

November 17, 1995

Mr. C. Lance Terry
Group Vice President, Nuclear
TU Electric
Energy Plaza
1601 Bryan Street, 12th Floor
Dallas, TX 75201-3411

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SUBJECT: COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2 - AMENDMENT
NOS. 43 AND 29 TO FACILITY OPERATING LICENSE NOS. NPF-87 AND NPF-89
(TAC NOS. M91066 AND M91067)

Dear Mr. Terry:

The Commission has issued the enclosed Amendment Nos. 43 and 29 to Facility Operating License Nos. NPF-87 and NPF-89 for the Comanche Peak Steam Electric Station, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated December 6, 1994 (TXX-94307).

The amendments revise Technical Specifications to allow appropriate remedial action for high particulate levels in the diesel generator fuel oil inventory and other out-of-limit properties in new diesel generator fuel oil that has been added to the existing diesel generator fuel oil storage inventory.

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

Sincerely,

ORIGINAL SIGNED BY:
Timothy J. Polich, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

- Enclosures: 1. Amendment No.43 to NPF-87
2. Amendment No.29 to NPF-89
3. Safety Evaluation

cc w/encls: See next page

Document Name: G:\CP91066.AMD

OFC	LA/PD4-1	PD4-1	PM/PD4-1	EMCB	OTSB	OGC
NAME	PNoonan ^{JTC}	EFuentes	TPolich:sw	JStrosnider ^{#19/5/95}	CGrimes ^{#95-149}	CPW ^{w/ noted change}
DATE	8/31/95	9/5/95	9/5/95	9/11/95	9/14/95	9/26/95
COPY	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO	YES/NO

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signed TJP

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

November 17, 1995

Mr. C. Lance Terry
Group Vice President, Nuclear
TU Electric
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Sincerely,

A handwritten signature in cursive script, appearing to read "Timothy J. Polich".

Timothy J. Polich, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket Nos. 50-445 and 50-446

Enclosures: 1. Amendment No. 43 to NPF-87
2. Amendment No. 29 to NPF-89
3. Safety Evaluation

cc w/encls: See next page

Mr. C. Lance Terry
TU Electric Company

Comanche Peak, Units 1 and 2

cc:
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U.S. Nuclear Regulatory Commission
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Granbury, TX 76048

Honorable Dale McPherson
County Judge
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

TEXAS UTILITIES ELECTRIC COMPANY
COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 1
DOCKET NO. 50-445
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 43
License No. NPF-87

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Texas Utilities Electric Company (TU Electric, the licensee) dated December 6, 1994 (LAR 94-021, TXX-94307), 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:

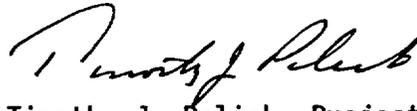
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2. Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 43, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated in the license. The licensee 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Timothy J. Polich, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: November 17, 1995



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

TEXAS UTILITIES ELECTRIC COMPANY
COMANCHE PEAK STEAM ELECTRIC STATION, UNIT 2
DOCKET NO. 50-446
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 29
License No. NPF-89

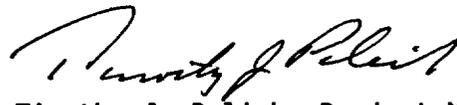
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Texas Utilities Electric Company (TU Electric, the licensee) dated December 6, 1994 (LAR 94-021, TXX-94307), complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (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. 29, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. TU 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.

FOR THE NUCLEAR REGULATORY COMMISSION



Timothy J. Polich, Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: November 17, 1995

ATTACHMENT TO LICENSE AMENDMENT NOS. 43 AND 29
FACILITY OPERATING LICENSE NOS. NPF-87 AND NPF-89
DOCKET NOS. 50-445 AND 50-446

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change. The corresponding overleaf pages are also provided to maintain document completeness.

<u>REMOVE</u>	<u>INSERT</u>
3/4 8-3	3/4 8-3
-	3/4 8-3a
3/4 8-10	3/4 8-10
-	3/4 8-10a
B 3/4 8-2	B 3/4 8-2
-	B 3/4 8-2a

ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

offsite source restored, restore at least two offsite circuits to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

- f. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; restore at least one of the inoperable diesel generators to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore at least two diesel generators to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- g. With the fuel oil storage system total particulate contamination not within limits, restore total particulate contamination to within limits within 7 days or immediately declare the associated diesel generator inoperable and perform the applicable ACTION for an inoperable diesel generator(s).
- h. With the properties specified by Surveillance Requirement 4.8.1.1.2d.2 for new fuel oil that has been added to the fuel oil storage inventory not within limits, confirm that the stored fuel oil properties are within limits or restore the stored fuel oil properties to within limits within 30 days or immediately declare the associated diesel generator inoperable and perform the applicable ACTION for an inoperable diesel generator(s).

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required independent circuits between the offsite transmission network and the Onsite Class 1E Distribution System shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months during shutdown by transferring (manually and automatically) the 6.9 kV safeguards bus power supply from the preferred offsite source to the alternate offsite source.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by:
- 1) Verifying the fuel level in the day fuel tank,
 - 2) Verifying the fuel level in the fuel storage tank,
 - 3) Verifying the fuel transfer pump starts and transfers fuel from the storage system to the day fuel tank,
 - 4) Verifying the diesel starts from ambient condition and accelerates to at least 441 rpm in less than or equal to 10 seconds.*#

*All planned diesel engine starts for the purpose of this surveillance may be preceded by a prelube period in accordance with vendor recommendations.

#The diesel generator start time (10 seconds) shall be verified at least once per 184 days. All other engine starts for performance of this surveillance, may use a diesel generator start involving gradual acceleration to synchronous speed as recommended by the manufacturer.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

The generator voltage and frequency shall be 6900 ± 690 volts and 60 ± 1.2 Hz within 10 seconds after the start signal**. The diesel generator shall be started for this test by using one of the following signals:

- a) Manual, or
 - b) Simulated safeguards bus undervoltage, or
 - c) Safety Injection Actuation test signal in conjunction with loss of offsite power, or
 - d) Safety Injection Actuation test signal by itself.
- 5) Verifying the generator is synchronized, loaded to between 6,300 and 7,000 kW** and operates at this load condition for at least 60 minutes, and
 - 6) Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
- b. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day fuel tank;
 - c. At least once per 31 days by checking for and removing accumulated water from the fuel oil storage tanks;
 - d. By sampling new fuel oil in accordance with ASTM-D4057-1981 prior to addition to storage tanks and:
 - 1) By verifying in accordance with the tests specified in ASTM-D975-1981 prior to addition to the storage tanks that the sample has:

*Diesel generator loading for the purpose of this surveillance may be accomplished in accordance with vendor recommendations; i.e., >110 seconds.

**During performance of surveillance activities as a requirement for ACTION statements, the air-roll test shall not be performed.

*This band is meant as guidance to avoid routine overloading of diesel generator. Momentary load excursions outside this band due to changing bus loads shall not invalidate the test.

TABLE 4.8-1

NOT USED

COMANCHE PEAK - UNITS 1 AND 2

3/4 8-9

Unit 1 - Amendment No. 33, 35
Unit 2 - Amendment No. 19, 21

ELECTRICAL POWER SYSTEMS

A.C. SOURCES

SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.8.1.2 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. One circuit between the offsite transmission network and the Onsite Class 1E Distribution System, and
- b. One diesel generator with:
 - 1) Day fuel tank containing a minimum volume of 1440 gallons of fuel,
 - 2) A fuel storage system containing a minimum volume of 86,000 gallons of fuel, and
 - 3) A fuel transfer pump.

APPLICABILITY: MODES 5 and 6.

ACTION:

- a. With less than the above minimum required A.C. electrical power sources OPERABLE, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel, or crane operation with loads over the fuel storage pool, and within 8 hours, depressurize and vent the Reactor Coolant System through a greater than or equal to 2.98 square inch vent. In addition, when in MODE 5 with the reactor coolant loops not filled, or in MODE 6 with the water level less than 23 feet above the reactor vessel flange, immediately initiate corrective action to restore the required sources to OPERABLE status as soon as possible.
- b. With the fuel oil storage system total particulate contamination not within limits, restore the storage system fuel oil particulate contamination level to within limits within seven (7) days or immediately declare the associated diesel generator inoperable and perform ACTION a. if less than the minimum required A.C. electrical power sources are OPERABLE.
- c. With the properties specified by Surveillance Requirement 4.8.1.1.2d.2 for new fuel oil that has been added to the fuel oil storage inventory not within limits, confirm that the stored fuel oil properties are within limits or restore the stored fuel oil properties to within limits within thirty (30) days or immediately declare the associated diesel generator inoperable and perform ACTION a. if less than the minimum required A.C. electrical power sources are OPERABLE.

ELECTRICAL POWER SYSTEMS

A.C. SOURCES

SHUTDOWN

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the requirements of Specifications 4.8.1.1.1 and 4.8.1.1.2* (except for Specification 4.8.1.1.2a.5).

*The 18 month surveillance test interval is extended to 24 months for Train A, Unit 2, to remain in effect until the completion of the second refueling outage for Unit 2.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

3/4.8.1, 3/4.8.2, and 3/4.8.3 A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION

The OPERABILITY of the A.C. and D.C. power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety-related equipment required for: (1) the safe shutdown of the facility, and (2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criterion 17 of 10 CFR 50 Appendix A.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the safety analyses and are based upon maintaining at least one redundant set of onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss-of-offsite power and single failure of the other onsite A.C. source. The A.C. and D.C. source allowable out-of-service times are based on Regulatory Guide 1.93, "Availability of Electrical Power Sources," December 1974 and Generic Letter 84-15, "Proposed Staff Position to Improve and Maintain Diesel Generator Reliability." When one diesel generator is inoperable, there is an additional ACTION requirement to verify that all required systems, subsystems, trains, components and devices, that depend on the remaining OPERABLE diesel generator as a source of emergency power, are also OPERABLE, and that the steam-driven auxiliary feedwater pump is OPERABLE. This requirement is intended to provide assurance that a loss-of-offsite power event will not result in a complete loss of safety function of critical systems during the period one of the diesel generators is inoperable. The term, verify, as used in this context means to administratively check by examining logs or other information to determine if certain components are out-of-service for maintenance or other reasons. It does not mean to perform the Surveillance Requirements needed to demonstrate the OPERABILITY of the component.

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that: (1) the facility can be maintained in the shutdown or refueling condition for extended time periods, and (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

The OPERABILITY of the day fuel tank and Fuel Storage System are based on the following: (1) the minimum day fuel tank volume ensures sufficient fuel immediately available to operate the diesel generator at the continuous rating for 60 minutes plus 10 percent, and (2) the remaining day fuel tank volume (between that required for (1) above and the volume specified in the Limiting Conditions for Operation), combined with the minimum specified Fuel Storage System volume, ensures sufficient onsite fuel oil storage capacity to operate the diesel generator at the continuous rating for seven days.

ELECTRICAL POWER SYSTEMS

BASES

A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION (Continued)

With fuel oil total particulate contamination not within the required limits, a period of seven (7) days is allowed for restoring the quality of the fuel oil. Normally, trending of particulate levels allows sufficient time to correct high particulate levels prior to reaching the limit of acceptability. Poor sample procedures, contaminated sampling equipment, and errors in laboratory analysis can produce failures that do not follow a trend. Since the presence of particulates does not mean failure of the fuel oil to burn properly in the diesel engine, and particulate concentration is unlikely to change significantly between Surveillance Frequency intervals, and proper engine performance has been recently demonstrated (within 31 days), it is prudent to allow a brief period prior to declaring the associated DG inoperable. The 7 day Completion Time allows for further evaluation, resampling and re-analysis of the DG fuel oil.

With the new fuel oil properties specified in 4.8.1.1.2d.2) not within the required limits, a period of 30 days is allowed for restoring the stored fuel oil properties. This period provides sufficient time to test the stored fuel oil to determine that the new fuel oil, when mixed with previously stored fuel oil, remains acceptable, or to restore the stored fuel oil properties. This restoration may involve feed and bleed procedures, filtering, or combinations of these procedures. Even if a DG start and load was required during this time interval and the fuel oil properties were outside limits, there is a high likelihood that the DG would still be capable of performing its intended function.

The Fuel Storage System consists of the fuel oil storage tank and is equivalent to the ANSI N195-1976 definition for supply tank.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory Guides 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971; 1.108, "Periodic Testing Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977; and 1.137, "Fuel-Oil Systems for Standby Diesel Generators," January 1978, Generic Letter 84-15, Generic Letter 83-26, "Clarification of Surveillance Requirements for Diesel Fuel Impurity Level Tests," and Generic Letter 94-01, "Removal of Accelerated Testing and Special Reporting Requirements for Emergency Diesel Generators."

The Surveillance Requirement for demonstrating the OPERABILITY of the station batteries are based on the recommendations of Regulatory Guide 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," Revision 1, February 1978, Regulatory Guide 1.32, "Criteria for Safety Related Electric Power Systems for Nuclear Power Plants," Revision 2, February 1977, and IEEE STD 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

ELECTRICAL POWER SYSTEMS

BASES

A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION (Continued)

The operational requirement to energize the instrument busses from their associated inverters connected to its associated D.C. bus is satisfied only when the inverter's output is from the regulated portion of the inverter and not from the unregulated bypass source via the internal static switch.

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values, and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates, and compares the battery capacity at that time with the rated capacity.

Table 4.8-2 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage, and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and 0.015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than 0.020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than 0.010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 43 AND 29 TO

FACILITY OPERATING LICENSE NOS. NPF-87 AND NPF-89

TEXAS UTILITIES ELECTRIC COMPANY

COMANCHE PEAK STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-445 AND 50-446

1.0 INTRODUCTION

By application dated December 6, 1994 (LAR 94-021, TXX-94307), Texas Utilities Electric Company (TU Electric/the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License Nos. NPF-87 and NPF-89) for the Comanche Peak Steam Electric Station, Units 1 and 2. The proposed changes would revise Technical Specifications (TSs) to allow appropriate remedial action for high particulate levels in the diesel generator fuel oil inventory and other out-of-limit properties in new diesel generator fuel oil that has been added to the existing diesel generator fuel oil storage inventory.

2.0 BACKGROUND

The Comanche Peak Steam Electric Station (CPSSES) Units 1 and 2 TSs 3.8.1.1 and 3.8.1.2, in part, require declaring the diesel generator (DG) inoperable if the diesel generator fuel storage system fuel oil has a total particulate contamination greater than or equal to 10 mg/liter, or if certain properties for new fuel oil that has been added to the fuel oil storage inventory exceed their acceptance limits.

Since the presence of particulate does not mean failure of the fuel oil to burn properly in the diesel engine, and particulate concentration is not expected to rise rapidly between surveillance frequency intervals, and proper engine performance has been recently demonstrated (within 31 days), it is prudent to allow a brief period prior to declaring the associated DG inoperable.

With the properties specified in 4.8.1.1.2d.2 for the new fuel oil that has been added to the fuel oil storage inventory which is not within the required limits, time is needed to evaluate the stored fuel oil to determine that it remains acceptable, or to restore the stored fuel oil properties. Even if a DG start and load was required during this time interval and the fuel oil properties were outside limits, there is a high likelihood that the emergency diesel generators (EDG) could run at their designed capacity on fuel oil which is of poorer quality than current limits allow.

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To address those subjects, the technical specification change requests propose new ACTION requirements which allows seven days to restore particulate levels and 30 days to assess the other fuel properties to determine the acceptability of the fuel oil in the storage tanks prior to declaring the associated diesel generator inoperable.

These proposed changes are improvements which are consistent with the applicable sections of NUREG-1431, the Improved Standard Technical Specifications (ISTS) for Westinghouse Plants.

3.0 EVALUATION

General Design Criteria (GDC) 17, "Electric Power Systems," of Appendix A, General Design Criteria for Nuclear power Plants," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," requires that an on-site electric power system be provided to permit functioning of structures, systems, and components important to safety. In addition GDC 17 contains requirements concerning system capacity capability, independence, redundancy, availability, testability, and reliability. Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50 establishes overall quality assurance requirements for the design, construction, and operation of structures, systems, and components important to safety. Regulatory Guide (RG) 1.137, "Fuel-Oil Systems for Standby Diesel Generators," describes a method acceptable to the NRC staff for complying with the Commission's regulations regarding fuel oil systems for standby diesel generators and assurance of adequate fuel oil quality.

The EDGs at CPSES are designed to provide sufficient capacity, capability, redundancy, and reliability to ensure the availability of necessary power to Engineering Safety Features (ESF) systems so that fuel, Reactor Coolant System and containment design limits are not exceeded.

For proper operation of the EDGs, it is necessary to ensure the proper quality of the fuel oil. RG 1.137 addresses the recommended fuel oil practices as supplemented by ANSI N195. The fuel oil properties of concern are water and sediment content, kinematic viscosity, specific gravity (or API gravity), and impurity level.

RG 1.137 states that fuel oil not meeting applicable requirements should be replaced "in a short period of time (about one week)." This RG also states that "other properties" should be analyzed (completed) within two weeks.

Diesel fuel oil supports the operation of the standby AC power sources and therefore is encompassed by Criterion 3 of the NRC "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 FR 39132) for items which are required to be in TS.

STORED FUEL OIL

Currently according to CPSES TS, a diesel generator is considered "inoperable" if the fuel oil parameters are above limits even though the likelihood is very high that the diesel generator will still run and perform its function.

TU Electric proposed the addition of ACTION statements g. to TS 3.8.1.1 and b. to TS 3.8.1.2 to address the required action in the event the stored fuel oil total particulates do not meet the Diesel Fuel Oil (DFO) Testing Program limits. Fuel oil degradation during long-term storage shows up as an increase in particulate, due mostly to oxidation. This action statement requires the restoration of the fuel oil total particulates to program limits (10 mg/l) within seven days.

Normally, trending of particulate levels allows sufficient time to correct high particulate levels prior to reaching the limit of acceptability. Poor sample procedures (bottom sampling), contaminated sampling equipment, and errors in laboratory analysis can produce failures that do not follow a trend. Since the presence of particulates does not mean failure of the fuel oil to burn properly in the diesel engine, and particulate concentration is unlikely to change significantly between surveillance frequency intervals, it is prudent to allow a brief period prior to declaring the associated DG inoperable. The particulate can cause fouling of filters and fuel oil injection equipment, however, which can cause engine failure. The trigger value of 10mg/liter of particulate is very conservative with respect to what an EDG can actually tolerate without adversely affecting filters and attendant EDG operation. Also, the possibility that particulate contamination will increase from 10 mg/liter to some unacceptable value in seven days is not credible. The 7-day Completion Time allows for further evaluation, resampling and re-analysis of the DG fuel oil.

The CPSES diesel generator vendor (Cooper) places much more lenient restrictions on particulate contamination levels allowed in the fuel oil supply. This is based, in part, on the fact that there are duplex filters between the diesel fuel oil storage tanks and the diesel generator that filter down to five (5) microns. These filters can be changed out while the diesel generator is in operation, which might be required if extremely high particulate contamination fuel oil was used.

NEW FUEL OIL PROPERTIES

TU Electric also proposed the addition of ACTION statements h. to TS 3.8.1.1 and c. to TS 3.8.1.2 to address the required action in the event the new fuel oil properties do not meet the DFO Testing Program limits following addition of the new fuel oil to the fuel oil storage tanks.

The current CPSES Technical Specification requires new diesel fuel that has been added to the fuel oil storage inventory to have less than 0.05% volume of water and sediment in the fuel. The vendor specifies that new fuel oil that

has been added to the fuel oil storage inventory should have less than 0.5% volume of water and sediment, which is ten (10) times more water and sediment than the CPSES Technical Specifications presently allow.

The other properties specified in Table 1 of ASTM-D975-1981 are:

- Flash Point, °C
- Cloud Point, °C
- Water and Sediment, volume %
- Carbon Residue, on 10% residuum, %
- Ash Weight, %
- Distillation Temperatures, °C
- Viscosity
- Sulfur, weight %
- Copper Strip Corrosion
- Cetane Number

Based on the testing for gravity, viscosity, flash point and "clear and bright"/"water and sediment," it is highly unlikely that any of these properties will exceed their acceptance value by anything more than a small amount. The impact of the exceedance is minimized as the new fuel that has been added to the fuel oil storage inventory is diluted by the existing stored fuel.

In the event the new fuel oil properties other than those specified previously are not met, the TS changes provide an additional 30 days to meet the DFO Testing Program limits. This additional 30-day period is acceptable because the fuel oil properties of interest, even if they are not within limits, would not have an immediate effect on EDG operation. This period provides sufficient time to test the stored fuel oil to determine that the new fuel oil, when mixed with previously stored fuel oil, remains acceptable, or to restore the stored fuel oil properties. This restoration may involve feed and bleed procedures, filtering, or combinations of these procedures. Even if a DG start and load were required during this time interval and the fuel oil properties were outside limits for these properties, there is a very high likelihood that the DG would still be capable of performing its intended function since the DFO properties of concern do not impact DFO combustion and will only have an impact on EDG reliability over many thousands of hours of operation.

Based on the evaluations above the proposed changes to TSs 3.8.1.1 and 3.8.1.2 are consistent with the applicable sections of NUREG-1431 and RG 1.137. Therefore, the staff finds the changes to CPSES TS regarding stored and new fuel properties to be acceptable.

4.0 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.

5.0 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 (60 FR 6311). 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.

6.0 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.

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