves and piping. It is expected that obtaining temperature data at the next refueling outage will confirm the refined analysis that will alleviate the need to install the relief valves. The result of TXU Electric's evaluation will be made available at site, for NRC Staff review if warranted.

Should you have any questions regarding this matter, please contact Obaid Bhatty at (254) 897-5839 to coordinate this effort.

This communication contains no new licensing basis commitments regarding CPSES Units 1 and Unit 2.

Sincerely,

C. L. Terry

C. L. Terry

By: Roger D. Walker

Roger D. Walker
Regulatory Affairs Manager

OAB/oab
Enclosure

cc: E. W. Merschoff, Region IV
J. I. Tapia, Region IV
D. H. Jaffe, NRR
Resident Inspectors, CPSES