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December 4, 2003

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

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION (CPSES)
DOCKET NOS. 50-445 & 50-446
RESPONSE TO REQUEST FOR INFORMATION ON GENERIC LETTER 2003-01, CONTROL ROOM HABITABILITY

Ref: (1) NRC Generic Letter 2003-01 "Control Room Habitability" June 12, 2003
(2) Letter from Al Passwater to the NRC Document Control Desk, "Submittal of the Strategic Teaming and Resource Sharing (STARS) Engineering Report on Control Room In-leakage" (ULNRC-04402) March 5, 2001
(3) Letter from D. R. Woodlan to the NRC Document Control Desk, "Submittal of Strategic Teaming and Resource Sharing (STARS) Additional Information on Control Room Habitability" (STARS-01002) August 31, 2001
(4) Letter from D. R. Woodlan to the NRC Document Control Desk, "Strategic Teaming and Resource Sharing (STARS) Demonstration of the Component Test Method for Determining Control Room In-leakage" (STARS-02008) June 7, 2002

This letter provides TXU Generation Company LP's (TXU Energy's) response, required within 180 days, to the Nuclear Regulatory Commission's (NRC's) request for information pursuant to the referenced Generic Letter (Reference 1).

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Since late 1999, TXU Energy has pro-actively participated in a joint-effort with the Strategic Teaming and Resource Sharing (STARS) alliance to confirm the habitability of the CPSES Units 1 and 2 control room. This effort included a series of peer assessments performed during the year 2000 to demonstrate that control room habitability was maintained in accordance with regulatory requirements and the facility's design and licensing bases.

The STARS assessments concluded that each facility's control room(s) is designed and maintained such that the likelihood of unfiltered in-leakage is low. In the absence of confirmatory testing, the year 2000 assessments concluded that regulatory requirements and the design and licensing bases are met at each facility. In addition, the assessments concluded that confirmatory testing is necessary. The results of these assessments and the STARS plan to perform in-leakage testing was reported to the NRC on March 5, 2001 (Reference 2).

STARS developed the "component test" referred to in NRC Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," May 2003. STARS developed the component test because this test is a more suitable method for determining control room in-leakage for the late vintage, robust design, low-leakage control rooms characteristic of the STARS facilities. STARS provided information to the NRC in a letter on August 31, 2001 (Reference 3), regarding the suitability of component testing at their facilities.

During the last few years, STARS has actively participated in various industry forums with the NRC to address issues surrounding control room habitability. A central issue of those forums was what constitutes an acceptable test for control room in-leakage. A number of licensees had tested their control rooms using a version of American Society for Testing and Materials (ASTM) consensus standard E741, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution." STARS performed comparison testing in year 2001 between the ASTM E741 method and the component test method for two facilities' control rooms (including CPSES) to validate the acceptability of the component test method. The testing demonstrated that the results of the two test methods correlated. In addition, the testing confirmed the previous assessment findings that the control rooms had a robust design and were maintained such that in-leakage would be expected to be low. The tests determined that there was no control room unfiltered in-leakage at each facility. The results of these tests were reported to the NRC in a letter dated June 7, 2002 (Reference 4). This letter stated that STARS plants planned to use the component test method for any future baseline testing of their control rooms.

NRC Regulatory Guide 1.197 provides conditions for component testing to be acceptable for determining control room envelope integrity. The regulatory guide states that:

(1) an integrated test (i.e., the ASTM E741 method) should be conducted in concert with the component test,
(2) the results of the two methods should correlate; and
(3) the components tested should account for no less than 95% of the control room envelope in-leakage as determined by the integrated test.

Regulatory Guide 1.197 states these conditions are necessary when subsequent control room envelope integrity tests are intended to be component tests.

TXU Energy believes that the component testing method has been adequately demonstrated as an acceptable stand-alone test. Furthermore, TXU Energy has completed correlation testing of the CPSES control room design between the two test methods in accordance with the intent of Generic Letter 2003-01 and NRC Regulatory Guide 1.197. The results of these tests confirmed zero unfiltered in-leakage. TXU Energy's safety analyses are therefore conservative with respect to the value of unfiltered in-leakage assumed into the CPSES control room during the progression of the design basis accident.

The attachment to this letter provides TXU Energy's response to the requested information of NRC Generic Letter 2003-01.

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

[27301] [TXU Energy plans to submit the Technical Specification change to include periodic verification of control room in-leakage by September 30, 2004, or within 90 days after TSTF-448 is available for use, whichever is later.]

The Commitment number is used by TXU Energy for the internal tracking of CPSES commitments which are one time action requirements.

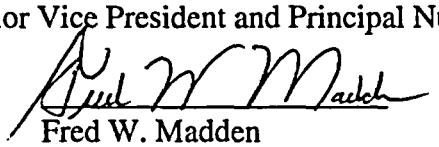
If you have any questions or require additional information, please contact Connie L. Wilkerson at (254) 897-0144.

Sincerely,

TXU Generation Company LP

By: TXU Generation Management Company LLC,
Its General Partner

M. R. Blevins
Senior Vice President and Principal Nuclear Officer

By: 
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CLW/clw
Attachment (Response to Requested Information of NRC Generic Letter 2003-01)

c - B. S. Mallett, Region IV
W. D. Johnson, Region IV
M. C. Thadani, NRR
Resident Inspectors, CPSES

Response to Requested Information of NRC Generic Letter 2003-01

Below is TXU Generation Company LP's (TXU Energy's) response to NRC Generic Letter 2003-01 "Control Room Habitability" with respect to the control room of the Comanche Peak Steam Electric Station (CPSES), Units 1 and 2. The Generic Letter's "Requested Information" is shown in bold.

Requested Information

1. **Confirm that your facility's CRE meets its applicable habitability regulatory requirements (e.g., GDC 1, 3, 4, 5, and 19) and that the CRE and CREHSs are designed, constructed, configured, operated, and maintained in accordance with the facility's design and licensing basis.**

   TXU Energy Response:

   TXU Energy has performed a test to confirm that the most limiting unfiltered in-leakage into the CPSES control room envelope is no more than the value assumed in its design basis radiological analyses for control room habitability. See response to item 1(a) below for more detail.

   TXU Energy is committed to the General Design Criteria of Appendix A of 10CFR50 as documented in the CPSES Final Safety Analysis Report (FSAR). The CPSES FSAR, Section 3.1 "Conformance With Nuclear Regulatory Commission (NRC) General Design Criteria," discusses the extent to which the design criteria of CPSES comply with the General Design Criteria.

   TXU Energy, assisted by peers from the Strategic Teaming and Resource Sharing (STARS[1]) alliance, performed a CPSES control room habitability assessment on March 6-9, 2000. In the absence of confirmatory testing for control room in-leakage, the assessment concluded that the control room habitability systems were designed, constructed, configured, operated and maintained consistent with the control room habitability design and licensing bases. Some issues regarding control room design were identified during the assessment. These issues did not prevent meeting the General Design Criteria. The assessment and issues for CPSES were summarized in a report to the NRC on March 5, 2001, "Submittal of the Strategic Teaming and Resource Sharing (STARS) Engineering Report on Control Room In-leakage" (ULNRC-04402). The five issues identified for CPSES and their status are as follows (Reference Appendix S of the March 5, 2001 STARS Engineering Report on Control Room In-Leakage):

[1] STARS consists of six plants operated by TXU Generation Company LP, AmerenUE, Wolf Creek Nuclear Operating Corporation, Pacific Gas and Electric Company, STP Nuclear Operating Company and Arizona Public Service Company.

Item	Issue	Status
6	The shafts for the Re-circulation fans are not sealed. Any in-leakage via the shaft seals adversely affects the filter flow measurement results that are credited in the accident analysis for control room envelope radiological dose cleanup.	Shaft seals have been added.
8	Four sections of non-safety related ducting pass-through the control room envelop. This ducting remains pressurized and does not isolate on ESF/HVAC emergency mode actuation. This potential source of in-leakage requires component testing.	Component testing confirmed zero leakage through this robust seam welded ductwork.
14	A potential vulnerability for unfiltered in-leakage exists via the ESF filter housing drain lines	A modification to eliminate this vulnerability has been implemented.
15	A potential for more filtered in-leakage than assumed in the dose analysis if dual isolation dampers in the control room ventilation system leak. These dampers require component testing.	Component testing has been completed. Test results indicate some filtered in-leakage and the need for better dampers. Bubble tight dampers are to be installed in 2004. Regulatory limits (for dose analysis) are still met.
16	Potential sources of unfiltered in-leakage exist due to instrument and service air lines that enter the control room emergency zone.	Component testing showing zero leakage has been completed.

TXU Energy has reviewed the previous assessment findings for CPSES control room habitability concerning the design basis radiological consequences analysis and conducted an additional assessment for maintaining control capability with respect to toxic gas and smoke. This review and additional assessment were performed as required to confirm that regulatory requirements and the control room habitability design and licensing bases continue to be met. The results of the previous assessment review and additional assessment for maintaining control capability with respect to toxic gas and smoke are discussed in items 1(a) and 1(b) below, respectively.

TXU Energy has established administrative controls that ensure continued compliance with the control room habitability design and licensing bases. These controls include the following:

Plant Procedures

STA-202 "Administrative Control of CPSES Nuclear Generation Procedures" – includes a technical review of new and revised procedures to ensure consistency, technical accuracy and administrative compliance.
ODA-308-3.7.10-1 "Control Room Pressure Boundary Breach Control" – provides Operations Department personnel a method to document and track degraded conditions that affect Technical Specification 3.7.10 "Control Room Emergency Filtration/Pressurization System (CREFS)"
STA-626 "Chemical/ Consumable Control Program" - requires an engineering evaluation of products for possible impact on control room habitability and HEPA and/or charcoal filters (Attachment 8.B).
STA-696 "Hazard Barrier Control" – provides guidance and direction for any barrier breach (e.g., fire, HELB, MELB, CR boundary, etc.)
ECE 5.01 "Design Control Program" - contains screening criteria to assist engineers in determining impacted areas and programs. One such area is for the Radiological Accident Analysis Engineer. This screen states that if there is a change to the performance characteristics of the control room air condition system or a structural change that will affect the integrity of the control room pressure boundary, then the Radiological Accident Analysis Engineer should review the document and /or participate in modification activities. ECE 5.01 also contains a screening criteria for ALARA.
WCI-606 "Work Control Process" - provides direction when work will cause a breach in the pressure boundary.
DBD-ME-003 "Control Room Habitability" - provides guidance for habitability issues.

Tests

Numerous tests are performed to assure proper component and system performance to maintain control room habitability.

OPT-463A and OPT-487A - verify that the control room HVAC System automatically switches into the emergency recirculation mode on a safety injection signal.
OPT-210 - initiates flow through the HEPA filters and charcoal adsorbers from the control room, verifies that the train operates with the emergency pressurization unit heaters on, manually initiates the emergency recirculation mode of operation, verifies the cross train breaker trips of the running fans, and verifies proper operation of the auto open circuit for the north and south intake dampers.
PPT-SX-7520A, 7521A, 7522B, and 7523B - test the filtration units for flow rate and differential pressure and determine penetration and bypass leakage by leak tests of the charcoal adsorber filter bank and leak testing of the upstream and downstream HEPA filter banks.
PPT-SX-7505A and 7506B - verify that the Emergency Pressurization Air Supply Units will maintain the control room at a positive pressure of greater than or equal to 0.125"

water gauge relative to the adjacent areas including the outside atmosphere at a flow rate of less than or equal to 800 cfm.

Maintenance activities

Maintenance activities designed to ensure the control room pressure boundary include:

PM 324618 "Pressure Boundary Door Inspection"
PM 312277 "Pressure Boundary Penetration Fire Seal Inspection"
FIR-310, R2 "Inspection Procedure for Penetration Seals"
PM 341185 "Tornado Blowout Panel Inspection"

Maintenance activities on Control Room HVAC system habitability components include:

PM 340306 "Inspection of Power Actuated Dampers"
PMs 300329 through 30332 and 300337 through 300340 "Inspection of Gravity Dampers"
PM 341562 "Vibration Monitoring of Filtration Fans CPX-VAFNCB-05 & 23"
PM 341563 "Vibration Monitoring of Filtration Fans CPX-VAFNCB-06 & 24"

TXU Energy plans to continue to work in alliance with STARS to ensure that control room habitability is maintained in the long-term.

1(a) That the most limiting unfiltered inleakage into your CRE (and the filtered inleakage if applicable) is no more than the value assumed in your design basis radiological analyses for CRE habitability. Describe how and when you performed the analyses, tests, and measurements for this confirmation.

TXU Energy Response:

The CPSES design basis radiological analysis for control room habitability is the accident that results in the maximum dose consequences to the operator. The accidents evaluated for control room habitability are 1) large break loss of coolant, 2) main steam line break, 3) steam generator tube rupture, 4) small break loss of coolant (3" CVCS line break outside of containment), 5) rod ejection, 6) RCP locked rotor, 7) fuel handling, 8) gas decay tank rupture, and 9) radioactive liquid waste tank rupture. For CPSES, the large break loss of coolant accident is the design basis for control room habitability. This analysis was last performed on August 28, 1989 (Revision 1) using methods described in NRC Regulatory Guide 1.4 (Revision 2), "Assumptions Used for Evaluating the Potential Radiological Consequences of a Loss of Coolant Accident for Pressurized Water Reactors" and the source term TID-14844 "Calculation of Distance Factors for Power and Test Reactor Sites" (March, 1962). The one exception taken to Regulatory Guide 1.4 is that only gamma radiation contribution is taken into account in the determination of whole body exposures. The calculated thyroid dose total is less than the design limit of 30 rem. The calculated beta skin dose total is less than the design limit of 75 rem that is allowed for plants that commit to provide for skin and eye protection. The total whole-body gamma dose is less than the

design limit of 5 rem. Thus the analysis results meet the dose requirements of GDC 19 of 10CFR50, Appendix A.

The most limiting unfiltered in-leakage into the CPSES control room envelope is assumed to be 12 standard cubic feet per minute (scfm). The Control Room Emergency Filtration/Pressurization System (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 scfm, including 10 scfm due to ingress/egress and 2 scfm leakage from the ductwork passing through the control room pressure boundary. Filtered in-leakage through the closed dampers due to the pressure differential is also included. The damper leakage air will be filtered by the recirculation filtration units. The most limiting filtered in-leakage through the dampers was assumed to be 64 scfm with both trains in the pressurization mode, 30 scfm with one train in the pressurization mode, and 27 scfm in the ventilation mode.

Because the control room door ingress/egress is to a stairwell which is equivalent to a two-door vestibule, back flow will not occur with the CPSES CREFS design and the 10 scfm is not applicable per SRP 6.4. The ductwork has all welded joints which were leak tested prior to operation. Therefore, the assumed unfiltered in-leakage from adjacent areas is conservative with respect to the SRP review criteria. The results of this analysis are documented in the CPSES Final Safety Analysis Report, Section 15.6.5.4.

An assessment performed in year 2000 determined that the CPSES control room envelope had minimal vulnerability to unfiltered in-leakage. Integrated testing and component testing, as described in NRC Regulatory Guide 1.197, was subsequently performed at CPSES in 2001. These testing results validated the year 2000 assessment findings for CPSES.

The testing at CPSES was conducted in December 2001 and is described in a letter to the NRC "Strategic Teaming and Resource Sharing (STARS) Demonstration of the Component Test Method for Determining Control Room In-leakage" (STARS-02008) dated June 7, 2002. Comparison of in-leakage results was made by using both the Integrated Tracer Gas Test method and the Component Test method described in Appendix I of NEI 99-03. The components selected for testing were identified during the self-assessment performed at CPSES in March, 2000 (see item 1 above). The purpose of the tests was to gain experience with tracer gas testing for the STARS plants, compare test method results, and provide meaningful feedback and comments to proposed new regulatory guidance. This testing also served to help determine if there was any unfiltered and filtered in-leakage in the CPSES control room pressure boundary that was unaccounted for in the existing analyses.

The results of both test methods compared favorably with each other. The unfiltered in-leakage was determined to be 0 scfm. There was a certain amount (245 scfm with one train in operation) of filtered in-leakage through the stand-by control room filter unit and the

normal supply path for the operating train (refer to item 15 listed above in item 1); however, even with the 245 scfm filtered in-leakage, CPSES does not exceed the regulatory limits of 30 rem thyroid, 5 rem whole body, and 75 rem beta air dose. Rather than accept this condition as is and re-evaluate the consequences, TXU Energy has elected to restore the plant to the original design condition. This option was selected because (1) it improves the plant design over the current configuration, and (2) the analysis required to accept this condition would involve prior NRC approval for either a methodology change or a more than minimal increase (10%) in consequences.

Corrective actions for addressing this filtered in-leakage condition are in progress and included in the CPSES Corrective Action Program. Note that this filtered air in-leakage will pass through at least one set of HEPA and charcoal filters. TXU Energy has shown that this filtered in-leakage can be significantly reduced by damper manipulation.[2] The necessary damper position changes can be accomplished from the control room. The corrective action is to replace six dampers near the intakes and filter units (three per train) with "bubble tight dampers." The bubble tight dampers are planned to be installed to reduce the filtered in-leakage and provide an effective isolation mode for the control room HVAC system. This modification is expected to be completed in 2004.

1(b) **That the most limiting unfiltered inleakage into your CRE is incorporated into your hazardous chemical assessment. This inleakage may differ from the value assumed in your design basis radiological analyses. Also confirm that the reactor control capability is maintained from either the control room or the alternate shutdown panel in the event of smoke.**

TXU Energy Response:

During the year 2000 assessments, TXU Energy determined that there were no offsite storage or transportation of chemicals that presented a hazard to control room habitability .

In addition, there are no onsite chemicals that pose a credible hazard to control room habitability. Engineered controls for the control room are not required to ensure habitability against a hazardous chemical threat. Therefore, the amount of unfiltered in-leakage is not incorporated into TXU Energy's hazardous chemical assessment.

The offsite and onsite hazardous chemical analyses for CPSES have been reviewed to confirm that the original Final Safety Analysis Report (FSAR) conclusions remain valid. One new stationary industrial source (Wolf Hollow power plant) has been evaluated. Wolf Hollow, as a source, is enveloped by the existing analyses for hazardous materials sources stored onsite.

[2] This data obtained while in the Emergency Recirculation Mode (lineup for radiological mitigation) and is used only to demonstrate the magnitude of the known vulnerability.

The original conclusion expressed in the FSAR, Section 2.2.1, that there are no heavily traveled highways that pass close to the CPSES site is still valid. There are no rail lines or waterways within the five-mile radius of the control room. Therefore the transport and spilling of hazardous chemicals that would affect the control room is highly unlikely.

All calculations relative to onsite hazardous chemicals remain valid. In addition, plant procedure STA-626 "Chemical/Consumable Control Program" requires an evaluation for control room habitability for any new chemical brought on site.

The year 2000 assessments did not evaluate the reactor control capability in the event of smoke since this issue was not fully developed at that time. Subsequently, TXU Energy has completed an additional assessment which provides this confirmation consistent with Regulatory Position 2.6 of NRC Regulatory Guide 1.196, "Control Room Habitability at Light-Water Nuclear Power Reactors," May, 2003. With respect to smoke, this additional assessment follows the guidance of Appendix E of NEI 99-03 "Control Room Habitability Assessment Guidance – Smoke Infiltration Impact On Safe Shutdown" as endorsed by Regulatory Position 2.6 of NRC Regulatory Guide 1.196.

The assessment of reactor control capability in the event of toxic gas and smoke is as follows:

Toxic Gas and Smoke - Background:

The location and layout of CPSES is such that the threat of smoke or toxic gas from offsite sources is not credible (i.e. the distance from any offsite source of combustion or toxic gas to the control room intakes is sufficient to ensure a significant amount of dispersion). Onsite, chemicals and combustibles are controlled such that the threat of smoke and toxic gas from onsite sources is negligible. These statements are supported by text in CPSES design basis documents (DBD-ME-003) and in FSAR Sections 2.2 and 6.4. Various control room habitability analyses have been performed for known locations and quantities of potentially hazardous materials against the need for detection and automatic isolation. These analyses assume the control room HVAC is in the normal lineup (i.e., outside air is drawn into the control room at or above the normal rate). These analyses demonstrate that potentially hazardous material sources from onsite and offsite will not render the control room uninhabitable; however, the control room HVAC lineup for smoke and toxic gas protection is still maintained as an Operator action option at CPSES. Upon the detection of a need for toxic gas or smoke protection, the CPSES control room ventilation line-up is the isolation mode which does not pressurize the boundary. In the isolation mode, the control room HVAC system is used to recirculate the air within the envelope. Currently, there is a known weakness in the ability to isolate. It is known that the dampers are not "air-tight" and that outside air will pass through the closed dampers and reach the control room. The rate at which this filtered in-leakage air will come in is a maximum of about 250 scfm. Corrective action to install bubble tight dampers is planned (see response to item 1(a)). The installation of these bubble tight dampers will ensure the ability to adequately isolate the control room from the exterior environment if necessary.

Analysis:

Smoke or toxic gas threats from outside sources (either onsite or offsite) will result in Operator action to line-up the ventilation system in the isolation mode. Thus the control room is safe from potential smoke or toxic gas contaminants. The Remote Shutdown Panels, located in the Electrical Equipment area of the Unit 1 and Unit 2 Safeguards Buildings, may become uninhabitable. This is due to the fact that this area is served by the Electrical Area Ventilation System that takes in fresh air from the roof of the Safeguards Building. This source will not simultaneously render the control room and the Remote Shutdown Panel rooms uninhabitable.

Smoke or toxic gas threats from inside sources (but outside the control room) will result in the contaminants being taken into the respective building's exhaust stream and eventually discharged into the atmosphere. Building exhaust flows are discharged in the vertical direction and thus any entrained contaminants will be in an elevated release that is readily dispersed. This minimizes the chance that any exhaust containing entrained contaminants will migrate to either the control room or the Electrical Area Ventilation System intakes. If necessary, the control room ventilation can be placed in the isolation mode. The infiltration of contaminants from adjacent areas will not occur because these boundaries are well sealed and the adjacent areas are normally at a neutral pressure relative to the control room when the control room ventilation is in the isolation mode. For smoke originating from inside the control room, Fire Preplan Instructions direct fire brigade personnel to coordinate with the Unit Reactor Operator on ventilation system alignment for smoke removal from inside the control room pressure boundary. Instructions are also given for Manual Smoke Removal from each of the three elevations inside the control room pressure boundary. Self-Contained Breathing Apparatus (SCBAs) are staged and licensed operations personnel are trained in their use. Abnormal Operations procedures exist for evacuating the control room in case of severe smoke or fire. The site control of chemicals and combustible materials coupled with installed mitigating systems (e.g., fire detection, fire suppression, HVAC filtration) and trained responders (e.g., fire brigade, spill response team) limits the amounts of toxic gas and smoke available for liberation. Since such small quantities are available for liberation inside, and that which is liberated will be drawn into the building's exhaust, the uninhabitable area will be limited to a small area near the location of the source. The control room is in the Electrical and Controls Building and the Remote Shutdown Panels are in the North and South ends of the Safeguards Building. Even though these two areas are on the same elevation (832') there is a significant amount of physical separation provided by building walls and doors. Therefore, an inside source of smoke or toxic gas will not simultaneously render the control room and the Remote Shutdown Panel rooms uninhabitable.

Conclusion:

The combination of all of the following factors act to ensure that smoke or toxic gas do not pose a threat to the habitability of the control room; the location and layout of the plant; the

control of onsite chemicals and combustibles; the installed mitigating systems; the orientation of plant exhausts; the design of the plant ventilation system to maintain areas adjacent to the control room at neutral or lower pressures; and the availability of trained responders. However, in the event of a threat from smoke or toxic gas from sources outside of the control room, the Operator will place the Control Room Ventilation System in the Isolation Mode. This mode isolates the control room from all surrounding areas and ensures habitability. If the source of smoke or toxic gas is inside the control room, the Operators are trained to relocate to the Remote Shutdown Panel and shutdown the plant. As described above there is no scenario that will simultaneously render the control room and the Remote Shutdown Panel rooms uninhabitable. CPSES currently meets the control room habitability (GDC 19) criteria for smoke and toxic gas. Note that implementation of bubble dampers is not required to meet GDC 19 for smoke and toxic gas but it does provide added assurance.

1(c) That your Technical Specifications verify the integrity of your CRE and the assumed inleakage rates of potentially contaminated air. If you currently have a ΔP surveillance requirement to demonstrate CRE integrity, provide the basis for your conclusion that it remains adequate to demonstrate CRE integrity in light of the ASTM E741 testing results. If you conclude that your ΔP surveillance requirement is no longer adequate, provide a schedule for: 1) revising the surveillance requirement in your technical specification to reference an acceptable surveillance methodology (e.g., ASTM E-741), and 2) making any necessary modifications to your CRE so that compliance with your new surveillance requirement can be demonstrated.

If your facility does not currently have a technical specification surveillance requirement for your CRE, explain how and on what frequency you confirm your CRE integrity.

TXU Energy Response:

The CPSES Technical Specifications (TS) require, on an 18 month staggered test basis, that a surveillance be performed to verify that each Control Room Emergency Filtration System (CREFS) train shall be demonstrated OPERABLE by verification that the system maintains the control room envelope at a positive pressure of $\geq$ 0.125 inches water gauge relative to the adjacent areas during the emergency recirculation mode of operation at a makeup flow of $\leq$ 800 cfm. The TS Bases state that this surveillance requirement verifies the integrity of the control room enclosure with respect to potentially contaminated adjacent areas in accordance with SRP 6.4. It does not verify filtered in-leakage internal to the filtration units and ductwork nor does it verify unfiltered in-leakage from internal pressurized sources (e.g. instrument air). These sources of in-leakage are addressed separately from TS surveillances.

TXU Energy believes that the positive pressure surveillance does verify the operability of the CREFS train and provides an indication of control room boundary integrity, although not confirmation. In light of the ASTM E741 testing results reported in Generic Letter 2003-01, in-leakage testing appears to be the best method to confirm boundary integrity.

Therefore, TXU Energy plans to submit a Technical Specification change to include periodic verification of control room in-leakage. This change will take into consideration the CPSES control room envelope design, the current CPSES Technical Specifications, Standard Technical Specification Traveler TSTF-448, and the in-leakage testing previously performed at CPSES. TXU Energy is aware that the NRC is currently reviewing TSTF-448 and has not yet approved it. It is anticipated that any issues that the NRC may have with TSTF-448 will be resolved in the near future. TXU Energy plans to submit the Technical Specification change to include periodic verification of control room in-leakage by September 30, 2004, or within 90 days after TSTF-448 is availability for use, whichever is later.

TXU Energy plans to complete a plant modification (install bubble tight dampers) to reduce the level of filtered air in-leakage identified during the testing of the CPSES control room envelope (see response to 1(a)). This modification is intended to provide an effective isolation mode for the control room HVAC system and restore the control room to the original design conditions, i.e., with respect to the design analyses values assumed for filtered in-leakage. Regulatory limits for dose analysis are still met. ASTM E 741 and component tests performed in December 2001 confirmed 0 scfm unfiltered in-leakage into the CPSES control room envelope.

2. **If you currently use compensatory measures to demonstrate CRE habitability, describe the compensatory measures at your facility and the corrective actions needed to retire these compensatory measures.**

TXU Energy Response:

TXU Energy does not use compensatory measures to demonstrate control room envelope habitability.

TXU Energy performed a self-assessment of control room habitability in year 2000 and concluded that regulatory requirements and the design and licensing bases were being met. TXU has subsequently performed additional assessments and confirmatory in-leakage testing. TXU Energy plans to submit a Technical Specification change to include periodic verification of control room in-leakage (see response to 1(c)). These additional measures will provide assurance to demonstrate control room envelope habitability.

3. **If you believe that your facility is not required to meet either the GDC, the draft GDC, or the "Principle Design Criteria" regarding control room habitability, in addition to responding to items 1 and 2 above, provide the documentation (e.g., Preliminary Safety Analysis Report, Final Safety Analysis Report sections, or correspondence, etc.) of the basis for this conclusion and identify your actual requirements.**

TXU Energy Response:

TXU Energy is committed to the General Design Criteria of Appendix A of 10CFR50 as stated in the response to item 1.