

#### UNITED STATES NUCLEAR REGULATORY COMMISSION REGION IV 611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TEXAS 76011-4005

July 23, 2002

William T. Cottle, President and Chief Executive Officer STP Nuclear Operating Company P.O. Box 289 Wadsworth, Texas 77483

SUBJECT: NRC TRIENNIAL FIRE PROTECTION INSPECTION REPORT 50-498/02-03; 50-499/02-03

Dear Mr. Cottle:

On May 24, 2002, the NRC completed an inspection at your South Texas Project Electric Generating Station, Units 1 and 2. The enclosed report documents the inspection findings which were discussed with Mr. T. Jordan, Vice President, Engineering and Technical Services, and other members of your staff in a telephonic exit meeting held on July 9, 2002.

The inspection involved an examination of the effectiveness of activities conducted under your license as they relate to the implementation of your NRC-approved Fire Protection Program and compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas, the inspection consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

No findings of significance were identified during this inspection.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and your response will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <a href="http://www.nrc.gov/reading-rm/adams.html">http://www.nrc.gov/reading-rm/adams.html</a> (the Public Electronic Reading Room).

Sincerely,

/RA/

Charles S. Marschall, Chief Engineering and Maintenance Branch Division of Reactor Safety

Dockets: 50-498; 50-499 Licenses: NPF-76, NPF-80 Enclosure: NRC Inspection Report 50-498/02-03; 50-499/02-03

cc w/enclosure: J. J. Sheppard, Vice President Engineering & Technical Services STP Nuclear Operating Company P.O. Box 289 Wadsworth, Texas 77483

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# **ENCLOSURE**

# U.S. NUCLEAR REGULATORY COMMISSION REGION IV

Dockets:	50-498; 50-499
Licenses:	NPF-76; NPF-80
Report:	50-498/02-03; 50-499/02-03
Licensee:	STP Nuclear Operating Company
Facility:	South Texas Project Electric Generating Station, Units 1 and 2
Location:	FM 521 - 8 miles west of Wadsworth Wadsworth, Texas 77483
Dates:	May 20-24, 2002
Team Leader:	R. P. Mullikin, Senior Reactor Inspector Engineering and Maintenance Branch
Inspectors:	R. L. Nease, Senior Reactor Inspector Engineering and Maintenance Branch
	N. F. O'Keefe, Senior Resident Inspector Project Branch A
Accompanying Personnel:	G. B. Miller, Reactor Inspector Engineering and Maintenance Branch
	K. Sullivan, Contractor Brookhaven National Laboratory
Approved By:	Charles S. Marschall, Chief Engineering and Maintenance Branch Division of Reactor Safety

# SUMMARY OF FINDINGS

# South Texas Project Electric Generating Station, Units 1 and 2 NRC Inspection Report 50-498/02-03; 50-499/02-03

IR 05000498-02-03; 05000499-02-03, 05/20-24/2002; STP Nuclear Operating Company; South Texas Project Electric Generating Station; Units 1& 2; Triennial Fire Protection Inspection.

This report covers a 1-week onsite inspection by a team of three regional inspectors, one senior resident inspector, and one contractor from Brookhaven National Laboratory during May 20 - 24, 2002. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000."

#### **Cornerstones: Initiating Events and Mitigating Systems**

• No findings of significance were identified

# Report Details

# 1. **REACTOR SAFETY**

#### 1R05 Fire Protection

The purpose of this inspection was to review the South Texas Project Electric Generating Station fire protection program for selected risk significant fire areas. Emphasis was placed on verification of the licensee's post-fire safe shutdown capability. The inspection was performed in accordance with the new Nuclear Regulatory Commission (NRC) reactor oversight process using a risk-informed approach for selecting the fire areas and attributes to be inspected. The team used the licensee's "Fire Analysis Update for the South Texas Project Electrical Generating Station PSA for Selected Fire Zones," dated December 1994, to choose several risk-significant areas for detailed inspection and review. The fire areas chosen for review during this inspection, with the fire zones shown in parentheses, were:

- <u>Fire Area 1</u> Relay Cabinet Area of Control Room (Z032), Control Room (Z034), and Watch Supervisor's Office (Z083);
- <u>Fire Area 2</u> Channel II Distribution Room (Z001), Channel II Battery Room (Z002), Channel I Distribution Room (Z003), Train A ESF Switchgear Room (Z004), Train A HVAC Equipment Room & Cleanup Unit (Z005), Train A Electrical Penetration Area (Z006), Train A Power Cable Vault (Z010), Train A Equipment Room (Z013), Corridor at Elevation 10' (Z016), Train A Electrical Chase (Z027), Corridor at Elevation 21' (Z028), Emergency Switchgear Room (Z029), Nonradioactive Pipe Chase (Z030), Halon Storage Room (Z037), Channel I Battery Room (Z084), Train A Electrical Chase (Z111), Train A CCW Pump & Chiller Room (Z128), Tendon Gallery (Z200);
- <u>Fire Area 3</u> Train B Electrical Penetration Area (Z031), Corridor and Offices at Elevation 35' (Z036), Kitchen (Z038), Train B HVAC Equipment Room (Z039), Train B ESF Switchgear Room (Z042), Channel III Battery and Distribution Room (Z043), Plant Computer Room (Z045), Radwaste Control and Counting Rooms (Z115), Nonradioactive Piping Penetration Area (Z116), Solid Radwaste and Unloading Area (Z117), VCT and Valve Rooms (Z119), Service Area and Recycle Holdup Tanks (Z130), Train B Electrical Chase (Z143), Locker Rooms and Clothing Issue (Z147);
- <u>Fire Area 7</u> Auxiliary Shutdown Area (Z071); and
- <u>Fire Area 31</u> Train B Cable Spreading/Power Cable Room and the Cable Room on Elevation 60' (Z047).

For each of the selected fire areas, the team focused the inspection on the fire protection features and on the systems and equipment necessary for the licensee to achieve and maintain safe shutdown conditions in the event of a fire in those fire areas.

#### .1 <u>Systems Required to Achieve and Maintain Post-Fire Safe Shutdown and Fire</u> <u>Protection of Safe Shutdown Capability</u>

#### a. Inspection Scope

The team reviewed the licensee's piping and instrumentation diagrams, safe shutdown equipment list, safe shutdown design basis documents, and the post-fire safe shutdown analysis to verify whether the licensee's shutdown methodology had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions for equipment in the fire areas selected for review. The team also reviewed the licensee's procedures for achieving and maintaining safe shutdown in the event of a fire to verify that the safe shutdown analysis provisions were properly implemented. The team focused on the following functions that must be ensured to achieve and maintain post-fire safe shutdown conditions: (1) reactivity control capable of achieving and maintaining cold shutdown reactivity conditions, (2) reactor coolant makeup capable of maintaining the reactor coolant level within the level indication in the pressurizer, (3) reactor heat removal capable of achieving and maintaining decay heat removal, (4) supporting systems capable of providing all other services necessary to permit extended operation of equipment necessary to achieving and maintaining hot shutdown conditions, and (5) process monitoring capable of providing direct readings to perform and control the above functions.

The team reviewed the separation of safe shutdown cables, equipment, and components within the same fire areas, and reviewed the licensee's methodology for meeting the requirements of Appendix A to Branch Technical Position 9.5-1 and 10 CFR Part 50, Appendix R, Section III.G. Specifically, this was to determine whether at least one post-fire safe shutdown success path was free of fire damage in the event of a fire in the selected areas. In addition, the team reviewed license documentation, such as NRC safety evaluation reports, the South Texas Project Electric Generating Station Updated Final Safety Analysis Report, submittals made to the NRC by the licensee in support of the NRC's review of their fire protection program, and deviations from NRC regulations to verify that the licensee met license commitments.

#### b. Findings

The team identified an unresolved item concerning the acceptability of the licensee's use of manual actions to remotely operate equipment necessary for achieving and maintaining hot shutdown, in lieu of providing protection to the cables associated with that equipment, as a method of complying with 10 CFR Part 50, Appendix R, Section III.G.2.

The licensee's strategy to achieve and maintain a hot shutdown condition in the event of a fire involved a combination of protection/separation of redundant trains of safe shutdown equipment, and manual actions to ensure the availability of safe shutdown equipment. The manual actions to be taken in the event of a fire were listed in Calculation 5A019MFP0001, "Report for Post Fire Operator Actions and Equipment Requirements," Revision 9, also referred to as the "Operator Actions List." In the Safety Evaluation Report, Supplement No. 2, dated January 1987, the staff stated that "The applicant's fire hazards analysis for each fire area includes an evaluation of safe shutdown capability. The evaluation also identifies possible spurious actuations that can

occur as a result of a fire in each area. Actions to overcome the spurious operations, or the compensatory measures to be taken, are indicated in the applicant's post-fire operator actions and equipment protection requirements (Report 5A019MFP001). Compensatory actions include tripping breakers, stopping specific pumps, and opening or closing certain valves. The NRC has reviewed the postulated spurious actuations, and the actions necessary to overcome their effects, and concludes that the compensatory actions are relatively simple and straightforward."

The actions specified in the operator actions list were implemented in two ways. The actions associated with a fire in Fire Area 1 (main control room complex) were incorporated in a separate procedure for control room evacuation. For a fire in any other fire area, Procedure 0POP04-ZO-0008, "Fire/Explosion," Revision 6, was used. Procedure 0POP04-ZO-0008 directed control room operators to refer to the operator actions list for the required actions. The team identified the following concerns:

- The licensee was unable to indicate which actions of the operator actions list were actually required to satisfy the safe shutdown analysis. The licensee stated that some of the actions were optional, but the majority were necessary.
- The operator actions list provided times for the completion of manual actions. The team was unable to determine whether these times could reasonably be met with the available watchstanders, or whether the completion times specified would satisfy the safe shutdown analysis. This was because the licensee was unable to provide documentation that provided the basis for each completion time and tie it to a consolidated thermal-hydraulic time line analysis which demonstrated that safe shutdown conditions could be achieved. The available documentation was a set of calculations of narrow aspects of the analysis which frequently reflected conditions or equipment which was inconsistent with the current procedures and equipment being credited.

Based on the above, the team could not determine whether the licensee had adequately incorporated into procedures the manual actions necessary to ensure the availability of equipment necessary to achieve a post-fire safe shutdown condition for fires outside the control room. However, the licensee stated that the documentation existed to support the times specified for the required manual actions, but it was not immediately available. Condition Report 02-9239 was written to track the licensee's efforts to research and locate this information for the NRC to inspect. The acceptability of the licensee's manual actions, which includes the determination of required actions and the basis for completion times, and the procedure which incorporates these manual actions is considered an unresolved item (50-498;499/0203-01) pending the NRC review of the licensee's documentation.

#### .2 Post-fire Safe Shutdown Circuit Analysis

a. Inspection Scope

On a sample basis, the team verified that cables of equipment required to achieve and maintain hot shutdown conditions in the event of fire in selected fire areas had been properly identified and either adequately protected from the potentially adverse effects of fire damage or analyzed to show that fire-induced faults (e.g., hot shorts, open

circuits, and shorts to ground) would not prevent safe shutdown. During the inspection, a sample of redundant components associated with systems required to achieve and maintain hot shutdown conditions were selected for review. The sample included components associated with the component cooling water system, charging system, auxiliary feedwater system, emergency diesel generators, and reactor coolant system. From this list of components, the team reviewed cable routing data depicting the routing of power and control cables associated with each of the selected components. Additionally, on a sample basis the team verified the adequacy of electrical protective device coordination (e.g., circuit breaker, fuse, relay), and the adequacy of electrical protection provided for nonessential cables which share a common enclosure (raceway, junction box, conduit, etc.) with cables of equipment required to achieve and maintain safe shutdown conditions.

#### b. Findings

The team identified an unresolved item concerning the availability of diagnostic instrumentation in the event a fire would require operators to identify mal-operation of fire-affected plant components and take manual actions to mitigate the consequences.

Section 50.48 of 10 CFR Part 50 and Appendix R to 10 CFR Part 50, established specific fire protection features required to satisfy General Design Criterion 3, "Fire Protection" (GDC 3, Appendix A to 10 CFR Part 50). Section III.G of Appendix R requires fire protection features be provided for equipment important to safe shutdown. An acceptable level of fire protection may be achieved by various combinations of fire protection features (barriers, fire suppression systems, fire detectors, and spatial separation of safety trains) delineated in Section III.G.2. For areas of the plant where compliance with the technical requirements of Section III.G.2 cannot be achieved, licensees must either seek an exemption from the specific requirement(s) or provide an alternative shutdown capability in accordance with Sections III.G.3 and III.L of the regulation.

The licensee's post-fire safe shutdown strategy relies on having sufficient instrumentation available to enable operators to properly detect fire-induced mal-operations and implement manual actions to defeat them in a timely manner. Accordingly, the success of this approach is largely dependent on the instrumentation available to ensure prompt detection of any mal-operation that may occur. This type of instrumentation is referred to as diagnostic instrumentation. As stated in Generic Letter 86-10, diagnostic instrumentation is instrumentation needed to assure proper actuation and functioning of safe shutdown equipment and support equipment (e.g., flow rate, pump discharge pressure). The specific diagnostic instrumentation needed depends on the design of the shutdown capability. From a review of the licensee's documentation (safe shutdown analysis and required equipment list) and discussions with the licensee's staff, it was not apparent that diagnostic instrumentation had been fully evaluated for the effects of fire damage. The licensee stated that the documentation existed to demonstrate that the diagnostic instrumentation had been fully evaluated, but it was not immediately available. The licensee issued Condition Report 02-7757 to track resolution of this concern.

Based on the findings described above, the team could not determine whether the licensee's strategy for achieving and maintaining post-fire safe shutdown conditions met

the fire protection licensing basis documented by the staff in its Safety Evaluation Report, Supplement 2. The protection of required diagnostic instrumentation is considered an unresolved item (50-498;499/0203-02) pending the NRC review of the licensee actions to address this concern.

#### .3 <u>Alternative Safe Shutdown Capability and Implementation</u>

#### a. Inspection Scope

The team reviewed the licensee's systems required to achieve alternative safe shutdown to determine if the licensee had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions from stations other than the control room. The team also focused on the adequacy of the systems to perform reactor pressure control, reactor makeup, decay heat removal, process monitoring, and support system functions. The team reviewed Procedure 0POP04-ZO-0001, "Control Room Evacuation," Revision 17, which would be used by operators to shut down the reactor in the event a fire in the control room complex and would require a control room evacuation. The team also stepped through the procedure with licensed operators to determine the adequacy of the procedure to direct safe shutdown from remote shutdown locations in accordance with the time line defined by the safe shutdown analysis.

#### b. Findings

The actions specified in the operator actions list were incorporated into Procedure 0POP04-ZO-0001 for a fire in the control room complex. The concerns regarding the operator actions list, which are specified in Unresolved Item 50-498;499/0203-01, are also valid for alternative shutdown capability.

#### .4 <u>Emergency Communications</u>

#### a. <u>Inspection Scope</u>

The team reviewed the adequacy of the communication system to support plant personnel in the performance of alternative safe shutdown functions and fire brigade duties. The team verified that sound-powered phones and the required number of radios were available for use and maintained in working order. The team performed a review of the electrical power supplies and cable routing for both the installed radio repeater system and sound powered phone system to determine that they remain functional following a fire in the control room fire area.

#### b. <u>Findings</u>

No findings of significance were identified.

#### .5 Emergency Lighting

#### a. Inspection Scope

The team reviewed the emergency lighting system required to support plant personnel in the performance of alternative safe shutdown functions to verify it was adequate to support the performance of manual actions required to achieve and maintain hot shutdown conditions, and for illuminating access and egress routes to the areas where manual actions are required. The locations and positioning of emergency lights were observed during a walkthrough of the control room evacuation procedure.

#### b. <u>Findings</u>

No findings of significance were identified.

#### .6 Cold Shutdown Repairs

a. Inspection Scope

The team reviewed licensee procedures to determine whether repairs were required to achieve cold shutdown in the event of a fire. No repairs were procedurally required.

b. Findings

No findings of significance were identified.

#### .7 Fire Protection Systems, Features, and Equipment

- a. For the selected fire areas, the team evaluated the adequacy of fire protection features, such as fire suppression and detection systems, fire area barriers, penetration seals, and fire doors. To do this, the team observed the material condition and configuration of the installed fire detection and suppression systems, fire barriers, and construction details and supporting fire tests for the installed fire barriers. In addition, the team reviewed license documentation, such as NRC safety evaluation reports, and deviations from NRC regulations and National Fire Protection Association code to verify that fire protection features met license commitments.
- b. Findings

No findings of significance were identified.

- .8 <u>Compensatory Measures</u>
- a. Inspection Scope

The team verified, by sampling, that adequate compensatory measures were put in place by the licensee for out-of-service, degraded, or inoperable fire protection and post-fire safe shutdown equipment, systems or features (e.g., detection and suppression systems, or passive fire barrier features).

#### b. Findings

No findings of significance were identified.

#### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Identification and Resolution of Problems

#### a. <u>Inspection Scope</u>

The team reviewed a sample of condition reports to verify that the licensee was identifying fire protection-related issues at an appropriate threshold and entering those issues into the corrective action program. A listing of condition reports reviewed is provided in the attachment to this report.

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b. Findings

No findings of significance were identified.

#### 4OA6 Meetings, including Exit

On, June 23, 2002, at the conclusion of the team's onsite inspection, the team leader debriefed Mr. J. Sheppard, Vice President and Assistant to the President and Chief Executive Officer, and other licensee staff members on the preliminary inspection results.

On July 9, 2002, a telephone exit meeting was held with Mr. T. Jordan, Vice President, Engineering and Technical Services, and other licensee staff members, during which the team leader characterized the results of the inspection.

The team reviewed some proprietary information during the inspection. This information was returned to the licensee.

# ENCLOSURE

# PARTIAL LIST OF PERSONS CONTACTED

#### Licensee

- A. Aldridge, Supervisor, Design Engineering
- D. Bednarczyk, Engineer, Quality and Licensing
- T. Bowman, Operations Manager, Unit 1
- F. Cox, Engineer, Engineering
- G. Danielski, Unit Supervisor, Operations
- D. Dayton, System Engineer, System Engineering
- R. Dukes, Consultant on safe shutdown analysis
- E. Halpin, Plant General Manager
- W. Harrison, Senior Staff Engineer, Engineering
- E. Heacock, Consulting Engineer, Design Engineering
- S. Head, Manager, Licensing
- J. Johnson, Supervisor, Quality
- T. Jordan, Vice President, Engineering and Technical Services
- M. Kanavos, Manager, Modifications and Design Basis Engineering
- A. Kent, Manager Test and Programs, Design Engineering
- J. Labuda, Fire Protection Coordinator, Engineering
- D. Leazar, Manager Nuclear Fuel Analysis
- M. McBurnett, Director, Quality and Licensing
- A. Moldenhauer, Analyst, PRA Group
- B. Mookhoek, Licensing Engineer, Licensing
- M. Oswald, Supervising Engineer, Design Engineering
- R. Piggott, Engineer, Licensing
- D. Rencurrel, Operations Manager, Operations
- J. Savage, Senior Quality Assurance Program Specialist
- J. Sheppard, Vice President and Assistant to the President and Chief Executive Officer
- W. Stillwell, Supervisor, PRA Group
- K. Taplett, Senior Staff Engineer, Engineering
- T. Walker, Manager, Engineering and Support Services Quality
- D. Wiegand, Fire Protection Engineer, Design Engineering
- R. Wiegand, Engineer, Engineering

## ITEMS OPENED AND CLOSED

#### <u>Opened</u>

50-498;499/0203-01 URI

The acceptability of the licensee's use of manual actions to remotely operate equipment necessary for achieving and maintaining hot shutdown, in lieu of providing protection to the cables associated with that equipment, as a method of complying with 10 CFR Part 50, Appendix R, Section III.G.2. This is considered an unresolved item pending further NRC review (Section 1.2). 50-498;499/0203-02 URI The availability of diagnostic instrumentation when a fire would require operators to identify mal-operation of fire-affected plant components and take manual actions to mitigate the consequences of a fire outside of the control room. This is considered an unresolved item pending further NRC review (Section 1.2).

#### LIST OF DOCUMENTS REVIEWED

# **CONDITION REPORTS**

97-11368	01-2709	01-6986	01-14718	02-5491	02-7618
98-761	01-2740	01-7294	02-2117	02-5918	02-7621
99-12378	01-2771	01-8420	02-3183	02-7530	02-7664
00-4795	01-4738	01-8612	02-4948	02-7611	02-9239
00-16024	01-5242	01-13232			

#### **CALCULATIONS**

<u>Number</u>	Title	<u>Revision</u>
5A011MC6023	Post Fire Safe Shutdown Analysis	7
5A019MFP001	Post Fire Operator Actions and Equipment Protection Requirements	0
5A019MFP001	Report for Post Fire Operator Actions and Equipment Requirements (OAL)	9
5E011EL0002.	Safe Shutdown Circuit Listing	2
7Q270MC5800	Combustible Loading of Safety Related Areas	
85E019EL0003	10CFR50 Appendix - R Safe Shutdown Circuit Analysis Report	0
86-FP-12	Smoke Removal from Buildings or Structures Identified in the Fire Hazards Analysis Report	1
CN-TA-87-20	TGX/THX Loss of Normal Feedwater/Station Blackout to Support Fire Hazards Analysis Controlled Cooldown by Depressurizing Secondary Side Pressure	0
EC5053	Protective Device Coordination for Appendix R, (Sheets: 24 - 33, 36, 37, 42, 44, 177, 197, and 200)	March 23, 1980

# **DRAWINGS**

Drawing Number	Title	<u>Revision</u>
9-W-01-9-E-0465#1	Mech. And Elect. Aux. Bldg. Fire detection Plan El. 10'-0"	10
9-W-01-9-E-0466#1	Mech. And Elect. Aux. Bldg. Fire detection Plan El. 21'-0" & 29'-0"	6
9-W-01-9-E-0467#1	Mech. And Elect. Aux. Bldg. Fire detection Plan El. 35'-0" & 41'-0"	7
9-W-01-9-E-0467#2	Mech. And Elect. Aux. Bldg. Fire detection Plan El. 35'-0" & 41'-0"	8
9-W-01-9-E-0468#1	Mech. And Elect. Aux. Bldg. Fire detection Plan El. 60'-0"	6
14926-0295(1)- 00080-ESP	Sprinkler Layout - Mechanical Aux. Building, Fire Area #3: Zones #130 & #147	6
NP 59-03	Detail "E-17" Hydrosil TS-102C Typical Electrical Pen. Seals	5
NP 59-11	Detail "E-20" Silicone Elastomer Fire/Air Conduit Seals	7
NP 59-19	Detail "E-1" Silicone Elastomer Typical Electrical Pen. Seals	5

# FIRE PENETRATION TEST REPORTS

CTP-1001A	CTP-1167	F-111	TS-TP-0075-C
CTP-1126	E-102	F-114	TS-TP-0084
CTP-1131	F-106	TS-TP-0027	

# FIRE PROTECTION IMPAIRMENTS

02-133 01-281 02-195 02-194 02-214 02-180

# PROCEDURES

<u>Number</u>	<u>Title</u>	<u>Revision</u>
0PGP03-ZF-001	Fire Protection Program	13
0PGP03-ZF-0018	Fire Protection System Operability Requirements	10
0PGP03-ZX-0002	Condition Reporting Process	23
0POP04-ZO-0001	Control Room Evacuation	17

Number	Title	<u>Revision</u>
0POP04-ZO-0008	Fire/Explosion	6
0TEP03-FP-0006	Relay Room Halon Concentration Test	0
1ST-FP 04	Fire Protection System - Halon Concentration Test	0
2ST-FP 04	Fire Protection System - Halon Concentration Test	0

#### STATION PROBLEM REPORTS

92-1259 93-854

#### MISCELLANEOUS DOCUMENTS

Letter dated April 8, 1987, from Houston Lighting & Power to the NRC, "Audit Conducted March 30, 1987 through April 3, 1987"

Letter dated April 10, 1987, from Houston Lighting & Power to Bechtel Energy Corporation, "NFPA Code Deviations"

Letter dated April 29, 1987, from Houston Lighting & Power to the NRC, "FSAR Revisions Concerning Section 9.5.1; Fire Protection Systems"

Letter dated May 7, 1987, from Houston Lighting & Power to the NRC, "FSAR Revisions Concerning Table 3.1.A-1 and Table 3.2.B-2"

Letter dated May 8, 1987, from Houston Lighting & Power to the NRC, "FSAR Revisions Concerning FSAR Section 11.2"

Letter dated May 8, 1987, from Houston Lighting & Power to the NRC, "Additional Information Concerning the Availability of Communication Required for Safe Shutdown in the Event of a Fire"

Letter dated May 29, 1987, from Houston Lighting & Power to the NRC, "Additional Information Concerning the Modifications Being Employed for Fire Barriers in Which a Seismic Gap Filler Material (Rotofoam) had been Installed"

Letter dated May 29, 1987, from Houston Lighting & Power to the NRC, "FSAR Revisions Concerning Section 9.5.1; Fire Protection Systems"

Letter dated June 11, 1987, from Houston Lighting and Power to the NRC, "Deviations Not Documented in the STP SER"

Letter dated June 25, 1987, from Houston Lighting and Power to the NRC, "Additional Information Regarding STP Fire Hazard Analysis"

Letter dated June 26, 1987, from Houston Lighting and Power to the NRC, "Additional Information Regarding STP Fire Hazard Analysis"

Letter dated May 30, 1995, from Houston Lighting & Power to American Nuclear Insurers

Letter dated June 7, 1995, letter American Nuclear Insurers to South Texas Project Electric generating Station

Appendix R Section III.G/III.L Safe Shutdown Evaluation, 14926-300141-00001-AXX

Bechtel Energy Corporation, Post-fire Single Train Shutdown Analysis ST-YB-HL-14152, Revision 1

Design Basis Document - Accident Analysis, Module 22.0, "Fire Hazards Loss of Offsite Power," 5N079NB1000, Revision 0

Fire Analysis Update for the South Texas Project Electrical Generating Station PSA for Selected Fire Zones, dated December 1994

Fire Hazards Analysis Report, Amendment 4

Fire Hazards Analysis Report, Amendment 14

Fire Hazards System Design Basis Document (DBD) 7A369MB1033, Revisions 1and 2

Fire Preplan Manual

NRC Inspection Report 50-498;499/86-42

NRC Inspection Report 50-498;499/87-17

Operator Action List, OAL 5A019MFP001, Revision 9

Plant Database Management System (PDMS) cable routing data for selected components

Plant Database Management System (PDMS) cable data for cabling routed in Trays TR A1XE2ATSAA and TR A1XM3BTTVA

Quality Audit Report 01-07 (FP), Fire Protection, dated June 26, 2001

Safety Evaluation Report, dated April 1986

Safety Evaluation Report, Supplement 1, dated April 1986

Safety Evaluation Report, Supplement 2, dated January 1987

Safety Evaluation Report, Supplement 3, dated May 1987

Safety Evaluation Report, Supplement 4, dated July 1987

Safety Evaluation Report, Supplement 5, dated March 1988

Safety Evaluation Report, Supplement 6, dated December 1988

Safety Evaluation Report, Supplement 7, dated March 1989

South Texas Project Level 2 Probabilistic Safety Assessment and Individual Plant Examination

South Texas Project Electric Generating Station Updated Final Safety Analysis Report, Revision 7

South Texas Project, Unit 1, Technical Specifications, Amendment 133

STP Operating Company, Docket 50-498, South Texas Project, Unit 1, Amendment to Facility Operating License, Amendment 95

Unit 1 Relay Room Halon Concentration Test, completed June 8, 1987

Unit 2 Relay Room Halon Concentration Test, completed December 29, 1988

Updated Final Safety Analysis Report, Revision 7