



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

January 14, 2004

James J. Sheppard, President and  
Chief Executive Officer  
STP Nuclear Operating Company  
P.O. Box 289  
Wadsworth, Texas 77483

**SUBJECT: SOUTH TEXAS PROJECT ELECTRIC GENERATING STATION, UNITS 1 AND 2 -  
NRC INSPECTION REPORT 05000498/2003-007 AND 05000499/2003-007**

Dear Mr. Sheppard:

On December 12, 2003, 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 on December 12, 2003, with Mr. Tom Jordan, and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety 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.

Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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 <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

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

Dockets: 50-498; 50-499  
Licenses: NPF-76; NPF-80

STP Nuclear Operating Company

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Enclosure:

NRC Inspection Report 05000498/2003-007;  
05000499/2003-007

cc w/attachment

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STP Nuclear Operating Company

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ADAMS:  Yes  No Initials: \_\_\_\_\_  
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SRI:EMB	SRI:EMB	RI:EMB	SRI:EMB	RI:EMB
RPMullikin/lmb	LEEllershaw	BWHenderson	CEJohnson	TAMcConnell
/RA/	/RA/	/RA/	/RA/	/RA/
1/7/04	1/7/04	1/7/04	1/7/04	1/8/04
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WMMcNeill	WCSifre	CSMarschall	WDJohnson	CSMarschall
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## ENCLOSURE

### U.S. NUCLEAR REGULATORY COMMISSION REGION IV

Dockets: 50-498; 50-499

Licenses: NPF-76; NPF-80

Report No: 05000498/2003-007; 05000499/2003-007

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

Date: November 17 through December 12, 2003

Lead Inspector: R. P. Mullikin, Senior Reactor Inspector, Engineering and Maintenance Branch

Inspectors: L. E. Ellershaw, Senior Reactor Inspector, Engineering and Maintenance Branch  
B. W. Henderson, Reactor Inspector, Engineering and Maintenance Branch  
C. E. Johnson, Senior Reactor Inspector, Engineering and Maintenance Branch  
T. A. McConnell, Reactor Inspector, Engineering and Maintenance Branch  
W. M. McNeill, Reactor Inspector, Engineering and Maintenance Branch  
W. C. Sifre, Reactor Inspector, Engineering and Maintenance Branch

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

## SUMMARY OF FINDINGS

IR 05000498/2003007; 05000499/2003007; 11/17-12/12/2003; South Texas Project Electric Generating Station, Units 1 and 2; Evaluation of Changes, Tests, or Experiments, and Safety System Design and Performance Capability

The NRC conducted an inspection with seven regional inspectors. No findings of significance were identified. 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.

- NRC-Identified Findings and Self-Revealing Findings

No findings of significance were identified.

## Report Details

### 1. REACTOR SAFETY

#### Introduction

The NRC conducted an inspection to verify that the licensee adequately preserved the facility safety system design and performance capability and that the licensee preserved the initial design in subsequent modifications of the system selected for review. The scope of the review also included any necessary nonsafety-related structures, systems, and components that provided functions to support safety functions. This inspection also reviewed the licensee's programs and methods for monitoring the capability of the selected systems to perform the current design basis functions. This inspection verified aspects of the initiating events, mitigating systems, and barrier cornerstones.

The licensee based the probabilistic risk assessment model for the South Texas Project Electric Generating Station, Units 1 and 2, on the capability of the as-built safety systems to perform their intended safety functions successfully. The team determined the area and scope of the inspection by reviewing the licensee's probabilistic risk analysis models to identify the most risk significant systems, structures, and components. The team established this according to their ranking and potential contribution to dominant accident sequences and/or initiators. The team also used a deterministic approach in the selection process by considering recent inspection history, recent problem area history, and all modifications developed and implemented.

The minimum sample size for this procedure is one risk-significant system for mitigating an accident or maintaining barrier integrity. The team completed the required sample size by reviewing the essential chilled water system. The primary review prompted parallel review and examination of support systems, such as, electrical power, instrumentation, and related structures and components.

The team assessed the adequacy of calculations, analyses, engineering processes, and engineering and operating practices that the licensee used for the selected safety system and the necessary support systems during normal, abnormal, and accident conditions. Acceptance criteria used by the team included NRC regulations, the technical specifications, applicable sections of the Updated Final Safety Analysis Report, applicable industry codes and standards, and industry initiatives implemented by the licensee's programs.

#### 1R02 Evaluations of Changes, Tests, or Experiments (71111.02)

##### a. Inspection Scope

The minimum sample size for this procedure is 6 evaluations and 12 screenings. The team reviewed 7 licensee-performed 10 CFR 50.59 evaluations to verify that the licensee had appropriately considered the conditions under which the licensee may make changes to the facility or procedures or conduct tests or experiments without prior NRC approval. These evaluations had been performed since the last NRC inspection of 10 CFR 50.59 activities.

The team reviewed an additional 13 licensee-performed 10 CFR 50.59 screenings in which the licensee determined that evaluations were not required, to ensure that the licensee's exclusion of a full evaluation was consistent with the requirements of 10 CFR 50.59.

The team reviewed and evaluated the most recent licensee 10 CFR 50.59 program self assessment and six corrective action documents written since the last NRC 10 CFR 50.59 inspection to determine whether the licensee conducted sufficient in-depth analyses of their program to allow for the identification and subsequent resolution of problems or deficiencies.

b. Findings

No findings of significance were identified.

1R21 Safety System Design and Performance Capability (71111.21)

.1 System Requirements

a. Inspection Scope

The team inspected the following attributes of the essential chilled water system: (1) process medium (water, steam, and air), (2) energy sources, (3) control systems, and (4) equipment protection. The team examined the procedural instructions to verify instructions as consistent with actions required to meet, prevent, and/or mitigate design basis accidents. The team also considered requirements and commitments identified in the Updated Final Safety Analysis Report, technical specifications, design basis documents, and plant drawings.

b. Findings

No findings of significance were identified.

.2 System Condition and Capability

a. Inspection Scope

The team reviewed the periodic testing procedures for the essential chilled water system to verify that the licensee periodically verified the capability of the system. The team also reviewed the system's operations by conducting system walkdowns; reviewing normal, abnormal, and emergency operating procedures; and reviewing the Updated Final Safety Analysis Report, technical specifications, design calculations, drawings, and procedures.

b. Findings

No findings of significance were identified.



.3 Identification and Resolution of Problems

a. Inspection Scope

The team reviewed a sample of essential chilled water system problems identified by the licensee in the corrective action program to evaluate the effectiveness of corrective actions related to design issues. The sample included open and closed condition reports for the past three years and are listed in the attachment to this report. Inspection Procedure 71152, "Identification and Resolution of Problems," was used as guidance to perform this part of the inspection. Older condition reports that were identified while performing other areas of the inspection were also reviewed.

b. Issues and Findings

No findings of significance were identified.

.4 System Walkdowns

a. Inspection Scope

The team performed walkdowns of the accessible portions of the essential chilled water system and required support systems. The team focused on the installation and configuration of switchgear, motor control centers, manual transfer switches, field cabling, raceways, piping, components, and instruments. During the walkdowns, the team assessed:

- The placement of protective barriers and systems;
- The susceptibility to flooding, fire, or environmental conditions;
- The physical separation of trains and the provisions for seismic concerns;
- Accessibility and lighting for any required local operator action;
- The material condition and preservation of systems and equipment; and
- The conformance of the currently-installed system configurations to the design and licensing bases.

b. Findings

No findings of significance were identified.

.5 Design Review

a. Inspection Scope

The team reviewed the current as-built instrument and control, electrical, and mechanical design of the essential chilled water system. These reviews included an examination of design assumptions, calculations, required system thermal-hydraulic performance, electrical power system performance, protective relaying, control logic, and instrument setpoints and uncertainties. The team also performed selected single-failure evaluations of individual components and circuits to determine the effects of such failures on the capability of the system to perform its design safety functions. The team also reviewed the licensee's calculations and methodology for ensuring the essential chilled water system was protected against seismic, flooding, fire, and high energy line break events.

The team reviewed calculations, drawings, specifications, vendor documents, Updated Final Safety Analysis Report, technical specifications, emergency operating procedures, and temporary and permanent modifications.

b. Findings

No findings of significance were identified.

.6 Safety System Inspection and Testing

a. Inspection Scope

The team reviewed the program and procedures for testing and inspecting selected components in the essential chilled water system. The review included the results of surveillance tests required by the technical specifications and selective review of Class 1E control circuits for capability to test system functions.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA6 Management Meetings

Exit Meeting Summary

The team leader presented the inspection results in the areas of safety system design and performance capability, and evaluations of changes, tests, or experiments to Mr. Tom Jordan, and other members of licensee management and staff at the conclusion of the onsite inspection on December 12, 2003. Licensee management acknowledged the inspection findings. The team confirmed that proprietary information reviewed by the team was returned to the licensee.

**ATTACHMENT**

PARTIAL LIST OF PERSONS CONTACTED

Licensee:

M. Berg, Manager, Testing/Programs Engineering  
J. Cook, Supervisor, Engineering Specialist  
C. Grantom, Manager, Probabilistic Risk Assessment  
S. Head, Manager, Licensing  
K. House, Supervisor, Engineering  
J. Johnson, Supervisor, Quality  
T. Jordan, Vice President, Engineering and Technical Services  
W. Jump, Manager, Training  
J. Loya, Engineer, Licensing  
M. McBurnett, Manager, Nuclear Safety Assurance  
L. Merritt, Engineer, Systems Engineering  
A. Moldenhauer, Staff Engineer, Probabilistic Risk Assessment  
W. Mookhoek, Senior Licensing Staff Engineer  
C. Pham, Engineer  
R. Savage, Senior Staff Specialist  
B. Scott, Supervisor, Inservice Testing  
T. Walker, Manager, Quality

NRC Personnel:

J. Cruz, Senior Resident Inspector  
G. Guerra, Resident Inspector

DOCUMENTS REVIEWED

PROCEDURES

<u>Number</u>	<u>Title</u>	<u>Revision</u>
CROE CR 02-143-1, 2, 4	Chilled Water Flow Balance for 300 Ton Essential Chiller	NA
0PAP01-ZA-0103	License Compliance Review	6
0PGP03-ZA-0039	Plant Procedures Writer's Guide	17
0PGP03-ZM-0028	Erection and Use of Temporary Scaffolding	11
0PGP03-ZO-0003	Temporary Modifications	20
0PGP03-ZX-0002	Condition Reporting Process	26
0PGP03-ZX-0013	Industry Events Analysis	4

<u>Number</u>	<u>Title</u>	<u>Revision</u>
0PGP03-ZV-001	Severe Weather Plan	9
0PGP05-ZA-0002	10 CFR 50.59 Evaluations	12 & 13
0PGP05-ZN-0004	Changes to Licensing Basis Documents and Amendments to The Operating License	14
0POP01-ZO-0004	Extreme Cold Weather Guidelines	18
0POP02-AF-0001	Auxiliary Feedwater	19
0POP02-CH-0001	Essential Chilled Water System	23 thru 30
0POP02-CH-0005	Essential Chiller Operation	25, 26 & 29
0POP02-EW-0001	Essential Cooling Water Operation	29
0POP02-RH-0001	Residual Heat Removal System Operations	34
0PSP03-CH-0001	Essential Chilled Water Pump 11A (21A) Inservice Test	13
0PSP03-CH-0002	Essential Chilled Water Pump 11B (21B) Inservice Test	13
0PSP03-CH-0003	Essential Chilled Water Pump 11C (21C) Inservice Test	12
0PSP03-CH-0004	Essential Chilled Water Pump 11A (21A) Reference Value Measurement	9
0PSP03-CH-0005	Essential Chilled Water Pump 11B (21B) Reference Value Measurement	7
0PSP03-CH-0006	Essential Chilled Water Pump 11C (21C) Reference Value Measurement	8
0PSP03-CH-0007	Essential Chilled Water System Valve Operability Test	10
0PSP03-EW-0017	Essential Cooling Water System Train A Testing	21
0PSP15-CH-0001	Essential Chilled Water System Inservice Pressure Test	4

CALCULATIONS

<u>Number</u>	<u>Title</u>	<u>Revision</u>
3V110MC5233	Essential Chilled Water System Network Analysis (Train C)	3
EC-5000	Voltage Regulation Study	9
EC-5029	Bechtel Engineering Calculation for 4.16 KVA Relay Settings	4
EC-5052	STP Engineering Calculation for Degraded and Undervoltage Protection	4
EC-5053	Protective Device Study for Appendix R	4
EC-5001	ETAP Power Station Electrical Fault Study Analysis	5
EC-5100	Standby Diesel Generator Transient Response Model	1
MC-06429	Essential Chiller Operational Analysis	2
MC-06482	Essential Chilled Water/Electrical Auxiliary Building Heating, Ventilation, and Air Conditioning Design Loads with Capacity of 300 Tons per Train	1
MC-06482A	Essential Chilled Water Minimum Flow Requirements for Electrical Auxiliary Building, Control Room Envelope, Fuel Handling Building, and Mechanical Auxiliary Building Coolers	0

DESIGN CHANGE PACKAGES

<u>Number</u>	<u>Title</u>	<u>Revision/Date</u>
DCP 97-6297-11	150 Ton Chillers Abandonment	January 3, 2002
DCP 97-6297-11	Chilled Water System Amendments	Supplement 0
DCP-99-17383-2	Add Jacking Bolts to the Motor Baseplate of the 300-Ton Essential Chillers	Supplement 0
DCP-02-14824-12	Replace Circuit Breaker CB-1 Model AP6-9822-1 with Model AP6-1-62-153 for Essential Chillers 22A(3V112VCH004), 22B(3VCH005) and 22C(3V112VCH006)	Supplement 0
DCP-03-18106-2	Calculation MC-6482A	Supplement 0

DRAWINGS

<u>Number</u>	<u>Title</u>	<u>Revision</u>
3V111V01052	Piping and Instrumentation Diagram Refrigeration Chiller 3V111VCH004 Chiller Water System Train "A"	8
3V111V01053	Piping and Instrumentation Diagram Refrigeration Chiller 3V111VCH005 Chiller Water System Train "B"	9
3V111V01054	Piping and Instrumentation Diagram Refrigeration Chiller 3V111VCH006 Chiller Water System Train "C"	10
3V119V22519	Process Flow Diagram Essential Chilled Water System Train "A"	1 with DCNs 0002532 and 96-7762-4
3V119V22520	Process Flow Diagram Essential Chilled Water System Train "B"	1 with DCNs 0002533 and 96-7762-4
3V119V22521	Process Flow Diagram Essential Chilled Water System Train "C"	1 with DCNs 0002534 and 96-7762-4
5V109Z41553	Mechanical Auxiliary Building Heating, Ventilation, and Air Conditioning Pumps and Cubicle Cooler Fans Logic Diagram System: HM	8
5V119V00008	Piping and Instrument Diagram Heating, Ventilation, and Air Conditioning Mechanical Auxiliary Building Supplementary Exhaust System and Supplementary Cooling System Flow Diagram,	18
5V119V25000	Piping and Instrument Diagram Heating, Ventilation, and Air Conditioning Electrical Auxiliary Building Main Area System	14
5V119V25004	Piping & Instrumentation Diagram - Heating, Ventilation, and Air Conditioning Control Room Envelope System	21
5V119Z41570	Essential Heating, Ventilation, and Air Conditioning Chilled Water Pumps Logic Diagram System: CH	4
5V119Z41592	Electrical Auxiliary Building Main Area & Control Room Essential Chilled Water Cooling Coils Logic Diagram System: CH	7

<u>Number</u>	<u>Title</u>	<u>Revision</u>
5V119Z41593	Essential Heating, Ventilation, and Air Conditioning Chilled Water Chillers Logic Diagram System: CH	15
5V129V00012	Piping and Instrumentation Diagram Heating, Ventilation, and Air Conditioning Fuel Handling Building Supply System	20
7Z269Z41913	Essential Chilled Water System ESF Status Monitoring Train A Logic Diagram System: SM	10
9-E-PKAC-01 #1	Single Line Diagram 4.16 KV Class 1E Switchgear E1C EAB	13
9-E-PKAC-01 #2	Single Line Diagram 4.16 KV Class 1E Switchgear E2C EAB	9
9EPMAG-02#1	Single Line Diagram Class 1E Motor Control Center E1C1 (EAB)	13
9E0CH11#1	Elementary Diagram E.A.B. Heating, Ventilation, and Air Conditioning Essential Chilled Water Chiller Units CH004, 005, 006	8

ENGINEERING EVALUATIONS

01-11507-01  
01-11527-14  
02-00285-02

TEST REPORTS

<u>Title</u>	<u>Date</u>
Essential Chilled Water System Valve Operability Test	September 02, 2001
Essential Chilled Water System Valve Operability Test	September 13, 2001
Essential Chilled Water System Valve Operability Test	October 25, 2001
Essential Chilled Water System Valve Operability Test	December 06, 2001
Essential Chilled Water System Valve Operability Test	December 06, 2001
Essential Chilled Water System Valve Operability Test	February 17, 2002
Essential Chilled Water System Valve Operability Test	February 28, 2002
Essential Chilled Water System Valve Operability Test	January 31, 2003

<u>Title</u>	<u>Date</u>
Essential Chilled Water System Valve Operability Test	June 29, 2003
Flow Balance Unit 1, Train A, after Abandonment of the 150 Ton Chiller	January 17, 2002
Flow Balance Unit 2, Train C, after Abandonment of the 150 Ton Chiller	January 17, 2002
Flow Balance Unit 1, Train C, after Abandonment of the 150 Ton Chiller	January 17, 2002
Flow Balance Unit 1, Train B, after Abandonment of the 150 Ton Chiller	January 29, 2002
Flow Balance Unit 2, Train A, after Abandonment of the 150 Ton Chiller	January 30, 2002
Flow Balance Unit 2, Train B, after Abandonment of the 150 Ton Chiller	January 30, 2002
Essential Chilled Water Pump 11A(21A) Inservice Test	December 26, 2002
Essential Chilled Water Pump 11A(21A) Inservice Test	January 04, 2003
Essential Chilled Water Pump 11A(21A) Inservice Test	March 19, 2003
Essential Chilled Water Pump 11A(21A) Inservice Test	March 26, 2003
Essential Chilled Water Pump 11A(21A) Inservice Test	June 12, 2003
Essential Chilled Water Pump 11A(21A) Inservice Test	June 20, 2003
Essential Chilled Water Pump 11A(21A) Inservice Test	September 04, 2003
Essential Chilled Water Pump 11A(21A) Inservice Test	September 11, 2003
Essential Chilled Water Pump 11B(21B) Inservice Test	January 29, 2003
Essential Chilled Water Pump 11B(21B) Inservice Test	February 03, 2003
Essential Chilled Water Pump 11B(21B) Inservice Test	March 23, 2003
Essential Chilled Water Pump 11B(21B) Inservice Test	May 02, 2003
Essential Chilled Water Pump 11B(21B) Inservice Test	July 18, 2003
Essential Chilled Water Pump 11B(21B) Inservice Test	July 23, 2003
Essential Chilled Water Pump 11B(21B) Inservice Test	October 10, 2003
Essential Chilled Water Pump 11B(21B) Inservice Test	October 16, 2003
Essential Chilled Water Pump 11C(21C) Inservice Test	December 11, 2002

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<u>Title</u>	<u>Date</u>
Essential Chilled Water Pump 11C(21C) Inservice Test	December 19, 2002
Essential Chilled Water Pump 11C(21C) Inservice Test	March 06, 2003
Essential Chilled Water Pump 11C(21C) Inservice Test	March 15, 2003
Essential Chilled Water Pump 11C(21C) Inservice Test	May 30, 2003
Essential Chilled Water Pump 11C(21C) Inservice Test	June 04, 2003
Essential Chilled Water Pump 11C(21C) Inservice Test	August 20, 2003
Essential Chilled Water Pump 11C(21C) Inservice Test	August 27, 2003

10 CFR 50.59 EVALUATIONS

<u>Number</u>	<u>Title</u>
98-19444-2	UFSAR Changes Associated With The Large Bore Pipe DCP for Unit 2 Steam Generator Replacement
99-10113-18	Use of VIPRE Computer Code for Steady State and Transient DNBR Analysis
00-3229-19	Revision to the Analysis for the Loss of Normal Feedwater Flow Event Described in UFSAR Section 15.2.7 of the UFSAR
00-15826-15	Elbow Tap Flow Technology
00-16902	Design Change to Declare One RHR Heat Exchanger as a Spare Train
01-15007-3	IVC High Energy Line Break Failure Modes and Effects Analysis Changes
01-18843-21	Addition of a New Methodology for Evaluating Fuel Rod Design and Performance

10 CFR 50.59 SCREENINGS OF PROCEDURE CHANGES

OPGP04-ZE-0305  
OPGP05-ZA-0002  
OPOP04-ZO-SEC0  
OPSP11-ZE-0001

10 CFR 50.59 SCREENINGS OF TEMPORARY MODIFICATIONS

T1-02-7593-2 R0  
T2-03-3557-4 R0

10 CFR 50.59 SCREENING OF A UFSAR CHANGE NOTICE

CN-2672, 03-398-1

10 CFR 50.59 SCREENINGS OF DESIGN CHANGE PACKAGES

<u>Number</u>	<u>Title</u>
DCP 00-5862-133	Revise Circulating Water System DBD due to 1.4% Power Uprate
DCP 00-10937-3	Feedwater Isolation Valve Energize-to-Actuate
DCP 00-18220-2	Alternate Valve Material for the ECW Aluminum Bronze Valves
DCP 01-18949-2	Replace Piping Material in Line 20" ES-1009-RC7
DCP 02-4946-1	Revise Drawings to Agree With As-built Configuration
DCP 03-4598-2	Canopy Seal Weld Repair Disposition For Leaking Reactor Head Penetrations

WORK ACTIVITIES

<u>Number</u>	<u>Title</u>	<u>Date</u>
236009-ST 88000161	4.16KV Degraded Voltage Relay Channel 1 Calibration/TADOT Quarterly Train A, Unit 1	October, 16, 2003
237251-ST 88000162	4.16KV Degraded Voltage Relay Channel 2 Calibration/TADOT Quarterly Train A, Unit 1	November 13, 2003
239096-ST 88000163	4.16KV Degraded Voltage Relay Channel 3 Calibration/TADOT Quarterly Train A, Unit 1	November 13, 2003

<u>Number</u>	<u>Title</u>	<u>Date</u>
236848-ST 88000164	4.16KV Degraded Voltage Relay Channel 4 Calibration/TADOT Quarterly Train A, Unit 1	November 13, 2003
236773-ST 88003382	4.16KV Degraded Voltage Relay Channel 1 Calibration/TADOT Quarterly Train C, Unit 1	November 13, 2003
238703-ST 88003383	4.16KV Degraded Voltage Relay Channel 2 Calibration/TADOT Quarterly Train C, Unit 1	November 13, 2003
239688-ST 88003384	4.16KV Degraded Voltage Relay Channel 3 Calibration/TADOT Quarterly Train C, Unit 1	October 16, 2003
239689-ST 88003385	4.16KV Degraded Voltage Relay Channel 4 Calibration/TADOT Quarterly Train C, Unit 1	October 16, 2003

CONDITION RECORDS (CRs)

99-15476	01-13587	02-14819	03-06933	03-17427
00-17950	02-00673	03-00128	03-12081	03-17443
00-18324	02-00853	03-00137	03-14815	03-17452
00-18402	02-01331	03-00270	03-16106	03-17453
00-18228	02-03231	03-00398	03-17346	03-17466
01-02657	02-03671	03-02041	03-17358	03-17478
01-04166	02-06457	03-02704	03-17363	03-17787
01-06680	02-06977	03-03527	03-17391	03-18069
01-06896	02-07805	03-04293	03-17394	03-18106
01-08878	02-07770	03-05678	03-17399	03-18150
01-10930	02-12155	03-06471	03-17402	03-18173
01-13111	02-12209	03-06484		

DESIGN BASIS DOCUMENTS

<u>Number</u>	<u>Title</u>	<u>Revision</u>
4E019NB1009	Equipment Qualification	1
5V109VB0110	Mechanical Auxiliary Building Heating, Ventilation, and Air Conditioning System	2, With DCNs 95-4416-19 & 97-02765
5V119VB1022	Electrical Auxiliary Building (EAB) Heating, Ventilation, and Air Condition System	3, With DCNs 0002737 & 0201103.
5V129VB0116	Fuel Handling Building Heating, Ventilation, and Air Conditioning System	1, With DCNs 95-4416-19 & 98-5763-04
5V369VB0120	Chilled Water (CH) System	3 & 4

MISCELLANEOUS DOCUMENTS

10 CFR 50.59 Resource Manual, Revision 1

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Design Criteria 5V369VQ1001, Essential Chiller Water System, Revision 5 with Document Change Notice 97-6297-10

Equipment Reliability Process Self Assessment of the Essential Chilled Water System, performed September 23-25, 2003

ETAP Power Station Users manual 2.0N, dated July 1998

ICEA Publication P-32.382 Short Circuit Characteristics of Insulated Cables, dated March 1969

Instruction Manual for Byron Jackson Horizontal Process Pumps Type SJA (VTB-B580-7001, Volume 1

Instruction Manual for Open Turbopak Centrifugal Liquid Chilling Units (Document 160.58-01)

LER 1-03-005, South Texas Project Unit 1 Auxiliary Feedwater Pump 11 Breaker failure to Close, dated November 3, 2003

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Performance Criteria, Goals and Monitoring List for Chilled Water Systems, dated 2/28/01

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South Texas Project Probabilistic Risk Assessment, "Essential Chilled Water System (Includes Top Events ECHS, ECA, ECB, ECC), Revision 4.0

South Texas Project Unit 1 and Unit 2 Instrument Setpoint Changes for Essential Chilled Water System (CH) 1993-2003

South Texas Project Updated Final Safety Analysis Report, Revision 7

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