



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

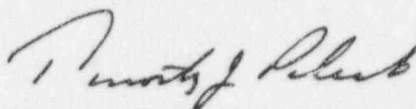
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Texas Utilities Electric Company (TU Electric, the licensee) dated December 5, 1994 (L.R. 94-021, TXX-94307), complies with the standards and requirements of the Atomic Energy Act of 1954, as 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:

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

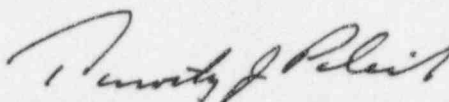
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Texas Utilities Electric Company (TU Electric, the licensee) dated December 6, 1994 (LAR 94-021, TXX-94307), complies with the standards and requirements of the Atomic Energy Act of 1954, as 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)

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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.\*#

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\*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  $6900 \pm 690$  volts and  $60 \pm 1.2$  Hz within 10 seconds after the start signal<sup>\*\*</sup>. 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<sup>\*\*</sup> 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:

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

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

<sup>†</sup>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.



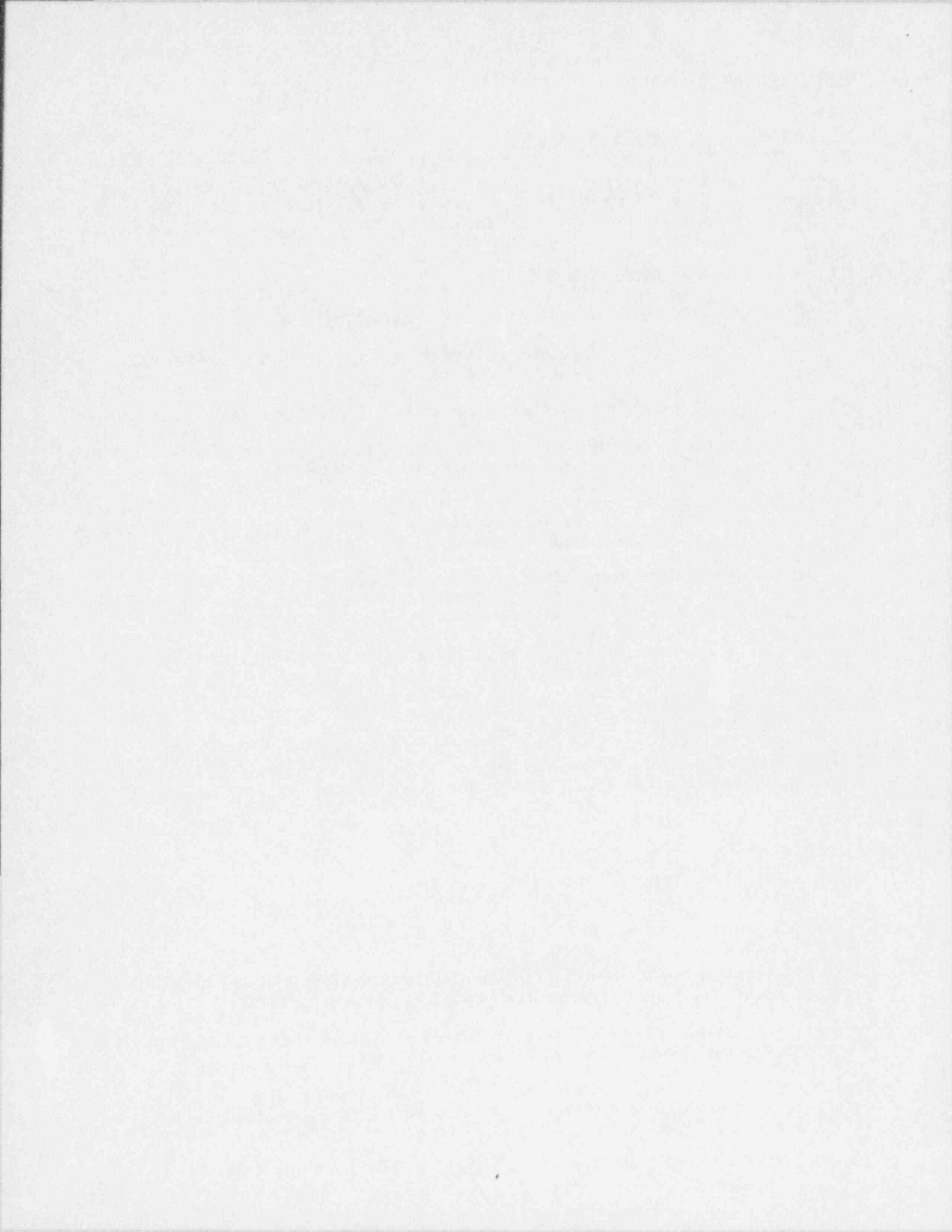


TABLE 4.8-1

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

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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

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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).

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\*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

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#### 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

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#### 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.