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Ref: 10CFR50.90

CPSES-200602131
Log # TXX-06174
File # 00236

October 23, 2006

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 AND 50-446
LICENSE AMENDMENT REQUEST (LAR) 06-011, TO REVISE TECHNICAL SPECIFICATIONS REGARDING CONTROL ROOM ENVELOPE HABITABILITY IN ACCORDANCE WITH TSTF-448, REVISION 3, USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS

REF: 1) Federal Register Notice, Volume 71, Pages 61075-61084, Technical Specification Improvement To Modify Requirements Regarding Control Room Envelope Habitability Using the Consolidated Line Item Improvement Process, dated October 17, 2006
2) NRC Generic Letter 2003-01, "Control Room Habitability,", June 12, 2003
3) TXU Power Letter, Logged TXX-03158, from Mike Blevins to Nuclear Regulatory Commission, dated December 4, 2003
4) TXU Power Letter, Logged TXX-05127, from Mike Blevins to Nuclear Regulatory Commission, dated August 22, 2005
5) NRC Letter from Mohan C. Thadani to M. R. Blevins, dated August 18, 2006 (TAC NOS. MC8163 AND MC8164)
6) TXU Power Letter, Logged TXX-06161, from Mike Blevins to Nuclear Regulatory Commission, dated September 18, 2006
7) TXU Power Letter, Logged TXX-06151, from Mike Blevins to Nuclear Regulatory Commission, dated October 23, 2006

Gentlemen:

In accordance with the provisions of 10 CFR 50.90, TXU Generating Company LP (TXU Power) is submitting License Amendment Request 06-011 for an amendment to the technical specifications (TS) for Comanche Peak Steam Electric Station (CPSES) Unit 1, Operating License (NPF-87), and CPSES Unit 2, Operating License (NPF-89).

The proposed amendment would modify TS requirements related to control room envelope habitability in accordance with TSTF–448, Revision 3 (Reference 1).

Attachment 1 provides a description of the proposed change, the requested confirmation of applicability, and plant specific verifications. Attachment 2 provides the existing TS pages marked up to show the proposed change. Attachment 3 provides revised (clean) TS pages. Attachment 4 provides a summary of the regulatory commitments made in this submittal. Attachment 5 provides the existing TS Bases pages marked up to show proposed change and is for information only.

TXU Power requests approval of the proposed License Amendment by January 15, 2007, with the amendment being implemented within 120 days of NRC approval.

In accordance with 10 CFR 50.91, a copy of this application, with attachments, is being provided to the State of Texas.

In response to Reference 2, Reference 3 committed to submitting a TS change to include periodic verification of control room leakage. Reference 4 was submitted to satisfy that commitment. The NRC staff completed their initial review of Reference 4 and conveyed their concerns by letter dated August 18, 2006 (Reference 5). TXU Power's response (Reference 6) to Reference 5 indicated that the proposed control room habitability program would be updated at a later date to be consistent with the NRC's expected issuance of a model safety evaluation of TSTF-448, Revision 3, "Control Room Habitability," in the Federal Register for public comments.

License Amendment Request (LAR) 05-005 (Reference 4) has been revised (in Supplement 1) to address only the new methods and assumptions for evaluating radiological consequences of design basis accidents (Reference 7). The control room habitability program was previously submitted for approval under LAR 05-005 (Reference 4), but is now separately submitted for approval under LAR 06-011 to expedite review under the consolidated line item improvement process.

The acceptance limits used in the new Control Room Envelope Habitability Program will be based on the assumptions of the radiological dose consequences calculations. CPSES is adopting new methods and assumptions as described in NRC Regulatory Guide (RG) 1.195, "Methods and Assumptions for Evaluating Radiological Consequences of Design Accidents at Light-Water Nuclear Power Reactors," May 2003, for the calculations of the radiological dose consequences, both to the public and to demonstrate compliance with 10 CFR 50, Appendix A, General Design Criteria (GDC) 19 . These new methods and assumptions presented in Final Safety Analysis Report (FSAR) Chapters 1, 6 and 15, have been submitted to the NRC for review and approval by LAR 05-005 (Reference 4) and Supplement 1 to LAR 05-005 (Reference 7). Previous discussions with the NRC Staff indicated that adoption of RG 1.195 is contingent on adoption of a control room habitability program.

These changes are needed to support replacement of the Unit 1 steam generators in the Spring of 2007.

If you should have any questions regarding this submittal, please contact Mr. Carl Corbin at (254) 897-0121.

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

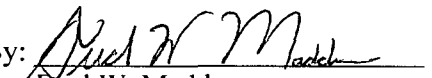
Executed on October 23, 2006.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC
Its General Partner

Mike Blevins

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

CBC
Attachments
1. Description and Assessment
2. Proposed Technical Specification Changes
3. Revised Technical Specification Pages
4. Regulatory Commitments
5. Proposed Technical Specification Bases Changes

c - B. S. Mallet, Region IV
M.C. Thadani, NRR
Resident Inspectors, CPSES

Ms. Alice Rogers
Environmental & Consumer Safety Section
Texas Department of State Health Services
1100 West 49th Street
Austin, Texas 78756-3189

ATTACHMENT 1 to TXX-06174

DESCRIPTION AND ASSESSMENT

1.0 DESCRIPTION

The proposed amendment would modify technical specification (TS) requirements related to control room envelope habitability in TS 3.7.10, Control Room Emergency Filtration / Pressurization System (CREVS) and TS Section 5.5, "Administrative Controls— Programs and Manuals."

The changes are consistent with Nuclear Regulatory Commission (NRC) noticed Industry/Technical Specification Task Force (TSTF) STS change TSTF–448 Revision 3. This TS improvement was published in the Federal Register for public comment on October 17, 2006 as part of the consolidated line item improvement process (CLIIP).

2.0 ASSESSMENT

2.1 Applicability of Published Safety Evaluation

TXU Power has reviewed the safety evaluation dated October 17, 2006, as part of the CLIIP. This review included a review of the NRC staff's evaluation, as well as the supporting information provided to support TSTF–448. TXU Power has concluded that the justifications presented in the TSTF proposal and the safety evaluation prepared by the NRC staff are applicable to Comanche Peak Steam Electric Station (CPSES) Units 1 and 2, and justify this amendment for the incorporation of the changes to the CPSES Units 1 and 2 TS.

2.2 Optional Changes and Variations

TXU Power is not proposing any variations or deviations from the TS changes described in the TSTF–448, Revision 3, or the NRC staff's model safety evaluation dated October 17, 2006, except as noted below.

TXU Power proposes to reference NEI 99–03, Revision 0, dated June 2001, in the TS bases for TS 3.7.10, instead of Revision 1, dated March 2003, because the NRC has not formally endorsed Revision 1.

In the Applicable Safety Analyses of TS Bases 3.7.10, the discussion of hazardous chemical releases and smoke challenges is clarified by inserting the following, "The analysis for Comanche Peak has determined no CREFS actuation is required for hazardous chemical releases or smoke and no Surveillance Requirements are required to verify operability for hazardous chemicals or smoke." This clarification represents the current plant specific design. In the future, if the Comanche Peak design or environment change, new Action B.2 of TS 3.7.10 addresses hazardous chemicals and smoke to assure that appropriate mitigating actions and / or design feature(s) are considered.

In Surveillance Requirement SR 3.7.10.4, of TS Bases 3.7.10, the discussion of hazardous chemical releases and smoke challenges is clarified by inserting the following, "For Comanche Peak, there is no CREFS actuation for hazardous chemical releases or smoke and there are no Surveillance Requirements that verify operability for hazardous chemicals or smoke." This clarification represents the current plant-specific design. In the future, if the Comanche Peak design or environment change, new Action B.2 of TS 3.7.10 addresses hazardous chemicals and smoke to assure that appropriate mitigating actions and / or design feature(s) are considered.

In addition there were minor differences in TS numbering and in the TS Bases references. These differences are administrative in nature and do not have any safety significance.

2.3 License Condition Regarding Initial Performance of New Surveillance and Assessment Requirements

TXU Power proposes the following as a license condition to support implementation of the proposed TS changes:

> Upon implementation of License Amendment Request No. 06-011 adopting TSTF–448, Revision 3, the determination of control room envelope (CRE) unfiltered air inleakage as required by SR 3.7.10.4, in accordance with TS 5.5.20.c.(i), the assessment of CRE habitability as required by Specification 5.5.20.c.(ii), and the measurement of CRE pressure as required by Specification 5.5.20.d, shall be considered met. Following implementation:
>
> (a) The first performance of SR 3.7.10.4, in accordance with Specification 5.5.20.c.(i), shall be within the specified Frequency of 6 years, plus the 15-month allowance of SR 3.0.2, as measured from December 13, 2001, the date of the most recent successful tracer gas test, as stated in the December 4, 2003, letter response to Generic Letter 2003–01, or within the next 15 months if the time period since the most recent successful tracer gas test is greater than 6 years.

(b) The first performance of the periodic assessment of CRE habitability, Specification 5.5.20.c.(ii), shall be within 3 years, plus the 9-month allowance of SR 3.0.2, as measured from December 13, 2001, the date of the most recent successful tracer gas test, as stated in the December 4, 2003, letter response to Generic Letter 2003–01, or within the next 9 months if the time period since the most recent successful tracer gas test is greater than 3 years.

(c) The first performance of the periodic measurement of CRE pressure, Specification 5.5.20.d, shall be within 18 months, plus the 138 days allowed by SR 3.0.2, as measured from July 27, 2006, the date of the most recent successful pressure measurement test.

3.0 REGULATORY ANALYSIS

3.1 No Significant Hazards Consideration Determination

TXU Power has reviewed the proposed no significant hazards consideration determination (NSHCD) published in the Federal Register as part of the CLIIP.

TXU Power has concluded that the proposed NSHCD presented in the Federal Register notice is applicable to CPSES Units 1 and 2 and is hereby incorporated by reference to satisfy the requirements of 10 CFR 50.91(a).

3.2 Verification and Commitments

As discussed in the notice published in the Federal Register on October 17, 2006, for this TS improvement, plant-specific verifications were performed as follows:

1. TXU Power commits to the guidance of NEI 99–03, Revision 0, "Control Room Habitability Assessment Guidance" dated June 2001, as reflected in the proposed changes to the TS and TSB.

2. TXU Power will revise procedures to implement the new surveillance and programmatic TS requirements related to CRE habitability.

3. TXU Power commits to Regulatory Positions C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, with the following exceptions:

TS 5.5.20.c.(ii).1 identifies the following exceptions to Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0:

1. C. – Section 4.3.2, "Periodic CRH Assessment" from NEI 99-03 Revision 1 will be used as input to a site specific Self Assessment procedure.

   Justification: Appendix H of NEI 99-03 Revision 0 is specifically written to support the initial assessment. Section 4.3.2 "Periodic CRH Assessment" of NEI 99-03 Revision 1 is specifically written to support the periodic assessments required by Figure 1 of Regulatory Guide 1.197.

2. C.1.2 – No peer reviews are required to be performed.

   Justification: Vulnerabilities were identified in Comanche Peak's self-assessment conducted March 6-9, 2000. Three offsite peers were involved in the assessment. Corrective actions (plant modifications) were completed prior to the successful ASTM E741 Tracer Tests conducted in December 2001. Maintenance level of effort is appropriate for the Control Room Envelope Habitability Program.

4.0 ENVIRONMENTAL EVALUATION

TXU Power has reviewed the environmental evaluation included in the model safety evaluation dated October 17, 2006, as part of the CLIIP. TXU Power has concluded that the staff's findings presented in that evaluation are applicable to CPSES Units 1 and 2, and the evaluation is hereby incorporated by reference for this application.

ATTACHMENT 2 to TXX-06174

PROPOSED TECHNICAL SPECIFICATION CHANGES (MARK-UP)

Pages 3.7-23
3.7-24
3.7-25
5.0-28a
Inserts (2 pages)

3.7 PLANT SYSTEMS

3.7.10 Control Room Emergency Filtration/Pressurization System (CREFS)

LCO 3.7.10 Two CREFS trains shall be OPERABLE

NOTE
The Control Room boundary may be opened intermittently under administrative controls.

envelope (CRE)

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6,
During movement of irradiated fuel assemblies

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One CREFS train inoperable for reasons other than Condition B.	A.1 Restore CREFS train to OPERABLE status.	7 days
B. Two CREFS Trains inoperable due to inoperable Control Room boundary in MODES 1, 2, 3, and 4.	B.1 Restore control room boundary to OPERABLE status.	24 hours OR 14 days for a one time implementation for each unit of the Turbine Generator Protection System Digital Modification to be completed during 1RF11 and 2RF09
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1 Be in MODE 3. AND C.2 Be in MODE 5.	6 hours 36 hours

(continued)

One or more

CRE

3

CRE

90 days

B.1 Initiate action to implement mitigating actions. Immediately
AND
B.2 Verify mitigating actions to ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits. 24 hours
AND

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A not met in MODE 5 or 6, or during movement of irradiated fuel assemblies.	D.1 Place OPERABLE CREFS train in emergency recirculation mode. OR D.2.1 Suspend CORE ALTERATIONS. AND D.2.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately Immediately
E. Two CREFS trains inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies except for up to 14 days for a one time implementation for each unit of the Turbine Generator Protection System Digital Modification to be completed during 1RF11 and 2RF09.	E.1 Suspend CORE ALTERATIONS. AND E.2 Suspend movement of irradiated fuel assemblies.	Immediately Immediately
F. Two CREFS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1 Enter LCO 3.0.3.	Immediately

OR

One or more CREFS trains inoperable due to an inoperable CRE boundary in MODE 5 or 6, or during movement of irradiated fuel assemblies.

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.10.1	Operate each CREFS train's Emergency Pressurization Unit for ≥ 10 continuous hours with the heaters operating and Emergency Filtration Unit ≥ 15 minutes.	31 days
SR 3.7.10.2	Perform required CREFS testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with VFTP the
SR 3.7.10.3	Verify each CREFS train actuates on an actual or simulated actuation signal.	18 months
SR 3.7.10.4	Verify one CREFS train can maintain a positive pressure of ≥ 0.125 inches water gauge, relative to the adjacent areas during the emergency recirculation mode of operation at a makeup flow rate of ≤ 800 cfm.	18 months on a STAGGERED TEST BASIS

Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program

In accordance with the Control Room Envelope Habitability Program

5.5 Programs and Manuals (continued)

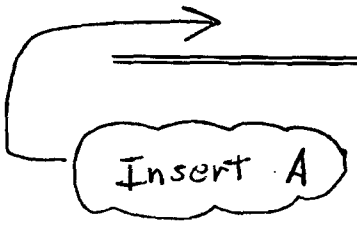
5.5.19 Battery Monitoring and Maintenance Program

This Program provides for restoration and maintenance, based on the recommendations of IEEE Standard 450, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications," or of the battery manufacturer for the following:

a. Actions to restore battery cells with float voltage < 2.13 V, and

b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the top of the plates.

113



Insert A (page 5.0-28a)

5.5.20 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Filtration System (CREFS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem whole body or its equivalent to any part of the body for the duration of the accident. The program shall include the following elements:

a. The definition of the CRE and the CRE boundary.

b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.

c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.

The following are exceptions to Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0:

1. C. - Section 4.3.2 "Periodic CRH Assessment" from NEI 99-03 Revision 1 will be used as input to a site specific Self Assessment procedure.

2. C.1.2 – No peer reviews are required to be performed.

Insert A (page 5.0-28a) (continued)

d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CREFS, operating at the flow rate required by the VFTP, at a Frequency of 18 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the 18 month assessment of the CRE boundary.

e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.

f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

ATTACHMENT 3 to TXX-06174

REVISED TECHNICAL SPECIFICATION PAGES

Pages 3.7-23
3.7-24
3.7-25
5.0-28a
5.0-28b

3.7 PLANT SYSTEMS

3.7.10 Control Room Emergency Filtration/Pressurization System (CREFS)

LCO 3.7.10 Two CREFS trains shall be OPERABLE

---NOTE---
The Control Room envelope (CRE) boundary may be opened intermittently under administrative controls.

APPLICABILITY: MODES 1, 2, 3, 4, 5, and 6,
During movement of irradiated fuel assemblies

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CREFS train inoperable for reasons other than Condition B.	A.1	Restore CREFS train to OPERABLE status.	7 days
B. One or more CREFS Trains inoperable due to inoperable CRE boundary in MODES 1, 2, 3, and 4.	B.1	Initiate action to implement mitigating actions.	Immediately
	AND		
	B.2	Verify mitigating actions to ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits.	24 hours
	AND		
	B.3	Restore CRE boundary to OPERABLE status.	90 days
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, 3, or 4.	C.1	Be in MODE 3.	6 hours
	AND		
	C.2	Be in MODE 5.	36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. Required Action and associated Completion Time of Condition A not met in MODE 5 or 6, or during movement of irradiated fuel assemblies.	D.1	Place OPERABLE CREFS train in emergency recirculation mode.	Immediately
	OR		
	D.2.1	Suspend CORE ALTERATIONS.	Immediately
	AND		
	D.2.2	Suspend movement of irradiated fuel assemblies.	Immediately
E. Two CREFS trains inoperable in MODE 5 or 6, or during movement of irradiated fuel assemblies. OR One or more CREFS trains inoperable due to an inoperable CRE boundary in MODE 5 or 6, or during movement of irradiated fuel assemblies.	E.1	Suspend CORE ALTERATIONS.	Immediately
	AND		
	E.2	Suspend movement of irradiated fuel assemblies.	Immediately
F. Two CREFS trains inoperable in MODE 1, 2, 3, or 4 for reasons other than Condition B.	F.1	Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.10.1	Operate each CREFS trains Emergency Pressurization Unit for ≥ 10 continuous hours with the heaters operating and Emergency Filtration Unit ≥ 15 minutes.	31 days
SR 3.7.10.2	Perform required CREFS testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.10.3	Verify each CREFS train actuates on an actual or simulated actuation signal.	18 months
SR 3.7.10.4	Perform required CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program.	In accordance with the Control Room Envelope Habitability Program

5.5 Programs and Manuals (continued)

5.5.19 Battery Monitoring and Maintenance Program

This Program provides for restoration and maintenance, based on the recommendations of IEEE Standard 450, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Vented Lead-Acid Batteries for Stationary Applications," or of the battery manufacturer for the following:

a. Actions to restore battery cells with float voltage < 2.13 V, and

b. Actions to equalize and test battery cells that had been discovered with electrolyte level below the top of the plates.

5.5.20 Control Room Envelope Habitability Program

A Control Room Envelope (CRE) Habitability Program shall be established and implemented to ensure that CRE habitability is maintained such that, with an OPERABLE Control Room Emergency Filtration System (CREFS), CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem whole body or its equivalent to any part of the body for the duration of the accident. The program shall include the following elements:

a. The definition of the CRE and the CRE boundary.

b. Requirements for maintaining the CRE boundary in its design condition including configuration control and preventive maintenance.

c. Requirements for (i) determining the unfiltered air inleakage past the CRE boundary into the CRE in accordance with the testing methods and at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Revision 0, May 2003, and (ii) assessing CRE habitability at the Frequencies specified in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0.

The following are exceptions to Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0:

1. C. – Section 4.3.2 "Periodic CRH Assessment" from NEI 99-03 Revision 1 will be used as input to a site specific Self Assessment procedure.

(continued)

5.5 Programs and Manuals

5.5.20 Control Room Envelope Habitability Program (continued)

2. C.1.2 – No peer reviews are required to be performed.

d. Measurement, at designated locations, of the CRE pressure relative to all external areas adjacent to the CRE boundary during the pressurization mode of operation by one train of the CREFS, operating at the flow rate required by the VFTP, at a Frequency of 18 months on a STAGGERED TEST BASIS. The results shall be trended and used as part of the 18 month assessment of the CRE boundary.

e. The quantitative limits on unfiltered air inleakage into the CRE. These limits shall be stated in a manner to allow direct comparison to the unfiltered air inleakage measured by the testing described in paragraph c. The unfiltered air inleakage limit for radiological challenges is the inleakage flow rate assumed in the licensing basis analyses of DBA consequences. Unfiltered air inleakage limits for hazardous chemicals must ensure that exposure of CRE occupants to these hazards will be within the assumptions in the licensing basis.

f. The provisions of SR 3.0.2 are applicable to the Frequencies for assessing CRE habitability, determining CRE unfiltered inleakage, and measuring CRE pressure and assessing the CRE boundary as required by paragraphs c and d, respectively.

Attachment 4 – Regulatory Commitments

The following table identifies those actions committed to by TXU Power in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments. Please direct questions regarding these commitments to Mr. Carl Corbin at (254) 897-0121.

Regulatory Commitments	Due Date / Event
TXU Power commits to the guidance of NEI 99-03, Revision 0, "Control Room Habitability Assessment Guidance" dated June 2001, as reflected in the proposed changes to the TS and TSB.	Commitment number 27413 will be implemented with license amendment.

ATTACHMENT 5 to TXX-06174

PROPOSED TECHNICAL SPECIFICATION BASES CHANGES
(For Information Only)

Pages B 3.7-54
B 3.7-55
B 3.7-56
B 3.7-57
B 3.7-58
B 3.7-59
B 3.7-60
B 3.7-61
Inserts (2 pages)

envelope (CRE) and a CRE boundary that limits the inleakage of unfiltered

, hazardous chemicals, or smoke

B 3.7 PLANT SYSTEMS

B 3.7.10 Control Room Emergency Filtration/Pressurization System (CREFS)

occupants

BASES

BACKGROUND The CREFS provides a protected environment from which operators can control the unit following an uncontrolled release of radioactivity.

air in the

CREFS

The CREFS consists of two independent, redundant trains that pressurize, recirculate and filter the control room air. Each train contains two filtration units: an emergency pressurization unit and an emergency filtration unit. Each filtration unit consists of a prefilter, high efficiency particulate air (HEPA) filters, an activated charcoal adsorber section for removal of gaseous activity (principally iodines), and a fan. Ductwork, valves or dampers, and instrumentation also form part of the system, as well as demisters to remove water droplets from the air stream. A second bank of HEPA filters follows the adsorber section to collect carbon fines and provide backup in case of failure of the main HEPA filter bank. In addition, the emergency pressurization units contain a demister and a heater to maintain the humidity of the incoming air below 70%.

doors, barriers,

Insert B

The CREFS is an emergency system wholly contained within the Control Room Air Conditioning System, parts of which operate during normal unit operations. Upon receipt of the actuating signal(s), normal air supply fans to the control room are isolated, and the stream of ventilation air is provided by the emergency pressurization units and then recirculated through the emergency filtration units. The demisters and heaters in the emergency pressurization units remove any large particles in the air, and any entrained water droplets present, to prevent excessive loading of the HEPA filters and charcoal adsorbers. Continuous operation of each train's emergency pressurization unit for at least 10 hours per month, with the heaters on, reduces moisture buildup on the HEPA filters and adsorbers. Both the demister and heater are important to the effectiveness of the charcoal adsorbers.

CRE

(continued)

BASES (continued)

BACKGROUND (continued)

Actuation of the CREFS by a Safety Injection, Loss of Offsite Power or Intake Vent High Radiation signal places the system in the emergency recirculation mode. Actuation of the system to the emergency recirculation mode of operation, closes the unfiltered outside air supply path and the system exhaust dampers, stops normal supply and exhaust fans, and aligns the system for recirculation of the control room air through the redundant trains of HEPA and the charcoal filters. The emergency recirculation mode also initiates pressurization and filtered ventilation of the air supply to the control room.

Outside air is filtered, and added to the air being recirculated from the control room. Pressurization of the control room prevents infiltration of unfiltered air from the surrounding areas of the plant.

The air entering the control room is continuously monitored by radiation detectors. One detector output above the setpoint will cause actuation of the emergency recirculation mode.

A single train will pressurize the control room to about 0.125 inches water gauge. The CREFS operation in maintaining the control room habitable is discussed in the FSAR, Sections 2.2, 6.4, 6.5, 7.3, and 9.4 (Ref. 1).

The CPSES CREFS design is zone isolation, with filtered recirculation air, and with a positive pressure. This design maximizes the iodine protection factors and minimizes the dose from iodine. The total unfiltered infiltration rate in the control room is conservatively assumed to be 12 cfm, including 10 cfm due to ingress/egress and 2 cfm leakage from the ductwork passing through the control room pressure boundary. Filtered inleakage through the closed dampers due to the pressure differential is also included. The damper leakage air will be filtered by the recirculation filtration units. 27

Because the control room door ingress/egress is to a stairwell which is equivalent to a two-door vestibule, backflow will not occur with the CPSES CREFS design and the 10 cfm is not applicable per SRP 6.4. The ductwork has all welded joints which were leak tested prior to operation. Therefore, the assumed unfiltered inleakage from adjacent areas is conservative with respect to the SRP review criteria.

The Control Room Habitability is maintained by limiting the inleakage of potentially contaminated air into the Control Room Envelope. The potential leakage paths for the Control Room Envelope include the control room enclosure (e.g., walls, penetrations, floors, ceilings, joints, etc.), and other potential paths such as pressurized ductwork from other HVAC systems, pressurized air systems (e.g., instrument air) or isolated HVAC intakes.

The periodic surveillance pressurization tests verify the integrity of the control room enclosure with respect to potentially contaminated adjacent

(continued)

BASES (continued)

BACKGROUND (continued)

areas in accordance with SRP 6.4. It does not verify filtered inleakage internal to the filtration units and ductwork nor does it verify unfiltered inleakage from internal pressurized sources (e.g. instrument air). These sources of inleakage are addressed separately from TS surveillances. 27

a habitable environment in the CRE

Redundant supply and recirculation trains provide the required filtration should an excessive pressure drop develop across the other filter train. The CREFS is designed in accordance with Seismic Category I requirements.

The CREFS is designed to maintain the control room environment for 30 days of continuous occupancy after a Design Basis Accident (DBA) without exceeding a 5 rem whole body dose or its equivalent to any part of the body.

CRE occupants

APPLICABLE SAFETY ANALYSES

The CREFS components are arranged in redundant, safety related ventilation trains. The location of components and ducting within the control room envelope ensures an adequate supply of filtered air to all areas requiring access. The CREFS provides airborne radiological protection for the control room operators, as demonstrated by the control room accident dose analyses for the most limiting design basis loss of coolant accident, fission product release presented in the FSAR, Chapter 15 (Ref. 2).

CRE

CRE occupant dose

The Control Room post accident mode of operation is the emergency recirculation mode. In the emergency recirculation mode, both the Emergency Filtration and Emergency Pressurization Units are functioning and they operate in series. In other words, all air which passes through the Emergency Pressurization Unit in each train will pass through the corresponding Emergency Filtration Unit before it is released into the Control Room. The safety analysis which confirmed the CREFS design took credit for no more than 99% filter efficiency of the Emergency Filtration Units only. If the Emergency Pressurization Units do not meet the surveillance requirement criteria for filtration the safety analyses and the associated acceptance criteria continue to be met by the Emergency Filtration Units. Thus, the operators will continue to be provided the protection identified in the licensing bases for CPSES.

Insert C → The analysis of toxic gas releases demonstrates that the toxicity limits are not exceeded in the control room following a toxic chemical release, as presented in Reference 1. Isolation of the control room is not automatic for a toxic chemical release event.

The worst case single active failure of a component of the CREFS, assuming a loss of offsite power, does not impair the ability of the system to perform its design function.

The CREFS satisfies Criterion 3 of 10CFR50.36(c)(2)(ii).

(continued)

, such as from a loss of both ventilation trains or from an inoperable CRE boundary,

BASES (continued)

if

LCO

Two independent and redundant CREFS trains are required to be OPERABLE to ensure that at least one is available assuming a single failure disables the other train. Total system failure could result in exceeding a dose of 5 rem to the control room operator in the event of a large radioactive release.

active

CRE occupants

Each

train

The CREFS is considered OPERABLE when the individual components necessary to limit operator exposure are OPERABLE in both trains. A CREFS train is OPERABLE when both filtration units (i.e., the emergency pressurization unit (EPU) and emergency filtration unit (EFU)) are OPERABLE. A filtration unit is OPERABLE when the associated:

CRE occupant

whole body or its equivalent to any part of the body

a. Fan is OPERABLE;

b. HEPA filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions (the EFU must meet Ventilation Filter Testing Program (VFTP) requirements; the EPU must meet VFTP requirements, except for filtration requirements); and

c. Heater (EPU only), demister (EPU only), ductwork, valves, and dampers are OPERABLE, and air circulation can be maintained.

Insert D

In addition, the control room boundary must be maintained, including the integrity of the walls, floors, ceilings, ductwork, and access doors.

Should be proceduralized and

The LCO is modified by a Note allowing the Control Room boundary to be opened intermittently under administrative controls. For entry and exit through doors the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings these controls consist of stationing a dedicated individual at the opening who is in continuous communication with the control room. This individual will have a method to rapidly close the opening when needed for control room isolation.

operators in the CRE

is indicated

a

CRE

(continued)

This Note only applies to openings in the CRE boundary that can be rapidly restored to the design condition, such as doors, hatches, floor plugs, and access panels

and to restore the CRE boundary to a condition equivalent to the design condition

ensure that the CRE will remain habitable

CREFS B.3.7.10

BASES (continued)

APPLICABILITY

the

In MODES 1, 2, 3, 4, 5, 6, and during movement of irradiated fuel assemblies, CREFS must be OPERABLE to control operator exposure during and following a DBA.

During movement of irradiated fuel assemblies the CREFS must be OPERABLE to cope with the release from a fuel handling accident.

ACTIONS

A.1

an inoperable CRE boundary

When one CREFS train is inoperable for reasons other than Condition B, action must be taken to restore OPERABLE status within 7 days. In this Condition, the remaining OPERABLE CREFS train is adequate to perform the control room protection function. However, the overall reliability is reduced because a single failure in the OPERABLE CREFS train could result in loss of CREFS function. The 7 day Completion Time is based on the low probability of a DBA occurring during this time period, and ability of the remaining train to provide the required capability.

CRE occupant

B.1, B.2, and B.3

If the control room boundary is inoperable in MODES 1, 2, 3, and 4 such that the CREFS trains can not establish or maintain the required pressure, action must be taken to restore an OPERABLE control room boundary within 24-hours. The 24 hour completion time is reasonable based on the low probability of a DBA occurring during this time period, and the availability of CREFs to provide a filtered environment (albeit with potential control room inleakage).

Insert E

A temporary Completion Time is connected to the Completion Time requirements of 24 hours. The temporary Completion Time is 14 days and applies to the implementation of the Turbine Generator Protection System Digital Modification for each unit during 1RF11 and 2RF09.

41

(continued)

BASES

ACTIONS (continued)

C.1 and C.2

In MODE 1, 2, 3, or 4, if the inoperable CREFS train or control room boundary cannot be restored to OPERABLE status within the required Completion Time, the unit must be placed in a MODE that minimizes accident risk. To achieve this status, the unit must be placed in at least MODE 3 within 6 hours, and in MODE 5 within 36 hours. The allowed Completion Times are reasonable, based on operating experience, to reach the required unit conditions from full power conditions in an orderly manner and without challenging unit systems.

D.1, D.2.1, and D.2.2

In MODE 5 or 6, or during movement of irradiated fuel assemblies, if the inoperable CREFS train cannot be restored to OPERABLE status within the required Completion Time, action must be taken to immediately place the OPERABLE CREFS train in the emergency mode. This action ensures that the remaining train is OPERABLE, that no failures preventing automatic actuation will occur, and that any active failure would be readily detected.

An alternative to Required Action D.1 is to immediately suspend activities that could result in a release of radioactivity that might require isolation of the control room. This places the unit in a condition that minimizes risk. This does not preclude the movement of fuel to a safe position.

E.1 and E.2

In MODE 5 or 6, or during movement of irradiated fuel assemblies, with two CREFS trains inoperable except for up to 14 days for a one time implementation for each unit of the Turbine Generator Protection System Digital Modification to be completed during 1RF11 and 2RF09, action must be taken immediately to suspend activities that could result in a release of radioactivity that might enter the control room. This places the unit in a condition that minimizes accident risk. This does not preclude the movement of fuel to a safe position.

41

(continued)

BASES

ACTIONS (continued)

F.1

If both CREFS trains are inoperable in MODE 1, 2, 3, or 4, for reasons other than an inoperable control room boundary (i.e., Condition B), the CREFS may not be capable of performing the intended function and the unit is in a condition outside the accident analyses. Therefore, LCO 3.0.3 must be entered immediately.

SURVEILLANCE REQUIREMENTS

SR 3.7.10.1

Standby systems should be checked periodically to ensure that they function properly. As the environment and normal operating conditions on this system are not too severe, each train once every month provides an adequate check of this system. Monthly heater operations dry out any moisture accumulated in the charcoal from humidity in the ambient air. Filtration units with heaters must be operated for ≥ 10 continuous hours with the heaters energized. Filtration units without heaters need only be operated for ≥ 15 minutes to demonstrate the function of the system. The 31 day Frequency is based on the reliability of the equipment and the two train redundancy availability.

SR 3.7.10.2

This SR verifies that the required CREFS testing is performed in accordance with the Ventilation Filter Testing Program (VFTP). The CREFS filter tests are in accordance with Regulatory Guide 1.52 (Ref. 3). The VFTP includes testing the performance of the HEPA filter, charcoal adsorber efficiency, minimum flow rate, and the physical properties of the activated charcoal. Specific test Frequencies and additional information are discussed in detail in the VFTP.

The VFTP filtration testing requirements of Sections 5.5.11a, b, and c are not required for an Emergency Pressurization Unit when being testing (1) during a periodic test (e.g., 18 months or after 720 hours of operation), (2) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (3) following painting, fire, or chemical release for the corresponding CREFS train to be OPERABLE.

(continued)

based on industry operating experience and is consistent with the typical refueling cycle.

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.7.10.3

This SR verifies that each CREFS train starts and operates on an actual or simulated Safety Injection, Loss-of-Offsite Power, or Intake Vent-High Radiation actuation signal. The Frequency of 18 months is specified in Regulatory Guide 1.52 (Ref. 3). Each actuation signal must be verified (overlapping testing is acceptable).

SR 3.7.10.4

Insert F

This SR verifies the capability of the CREFS to pressurize the control room envelope. The control room positive pressure, with respect to potentially contaminated adjacent areas, is periodically tested to verify this function of the CREFS. During the emergency recirculation mode of operation, the CREFS is designed to pressurize the control room ! 0.125 inches water gauge positive pressure with respect to adjacent areas in order to minimize unfiltered inleakage. The CREFS is designed to maintain this positive pressure with one train at a makeup flow rate of " 800 cfm. The Frequency of 18 months on a STAGGERED TEST BASIS is consistent with the guidance provided in NUREG-0800 (Ref. 4). | 27 | 27 | 1

REFERENCES

1. FSAR, Sections 2.2, 6.4, 6.5, 7.3, and 9.4, and 9.5
2. FSAR, Chapter 15.
3. Regulatory Guide 1.52, Rev. 2.

Insert G

4. NUREG-0800, Section 6.4, Rev. 2, July 1981.

Insert B (page B 3.7-54)

The CRE is the area within the confines of the CRE boundary that contains the spaces that control room occupants inhabit to control the unit during normal and accident conditions. This area encompasses the control room, and may encompass other non-critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident. The CRE is protected during normal operation, natural events, and accident conditions. The CRE boundary is the combination of walls, floor, roof, ducting, doors, penetrations and equipment that physically form the CRE. The OPERABILITY of the CRE boundary must be maintained to ensure that the inleakage of unfiltered air into the CRE will not exceed the inleakage assumed in the licensing basis analysis of design basis accident (DBA) consequences to CRE occupants. The CRE and its boundary are defined in the Control Room Envelope Habitability Program.

Insert C (page B 3.7-56)

The CREFS provides protection from smoke and hazardous chemicals to the CRE occupants. The analysis of hazardous chemical releases demonstrates that the toxicity limits are not exceeded in the CRE following a hazardous chemical release (Ref. 1). The evaluation of a smoke challenge demonstrates that it will not result in the inability of the CRE occupants to control the reactor either from the control room or from the remote shutdown panels (Ref. 1). The analysis for Comanche Peak has determined no CREFS actuation is required for hazardous chemical releases or smoke and no Surveillance Requirements are required to verify operability for hazardous chemicals or smoke.

Insert D (page B 3.7-57)

In order for the CREFS trains to be considered OPERABLE, the CRE boundary must be maintained such that the CRE occupant dose from a large radioactive release does not exceed the calculated dose in the licensing basis consequence analyses for DBA's, and that CRE occupants are protected from hazardous chemicals and smoke.

Insert E (page B 3.7-58)

If the unfiltered inleakage of potentially contaminated air past the CRE boundary and into the CRE can result in CRE occupant radiological dose greater than the calculated dose of the licensing basis analyses of DBA consequences (allowed to be up to 5 rem whole body or its equivalent to any part of the body), or inadequate protection of CRE occupants from hazardous chemicals or smoke, the CRE boundary is inoperable. Actions must be taken to restore an OPERABLE CRE boundary within 90 days.

During the period that the CRE boundary is considered inoperable, action must be initiated to implement mitigating actions to lessen the effect on CRE occupants from the potential hazards of a radiological or chemical event or a challenge from smoke. Actions must be taken within 24 hours to verify that in the event of a DBA, the mitigating actions will ensure that CRE occupant radiological exposures will not exceed the calculated dose of the licensing basis analyses of DBA consequences, and that CRE occupants are protected from hazardous chemicals and smoke. These mitigating actions (i.e., actions

Insert E (page B.7-58) (continued)

that are taken to offset the consequences of the inoperable CRE boundary) should be preplanned for implementation upon entry into the condition, regardless of whether entry is intentional or unintentional. The 24 hour Completion Time is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions. The 90 day Completion Time is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA. In addition, the 90 day Completion Time is a reasonable time to diagnose, plan and possibly repair, and test most problems with the CRE boundary.

Insert F (page B 3.7-61)

This SR verifies the OPERABILITY of the CRE boundary by testing for unfiltered air inleakage past the CRE boundary and into the CRE. The details of the testing are specified in the Control Room Envelope Habitability Program.

The CRE is considered habitable when the radiological dose to CRE occupants calculated in the licensing basis analyses of DBA consequences is no more than 5 rem whole body or its equivalent to any part of the body and the CRE occupants are protected from hazardous chemicals and smoke. For Comanche Peak, there is no CREFS actuation for hazardous chemical releases or smoke and there are no Surveillance Requirements that verify operability for hazardous chemicals or smoke. This SR verifies that the unfiltered air inleakage into the CRE is no greater than the flow rate assumed in the licensing basis analyses of DBA consequences. When unfiltered air inleakage is greater than the assumed flow rate, Condition B must be entered. Required Action B.3 allows time to restore the CRE boundary to OPERABLE status provided mitigating actions can ensure that the CRE remains within the licensing basis habitability limits for the occupants following an accident. Compensatory measures are discussed in Regulatory Guide 1.196, Section C.2.7.3, (Ref. 4) which endorses, with exceptions, NEI 99-03, Section 8.4 and Appendix F (Ref. 5). These compensatory measures may also be used as mitigating actions as required by Required Action B.2. Temporary analytical methods may also be used as compensatory measures to restore OPERABILITY (Ref. 6). Options for restoring the CRE boundary to OPERABLE status include changing the licensing basis DBA consequence analysis, repairing the CRE boundary, or a combination of these actions. Depending upon the nature of the problem and the corrective action, a full scope inleakage test may not be necessary to establish that the CRE boundary has been restored to OPERABLE status.

Insert G (page B 3.7-61)

4. Regulatory Guide 1.196.

5. NEI 99-03, "Control Room Habitability Assessment," June 2001.

6. Letter from Eric J. Leeds (NRC) to James W. Davis (NEI) dated January 30, 2004, "NEI Draft White Paper, Use of Generic Letter 91-18 Process and Alternative Source Terms in the Context of Control Room Habitability." (ADAMS Accession No. ML040300694).