

Mr. C. Lance Terry
 Senior Vice President
 & Principal Nuclear Officer
 TXU Electric
 Attn: Regulatory Affairs Department
 P. O. Box 1002
 Glen Rose, Texas 76043

June 12, 2000

SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2 - ISSUANCE OF AMENDMENTS RE: REVISION TO VENTILATION CHARCOAL ADSORBER TESTING PROGRAM (TAC NOS. MA7188 AND MA7189)

Dear Mr. Terry:

The Commission has issued the enclosed Amendment No. 78 to Facility Operating License No. NPF-87 and Facility Operating License No. NPF-89 for Comanche Peak Steam Electric Station, Units 1 and 2, respectively. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated November 8, 1999, as supplemented by letters dated April 13, and May 30, 2000.

The amendments change TS 5.5.11, "Ventilation Filter Testing Program (VFTP)" to include the requirement for laboratory testing of Engineered Safety Feature Ventilation System charcoal samples per American Society for Testing and Materials D3803-1989 and the application of a safety factor of 2.0 to the charcoal filter efficiency assumed in the plant design-basis dose analyses. The license amendments also extend the implementation date for License Amendment 74, currently June 30, 2000, to December 31, 2000.

A copy of our related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

David H. Jaffe, Senior Project Manager, Section 1
 Project Directorate IV & Decommissioning
 Division of Licensing Project Management
 Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

- Enclosures: 1. Amendment No. 78 to NPF-87
 2. Amendment No. 78 to NPF-89
 3. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

June 12, 2000

Mr. C. Lance Terry
Senior Vice President
& Principal Nuclear Officer
TXU Electric
Attn: Regulatory Affairs Department
P. O. Box 1002
Glen Rose, Texas 76043

**SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2 -
ISSUANCE OF AMENDMENTS RE: REVISION TO VENTILATION CHARCOAL
ADSORBER TESTING PROGRAM (TAC NOS. MA7188 AND MA7189)**

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Docket Nos. 50-445 and 50-446

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3. Safety Evaluation

cc w/encls: See next page

Comanche Peak Steam Electric Station

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 1

DOCKET NO. 50-445

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 78
License No. NPF-87

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by TXU Electric dated November 8, 1999, as supplemented by letters dated April 13, and May 30, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-87 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 78 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. TXU Electric shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.
4. License amendment 74 shall be implemented by December 31, 2000.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Gramm, Chief, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: June 12, 2000



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION, UNIT NO. 2

DOCKET NO. 50-446

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 78
License No. NPF-89

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by TXU Electric dated November 8, 1999, as supplemented by letters dated April 13, and May 30, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-89 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 78 , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. TXU Electric shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.
4. License amendment 74 shall be implemented by December 31, 2000.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Gramm, Chief, Section 1
Project Directorate IV & Decommissioning
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: June 12, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 78

TO FACILITY OPERATING LICENSE NO. NPF-87

AND

FACILITY OPERATING LICENSE NO. NPF-89

DOCKET NOS. 50-445 AND 50-446

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Insert

5.0-21

5.0-21

5.0-22

5.0-22

5.5 Programs and Manuals

5.5.11 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2 and in accordance with Regulatory Guide 1.52, Revision 2, ANSI/ASME N509-1980, ANSI/ASME N510-1980, and ASTM D3803-1989.

Note: ANSI/ASME N510-1980, ANSI/ASME N509-1980, and ASTM D3803-1989 shall be used in place of ANSI 510-1975, ANSI/ASME N509-1976, and ASTM D3803-1979 respectively in complying with Regulatory Guide 1.52, Revision 2.

- a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 1.0% for Primary Plant Ventilation System - ESF Filtration units and < 0.05% for all other units when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI/ASME N510-1980 at the system flowrate specified below $\pm 10\%$.

ESF Ventilation System	Flowrate
Control Room Emergency filtration unit	8,000 CFM
Control Room Emergency pressurization unit	800 CFM
Primary Plant Ventilation System - ESF filtration unit	15,000 CFM

- b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < 1.0% for Primary Plant Ventilation System - ESF Filtration units and < 0.05% for all other units when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI/ASME N510-1980 at the system flowrate specified below $\pm 10\%$.

ESF Ventilation System	Flowrate
Control Room Emergency filtration unit	8,000 CFM
Control Room Emergency pressurization unit	800 CFM
Primary Plant Ventilation System - ESF filtration unit	15,000 CFM

(continued)

5.5 Programs and Manuals

5.5.11 Ventilation Filter Testing Program (VFTP) (continued)

- c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of $\leq 30^{\circ}\text{C}$ and greater than or equal to the relative humidity specified below.

ESF Ventilation System	Penetration	RH
Control Room Emergency filtration unit	0.5%	70%
Control Room Emergency pressurization unit	0.5%	70%
Primary Plant Ventilation System - ESF filtration unit	2.5%	70%

- d. Demonstrate at least once per 18 months for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, and ANSI/ASME N510-1980 at the system flowrate specified below $\pm 10\%$

ESF Ventilation System	Delta P	Flowrate
Control Room Emergency filtration unit	8.0 in WG	8000 CFM
Control Room Emergency pressurization unit	9.5 in WG	800 CFM
Primary Plant Ventilation System - ESF filtration unit.	8.5 in WG	15000 CFM

- e. Demonstrate at least once per 18 months that the heaters for each of the ESF systems dissipate the value specified below when tested in accordance with ANSI/ASME N510-1980.

ESF Ventilation System	Wattage
Control Room Emergency pressurization unit	10 ± 1 kW
Primary Plant Ventilation System - ESF filtration unit	100 ± 5 kW

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

(continued)



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 78 TO

FACILITY OPERATING LICENSE NO. NPF-87

AND

FACILITY OPERATING LICENSE NO. NPF-89

TXU ELECTRIC

COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-445 AND 50-446

1.0 INTRODUCTION

By application dated November 8, 1999, as supplemented by letters dated April 13, and May 30, 2000, TXU Electric (the licensee) requested changes to the Technical Specifications (TS) for the Comanche Peak Steam Electric Station (CPSES), Units 1 and 2. The proposed changes would change TS 5.5.11, "Ventilation Filter Testing Program (VFTP)" to include the requirement for laboratory testing of Engineered Safety Feature (ESF) Ventilation System charcoal samples per American Society for Testing and Materials (ASTM) D3803-1989 and the application of a safety factor of 2.0 to the charcoal filter efficiency assumed in the plant design-basis dose analyses. The April 13, and May 30, 2000, supplements provided clarifying information that did not change the scope of the application or the Nuclear Regulator Commission (NRC) staff's proposed no significant hazards consideration determination.

2.0 EVALUATION

The NRC staff, with technical assistance from Brookhaven National Laboratory (BNL), has reviewed the licensee's submittals. In addition, the staff has reviewed the attached BNL Technical Evaluation Report (TER) regarding the proposed TS changes for CPSES, Units 1 and 2. Based on its review, the staff adopts the TER. In view of the above, and because the NRC staff considers ASTM D3803-1989 to be the most accurate and most realistic protocol for testing charcoal in safety-related ventilation systems, the NRC staff finds that the proposed TS changes satisfy the actions requested in Generic Letter 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999, and are acceptable.

The NRC received a letter from ASTM in response to a March 8, 2000, Federal Register Notice (65 FR 12286) related to revising testing standards in accordance with ASTM D3803-1989 for laboratory testing of activated charcoal in response to Generic Letter

(GL) 99-02. ASTM notified the NRC that the 1989 standard is out of date and should be replaced by D3803-1991(1998). The staff acknowledges that the most current version of ASTM D3803 is ASTM D3803-1991 (reaffirmed in 1998). However, it was decided, for consistency purposes, to have all of the nuclear reactors test to the same standard (ASTM D3803-1989) because, prior to GL 99-02 being issued, approximately one third of nuclear reactors had technical specifications that referenced ASTM D3803-1989 and there are no substantive changes between the 1989 and 1998 versions.

In an unrelated issue, the May 30, 2000, supplement requests that the license amendments also extend the implementation date for License Amendment 74, currently June 30, 2000, to December 31, 2000. Amendment 74 consisted of changes to the TSs in response to the licensee's letters dated February 11, 1999, September 3, 1999, and December 20, 1999. The Amendments changed the TSs to authorize an increase in the allowable spent fuel storage capacity and the crediting of soluble boron, in the spent fuel pool, for spent fuel reactivity control. The licensee's May 30, 2000, supplement indicates that additional implementation time is needed to investigate potential non-conservatisms in Westinghouse's currently licensed and approved methodology regarding the axial burnup bias on spent fuel criticality analyses. These analyses were among the bases for issuance of Amendment 74. The proposed delay in the implementation date of Amendment 74 will allow time for the licensee to address the effect, if any, this issue might have on the spent fuel storage curves as approved by Amendment 74. Accordingly, the NRC staff concludes that the licensee's proposed implementation date of December 31, 2000, for Amendment 74 is acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Texas State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (64 FR 73101, dated December 29, 1999). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: June 12, 2000

Attachment: Technical Evaluation Report, Brookhaven National Laboratory

ATTACHMENT

**TECHNICAL EVALUATION REPORT
BROOKHAVEN NATIONAL LABORATORY
FOR THE OFFICE OF NUCLEAR REACTOR REGULATION
DIVISION OF SYSTEMS SAFETY AND ANALYSIS
PLANT SYSTEMS BRANCH
RELATED TO AMENDMENT NO. 99-007 TO FACILITY OPERATING LICENSES
NOS. NPF-87 (UNIT 1) AND NPF-89 (UNIT 2)
TXU ELECTRIC
COMANCHE PEAK STEAM ELECTRIC STATION
DOCKET NOS. 50-445 AND 50-446**

1.0 INTRODUCTION

By letters dated July 26, 1999 (Log# TXX-99155) and November 8, 1999 (Log# TXX-99231), TXU Electric (the licensee) submitted its response to the actions requested in Generic Letter (GL) 99-02, "Laboratory Testing of Nuclear-Grade Activated Charcoal," dated June 3, 1999, for Comanche Peak Steam Electric Station. By letter dated November 8, 1999, TXU Electric requested changes to the Technical Specifications (TS) Sections 5.5.11, "Ventilation Filter Testing Program (VFTP)," for Comanche Peak - Units 1 and 2. By letter dated April 13, 2000 (Log# TXX-00073), TXU Electric provided additional information at NRC request concerning the system face velocities at the maximum flow rates specified in the TS. The proposed changes would revise the TS surveillance testing of the safety related ventilation system charcoal to meet the requested actions of GL 99-02.

2.0 BACKGROUND

Safety-related air-cleaning units used in the engineered safety features (ESF) ventilation systems of nuclear power plants reduce the potential onsite and offsite consequences of a radiological accident by filtering radioiodine. Analyses of design basis accidents assume particular safety-related charcoal adsorption efficiencies when calculating offsite and control room operator doses. To ensure that the charcoal filters used in these systems will perform in a manner that is consistent with the licensing basis of a facility, licensees have requirements in their TS to periodically perform a laboratory test (in accordance with a test standard) of charcoal samples taken from these ventilation systems.

In GL 99-02, the staff alerted licensees that testing nuclear-grade activated charcoal to standards other than American Society for Testing and Materials (ASTM) D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with their current licensing bases with respect to the dose limits of General Design Criterion (GDC) 19 of Appendix A to Part 50 of Title 10 of the Code of Federal Regulations (10 CFR) and Subpart A of 10 CFR Part 100.

GL 99-02 requested that all licensees determine whether their TS reference ASTM D3803-89 for charcoal filter laboratory testing. Licensees whose TS do not reference ASTM D3803-89 were requested to either amend their TS to reference ASTM D3803-1989 or propose an alternative test protocol.

3.0 EVALUATION

3.1 Laboratory Charcoal Sample Testing Surveillance Requirements

The current and proposed laboratory charcoal sample testing TS surveillance requirements for the Primary Plant Ventilation System (PPVS), Control Room Emergency Pressurization Units (CREPU), and Control Room Emergency Filtration Units (CREFU) for both reactor units are shown in Table 1 and Table 2, respectively.

The proposed use of ASTM D3803-1989 is acceptable because it provides accurate and reproducible test results. The proposed test temperature of 30 °C is acceptable because it is consistent with ASTM D3803-1989. The proposed test relative humidity (RH) of 70 percent is also acceptable, because both PPVS and CREPU systems are equipped with safety-related heaters and the control room has a safety-related air conditioning system which remains operational for both the recirculation and ventilation modes to maintain 70% RH for the CREFU (Refs. NUREG-0797, Supplement 22, dated January 1999 and FSAR Section 15.6, page 15.6-34). This is consistent with the actions requested in GL 99-02.

Based on Table 9.4-4 and Section 15.6 of the FSAR, the credited efficiencies for radioactive organic iodine for the PPVS, CREPU and CREFU are $\geq 95\%$, $\geq 99\%$, $\geq 99\%$, respectively. The proposed test penetrations for methyl iodide for the PPVS, CREPU and CREFU are $\geq 2.5\%$, $\geq 0.5\%$, $\geq 0.5\%$, respectively. The proposed test penetrations were obtained by applying a safety factor of 2 to the credited efficiencies. The proposed safety factors are acceptable because they ensure that the efficiencies credited in the accident analysis are still valid at the end of the surveillance interval. This is consistent with the minimum safety factor of 2 specified in GL 99-02.

Based on Section 1A(B) and Table 9.4-4 of the FSAR, and the TXU Electric letter of April 13, 2000, the system face velocities at the charcoal adsorber sections will not exceed 44 fpm (110% of 40 fpm) at the maximum system flow rates specified in the TS. This is acceptable because it ensures that the testing will be consistent with the operation of the ventilation system during accident conditions. Therefore, it is not necessary to specify the face velocity in the proposed TS change. This is consistent with the August 23, 1999 errata to GL 99-02.

4.0 CONCLUSION

On the basis of its evaluation, BNL recommends that the NRC staff conclude that the proposed TS changes are acceptable.

Principal Contributors: Mano Subudhi, and Anthony Fresco, BNL
Date: May 23, 2000

COMANCHE PEAK STEAM ELECTRIC STATION UNITS 1 AND 2

TABLE 1 - CURRENT TS REQUIREMENTS											
System Description					Current TS Requirements						
TS Section	System	Bed Thickness (inches)*	Actual Charcoal*		Credited Efficiency (Organic Iodine)*	Test Penetration. (Methyl Iodide)	Safety Factor	Test Standard	Test Temp (° C)	Test RH (%)	Test Face Velocity (fpm)
			Res. Time (Sec)*	Face Velocity (fpm)*							
5.5.11	PPVS	4	0.50	40	95%	1.0%	5	ANSI N510-1980	30	70	40
	CREPU	4	0.50	40	99%	0.2%	5	ANSI N510-1980	30	70	40
	CREFU	4	0.50	40	99%	0.2%	5	ANSI N510-1980	30	70	40

* Based on FSAR Section 1A(B) for Regulatory Guide 1.52, FSAR Table 9.4-4, or FSAR Section 15.6.

TABLE 2 - PROPOSED TS REQUIREMENTS											
System Description					Proposed TS Requirements						
TS Section	System	Bed Thickness (inches)*	Actual Charcoal*		Credited Efficiency (Organic Iodine)*	Test Penetration (Methyl Iodide)	Safety Factor	Test Standard	Test Temp (° C)	Test RH (%)	Test Face Velocity (fpm)
			Res. Time (Sec)*	Face Velocity (fpm)*							
5.5.11	PPVS	4	0.50	40	95%	2.5%	2	ASTM D3803-1989	30	70	40
	CREPU	4	0.50	40	99%	0.5%	2	ASTM D3803-1989	30	70	40
	CREFU	4	0.50	40	99%	0.5%	2	ASTM D3803-1989	30	70	40

* Based on FSAR Section 1A(B) for Regulatory Guide 1.52, FSAR Table 9.4-4, or FSAR Section 15.6.