

South Texas Project Electric Generating Station P.O. Box 289 Wadsworth, Texas 77483

October 28, 1998  
NOC-AE-000342  
File No.: G20.02.01  
G21.02.01  
10CFR50.90

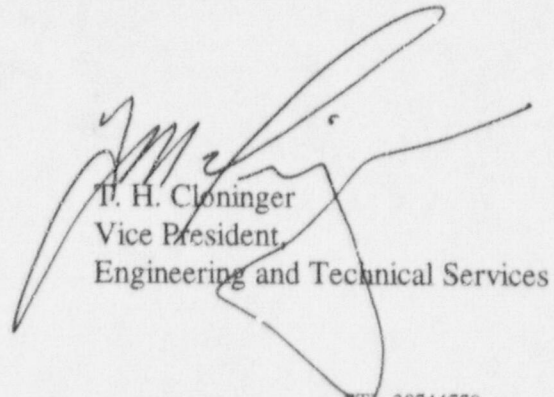
U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555

South Texas Project  
Units 1 and 2  
Docket Nos. STN 50-498 and STN 50-499  
Supplemental Information on Proposed Amendments to Relocate  
Technical Specifications 3/4.3.3.3 and 3/4.7.13 to the Technical Requirements Manual

- References:
- 1) Letter from T. H. Cloninger to U.S. Nuclear Regulatory Commission dated July 6, 1998 (ST-NOC-AE-000204)
  - 2) Letter from T. H. Cloninger to U.S. Nuclear Regulatory Commission dated July 6, 1998 (ST-NOC-AE-000205)

In References 1 and 2, the STP Nuclear Operating Company (STPNOC) proposed to amend the South Texas Project (STP) Operating Licenses NPF-76 and NPF-80 by relocating Technical Specifications 3/4.3.3.3, "Seismic Instrumentation", and 3/4.7.13, "Area Temperature Monitoring", to the STP Technical Requirements Manual (TRM). During the Nuclear Regulatory Commission's (NRC's) review of these proposed amendment requests, the NRC verbally requested that STPNOC submit the new pages of the TRM that contain these relocated Technical Specifications. Attached please find the new pages that were incorporated as part of Amendment 10 to the TRM.

STPNOC has determined that there are no new licensing commitments identified in this submittal. If there are any questions regarding this submittal, please contact Mr. A. W. Harrison at (512) 972-7298.

  
T. H. Cloninger  
Vice President,  
Engineering and Technical Services

9811030135 981028  
PDR ADOCK 05000498  
P PDR

BJS/

Attachment: New Technical Requirements Manual Pages

cc:

Ellis W. Merschoff  
Regional Administrator, Region IV  
U. S. Nuclear Regulatory Commission  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-8064

Thomas W. Alexion  
Project Manager, Mail Code 13H3  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Cornelius F. O'Keefe  
Senior Resident Inspector  
U. S. Nuclear Regulatory Commission  
P. O. Box 910  
Bay City, TX 77404-0910

J. R. Newman, Esquire  
Morgan, Lewis & Bockius  
1800 M Street, N.W.  
Washington, DC 20036-5869

M. T. Hardt/W. C. Gunst  
City Public Service  
P. O. Box 1771  
San Antonio, TX 78296

J. C. Lanier/A. Ramirez  
City of Austin Electric Utility Department  
721 Barton Springs Road  
Austin, TX 78704

Jon C. Wood  
Matthews & Branscomb  
One Alamo Center  
106 S. St. Mary's Street, Suite 700  
San Antonio, TX 78205-3692

Institute of Nuclear Power Operations  
Records Center  
700 Galleria Parkway  
Atlanta, GA 30339-5957

Richard A. Ratliff  
Bureau of Radiation Control  
Texas Department of Health  
1100 West 49th Street  
Austin, TX 78756-3189

D. G. Tees/R. L. Balcom  
Houston Lighting & Power Co.  
P.O. Box 1700  
Houston, TX 77251

Central Power and Light Company  
Attention: G. E. Vaughn/C. A. Johnson  
P. O. Box 289, Mail Code: N5012  
Wadsworth, TX 77483

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

## **Attachment**

# **NEW TECHNICAL REQUIREMENTS MANUAL PAGES**

**3/4.3-1**

**3/4.3-2**

**3/4.3-3**

**3/4.7-9**

**3/4.7-10**

**B 3/4.3-1**

**B 3/4.7-2**

## INSTRUMENTATION

### 3/4.3.3.3 SEISMIC INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

#### **NOTE**

THIS TRM REQUIREMENT DUPLICATES THE REQUIREMENTS OF TECHNICAL SPECIFICATION 3/4.3.3.3. THE REQUIREMENTS AND ACTIONS OF THE TECHNICAL SPECIFICATIONS GOVERN UNTIL THE NRC APPROVES THE RELOCATION AS REQUESTED IN NOC-AE-000205, DATED 07/06/98.

3.3.3.3 The seismic monitoring instrumentation shown in Table 3.3-7\* shall be OPERABLE.

APPLICABILITY: At all times.

#### ACTION:

- a. With one or more of the above required seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status. This ACTION may be applicable to both units simultaneously.
- b. The provisions of Specification 3.0.3 are not applicable.

## SURVEILLANCE REQUIREMENTS

4.3.3.3.1 Each of the above required seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION, and ANALOG CHANNEL OPERATIONAL TEST at the frequencies shown in Table 4.3-4.

4.3.3.3.2 Each of the above required seismic monitoring instruments actuated during a seismic event shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 10 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 14 days describing the magnitude, frequency spectrum, and resultant effect upon facility features important to safety.

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\* The instrumentation may be shared with additional units at a common site provided seismic instrumentation and corresponding Technical Specifications meet the recommendations of Regulatory Guide 1.12, Revision 1, April 1974.

# INSTRUMENTATION

TABLE 3.3-7  
SEISMIC MONITORING INSTRUMENTATION

INSTRUMENTS AND SENSOR LOCATIONS (Unit 1 only)	MEASUREMENT RANGE	MINIMUM INSTRUMENTS OPERABLE
1. Triaxial Time-History Accelerometers***		
a. Free Field	±3g	1
b. Containment Bldg. Foundation (Tendon Gallery El. -36'9")	±3g	1
c. Outside Face Containment Shell (Reactor Containment Building El. 68'0")	±3g	1
d. Steam Generator Upper Lateral Support (Reactor Containment Building El. 66'7½")	±3g	1
e. Fuel Handling Building Foundation (Fuel Handling Building El. -29'0")	±3g	1
f. Mechanical Electrical Auxiliary Building (Mechanical Electrical Auxiliary Building El. 35'0")	±3g	1
2. Triaxial Peak Accelerographs		
a. Spent Fuel Pool Heat Exchanger (Inlet Line Fuel Handling Building El. 64'5¼")	±3g	1
b. Reactor Vessel (Reactor Containment Building El. 68'0")	±3g	1
c. Cold Leg of RC Piping (Reactor Containment Building El. 34'3")	±3g	1
3. Self-Contained Triaxial Accelerograph (At Reactor Containment Building Foundation Tendon Gallery El. -36'9")	±3g	1
4. Triaxial Seismic Switch* ** #	0.03 to 3g	1
5. Triaxial Seismic Trigger* ** ##	0.003 to 0.3g	1
6. Response Spectrum Analyzer* **	1 to 32 Hz	1
7. Magnetic Tape Recorders**	0.1 to 33 Hz	6
8. Playback System**	N.A.	1

\* With reactor control room indication and alarm in Unit 1 (Alarm only in Unit 2)

\*\* At seismic monitoring panel in Control Room, Unit 1

\*\*\* Accelerometer data is gathered and analyzed by the Response Spectrum Analyzer (Item 6).

# Triaxial seismic switch is set at the OBE acceleration level of 0.05g horizontal and 0.033g vertical.

## Triaxial seismic trigger is set at 0.02g all axes.

# INSTRUMENTATION

TABLE 4.3-4  
SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENTS AND SENSOR LOCATIONS (Unit 1 only)	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST
1. Triaxial Time-History Accelerometers***			
a. Free Field	M	R	SA
b. Containment Bldg. Foundation (Tendon Gallery El. -36'9")	M	R	SA
c. Outside Face Containment Shell (Reactor Containment Building El. 68'0")	M	R	SA
d. Steam Generator Upper Lateral Support (Reactor Containment Building El. 66'7½")	M	R	SA
e. Fuel Handling Building Foundation (Fuel Handling Building El. -29'0")	M	R	SA
f. Mechanical Electrical Auxiliary Building (Mechanical Electrical Auxiliary Building El. 35'0")	M	R	SA
2. Triaxial Peak Accelerographs			
a. Spent Fuel Pool Heat Exchanger (Inlet Line Fuel Handling Building El. 64'5¼")	N.A.	R	N.A.
b. Reactor Vessel (Reactor Containment Building El. 68'0")	N.A.	R	N.A.
c. Cold Leg of RC Piping (Reactor Containment Building El. 34'3")	N.A.	R	N.A.
3. Self-Contained Triaxial Accelerograph (At Reactor Containment Building Foundation Tendon Gallery El. -36'9")	M	R	SA
4. Triaxial Seismic Switch* **	M	R	SA
5. Triaxial Seismic Trigger* **	M	R	SA
6. Response Spectrum Analyzer* **	M	R	SA
7. Magnetic Tape Recorders**	M	R	SA
8. Playback System**	M	R	N.A.

\* With reactor control room indication and alarm in Unit 1 (Alarm only in Unit 2)

\*\* At seismic monitoring panel in Control Room, Unit 1

\*\*\* Accelerometer data is gathered and analyzed by the Response Spectrum Analyzer (Item 6)

## PLANT SYSTEMS

### 3/4.7.13 AREA TEMPERATURE MONITORING

**NOTE**  
THIS TRM REQUIREMENT DUPLICATES THE REQUIREMENTS OF TECHNICAL SPECIFICATION 3/4.7.13. THE REQUIREMENTS AND ACTIONS OF THE TECHNICAL SPECIFICATIONS GOVERN UNTIL THE NRC APPROVES THE RELOCATION AS REQUESTED IN NOC-AE-000204, DATED 07/06/98.

#### LIMITING CONDITION FOR OPERATION

3.7.13 The temperature of each area shown in Table 3.7-3 shall not be exceeded for more than 8 hours or by more than 30°F.

APPLICABILITY: Whenever the equipment in an affected area is required to be OPERABLE.

#### ACTION:

- a. With the temperature inside any QDPS auxiliary processing cabinet exceeding 110°F for more than 12 hours, prepare an engineering evaluation within the next 24 hours to determine the temperature effects on QDPS OPERABILITY and service life. The provisions of Specification 3.0.3 are not applicable.
- b. With one or more areas exceeding the temperature limit(s) shown in Table 3.7-3 for more than 8 hours, prepare and submit to the Commission within 30 days, pursuant to Specification 6.9.2, a Special Report that provides a record of the cumulative time and the amount by which the temperature in the affected area(s) exceeded the limit(s) and an analysis to demonstrate the continued OPERABILITY of the affected equipment. The provisions of Specification 3.0.3 are not applicable.
- c. With one or more areas exceeding the temperature limit(s) shown in Table 3.7-3 by more than 30°F, prepare and submit a Special Report as required by ACTION b. above and within 4 hours either restore the area(s) to within the temperature limit(s) or declare the equipment in the affected area(s) inoperable.

#### SURVEILLANCE REQUIREMENTS

4.7.13 The temperature in each of the areas shown in Table 3.7-3 shall be determined to be within its limit at least once per 24 hours.

PLANT SYSTEMS

TABLE 3.7-3

AREA TEMPERATURE MONITORING

<u>AREA</u>	<u>TEMPERATURE LIMIT (°F)</u>
1. Relay Room (Electrical Auxiliary Building E1. 35'0")	≤ 78
2. Switchgear Rooms (Electrical Auxiliary Building E1. 10'0", 35'0", 60'0")	≤ 85
3. Electrical Penetration Spaces (Electrical Auxiliary Building E1. 10'0", 35'0", 60'0")	≤ 103
4. Safety Injection and Containment Spray Pump Cubicles (Fuel Handling Building E1. -29'0")	≤ 101
5. Component Cooling Water Pump Cubicles (Mechanical Auxiliary Building E1. 10'0")	≤ 112
6. Centrifugal Charging Pump Cubicles (Mechanical Auxiliary Building E1. 10'0")	≤ 132
7. Hydrogen Analyzer Room (Mechanical Auxiliary Building E1. 60'0")	≤ 102
8. Boric Acid Transfer Pump Cubicles (Mechanical Auxiliary Building E1. 10'0")	≤ 101
9. Standby Diesel Generator Rooms (Diesel Generator Building E1. 25'00")	≤ 101*
10. Essential Cooling Water Pump Rooms (Essential Cooling Water Intake Structure E1. 34'0")	≤ 101
11. Isolation Valve Cubicles (Isolation Valve Cubicle E1. 10' 0")	≤ 101
12. Qualified Display Processing System Rooms (Electrical Auxiliary Building E1. 10'0")	≤ 94**

\*Temperature limit is ≤ 120°F when testing the standby diesel generator pursuant to Surveillance Requirement 4.8.1.1.2.e.7).

\*\*Measurement inside QDPS auxiliary processing cabinets.



## INSTRUMENTATION

### BASES

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#### 3/4.3.3.3 SEISMIC INSTRUMENTATION

The OPERABILITY of the seismic instrumentation ensures that sufficient capability is available to promptly determine the magnitude of a seismic event and evaluate the response of those features important to safety. This capability is required to permit comparison of the measured response to that used in the design basis for the facility to determine if plant shutdown is required pursuant to Appendix A of 10 CFR Part 100. The instrumentation is consistent with the recommendations of Regulatory Guide 1.12, "Instrumentation for Earthquakes," April 1974.

#### 3/4.3.3.7 CHEMICAL DETECTION SYSTEMS

DELETED

#### 3/4.3.4 TURBINE OVERSPEED PROTECTION

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are OPERABLE and will protect the turbine from excessive overspeed. Protection from turbine excessive overspeed is required since excessive overspeed of the turbine could generate potentially damaging missiles which could impact and damage safety-related components, equipment, or structures.

## PLANT SYSTEMS

### BASES

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To provide assurance of snubber functional reliability, one of three functional testing methods is used with the stated acceptance criteria:

1. Functionally test 10% of a type of snubber with an additional 10% tested for each functional testing failure, or
2. Functionally test a sample size and determine sample acceptance or rejection using Figure 4.7-1, or
3. Functionally test a representative sample size and determine sample acceptance or rejection using the stated equation.

Figure 4.7-1 was developed using "Wald's Sequential Probability Ratio Plan" as described in "Quality Control and Industrial Statistics" by Acheson J. Duncan.

Permanent or other exemptions from the surveillance program for individual snubbers may be granted by the Commission if a justifiable basis for exemption is presented and, if applicable, snubber life destructive testing was performed to qualify the snubbers for the applicable design conditions at either the completion of their fabrication or at a subsequent date. Snubbers so exempted shall be listed in the list of individual snubbers indicating the extent of the exemptions.

The service life of a snubber is established via manufacturer input and information through consideration of the snubber service conditions and associated installation and maintenance records (newly installed snubbers, seal replaced, spring replaced, in high radiation area, in high temperature area, etc.). The requirement to monitor the snubber service life is included to ensure that the snubbers periodically undergo a performance evaluation in view of their age and operating conditions. These records will provide statistical bases for future consideration of snubber service life.

### 3/4.7.13 AREA TEMPERATURE MONITORING

The area temperature limitations ensure that safety-related equipment will not be subjected to temperatures in excess of their environmental qualification temperatures. Exposure to excessive temperatures may degrade equipment and can cause a loss of its OPERABILITY. The temperature limits include an allowance for instrument error of  $\pm 3^{\circ}\text{F}$  maximum.