

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-498/90-25
50-499/90-25

Operating Licenses: NPF-76
NPF-80

Dockets: 50-498
50-499

Licensee: Houston Lighting & Power Company (HL&P)
P.O. Box 1700
Houston, Texas 77251

Facility Name: South Texas Project, Units 1 and 2 (STP)

Inspection At: STP, Matagorda County, Texas

Inspection Conducted: July 23-27, 1990

Inspectors:

Amarjit Singh
A. Singh, Reactor Inspector, Test Programs
Section, Division of Reactor Safety

8/9/90
Date

D. L. Kelley
D. L. Kelley, Reactor Inspector, Test Programs
Section, Division of Reactor Safety

8/9/90
Date

Approved:

W. C. Seidle
W. C. Seidle, Chief, Test Programs Section
Division of Reactor Safety

8/9/90
Date

Inspection Summary

Inspection Conducted July 23-27, 1990 (Report 50-498/90-25; 50-499/90-25)

Area Inspected: Routine, unannounced inspection of licensee's plant surveillance procedures and records.

Results: The inspectors found that surveillance tests were being scheduled and performed as required by the Technical Specifications in accordance with approved plant surveillance procedures. The overall plant surveillance procedures were of high quality. Acceptance criteria were clearly stated and test results were referenced to the criteria. Independent verifications and reviews were clearly documented. Appropriate instructions for returning equipment to service were given. Also, the data package retrieval system is considered to be a strength in the licensee's surveillance procedure program.

DETAILS

1. PERSONS CONTACTED

HL&P

- *C. A. Ayola, Supervising Engineer, Licensing
- *D. J. Deaver, Manager, Plant Engineering
- *C. R. Grantom, Plant Surveillance Coordinator
- *L. Gyles, Plant Operations
- *R. R. Hernandel, Division Manager
- *W. J. Jump, Maintenance Manager
- *A. K. Khosla, Senior Engineer, Licensing
- *D. R. Keating, Director, Independent Safety Engineering Group
- *W. H. Kinsey, Plant Manager, STP, Units 1 and 2
- *D. A. Leazar, Program Manager
- *M. Munoz, Lead, Records Management
- *M. A. McBurnett, Manager, Nuclear Licensing
- *D. S. Rhodes, Lead, Records
- *G. E. Vaughan, Vice President, Nuclear Generation
- *J. T. Westermeier, General Manager, Site Facilities
- *R. Wilkinson, Electrical Maintenance Coordinator

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- *J. I. Tapia, Senior Resident Inspector

The inspector also interviewed other licensee employees during the inspection.

*Denotes those attending exit meeting.

2. SURVEILLANCE PROCEDURES AND RECORDS (61700)

The purpose of this inspection was to ascertain whether the surveillance of safety-related systems and components was being conducted in accordance with approved procedures, as required by the Technical Specifications. The inspection involved a review of surveillances performed on both Units 1 and 2. The conclusion reached by the inspectors was that the surveillances were being performed as required using technically correct procedures. The procedures and test results reviewed by the inspectors are listed in the Attachment.

The inspection was accomplished by selecting Technical Specification surveillance tests in the following areas:

- o Reactivity control and power distribution
- o Instrumentation
- o Reactor coolant system
- o Emergency core cooling system

- o Containment systems
- o Plant and electrical power systems
- o Fire protection/prevention systems
- o Inservice testing

The inspectors verified that at least two Technical Specification surveillance tests relating to each of the above areas were covered by approved procedures.

The inspectors determined that the required tests were being scheduled and performed in accordance with approved procedures. The acceptance criteria were specified in the procedures reviewed and records indicated that they were clear and the test results were appropriately referenced to acceptance criteria. Appropriate instructions were given for returning equipment to service following testing. Also, the inspectors reviewed selected training records for test personnel. The review indicated that the personnel involved had received appropriate training and had received their certification.

The inspectors selected surveillance test procedures and multiple samples of completed tests for Units 1 and 2 for review and evaluation. The sample size for the test reviews for both units was approximately 200.

The results of the review indicated that the tests were well written, easily understood and technically accurate. The purpose and acceptance criteria accurately addressed the Technical Specifications requirements and the acceptance criteria accurately described the data required to satisfy the Technical Specifications surveillance requirements.

The test data reviewed indicated that the test data sheets had been independently verified, as required by the procedures, and no errors were detected. The inspectors' review also indicated that the surveillance procedures and data sheets were of high quality. The references in the surveillance procedures to the Technical Specifications were clearly stated. The use of "N/A" (not applicable) was not prevalent in the data packages, and in several instances, a clear explanation was given in those cases where "N/A" was used.

The inspectors noted that the licensee has an excellent system to retrieve the data packages.

Within the scope of this inspection, no violations or deviations were identified.

3. EXIT MEETING

On July 27, 1990, an exit meeting was conducted with Mr. G. E. Vaughn and members of the South Texas Project staff. During the meeting, the inspectors reviewed the scope and findings of the inspection. The licensee did not identify as proprietary, any information contained in this report.

ATTACHMENT

UNIT 1

PROCEDURE NO.

TITLE

1PSP03-AF-0002	"Auxiliary Feedwater Pump 12 Inservice Test", (last 4 tests)
1PSP03-CC-0002	"Component Cooling Water Pump 1B" (last test)
1PSP03-CH-0001	"Essential Chilled Water Pump 11A Inservice Test" (last 4 test)
1PSP03-CV-0002	"Centrifugal Charging Pump 1B Inservice Test" (last 4 tests)
OPSP10-ZG-0001	"Determination of Moderator Temperature Coefficient (BOL) (last test)
OPSP10-ZG-0006	"Post Refueling Shutdown Margin Verification" (last test)
OPSP10-ZG-0003	"Shutdown Margin Verification Modes 3, 4, and 5" (last 10 tests)
OPSP10-ZG-0004	"Determination of Moderator Temperature Coefficient at Power" (last test)
1PSP03-FW-0001	"Feedwater System Valve Operability Test" (last 4 tests)
1PSP03-RS-0001	"Monthly Control Rod Operability" (last test)
1PSP03-R1-0001	"Digital Rod Position Indication Operability Test" (last test)
OPSP03-SP-0007B	"SSPS Actuation Train B Master Relay Test" (last 4 tests)
1PSP03-SP-0012B	"Train B Slave Relay Test" (last test)
1PSP05-RC-0455	"Pressurizer Pressure Set 2 Calibration (P-0455) (last 4 tests)
OPSP11-CS-0010	"Containment Spray System Check Valve" (last test)

1PSP03-MS-0001	"Main Steam System Valve Operability Test" (last 4 tests)
OPSP10-ZG-0002	"Core Reactivity Balance (Reactivity Anomaly) (last 3 tests)
1PSP05-RC-0419	"RCS Flow Loop 1 Set 3 Calibration" (last test)
OPSP05-RC-0430	"Delta T and T Average Loop 3 Set 3" (last test)
OPSP05-NI-0041	"Power Range Neutron Flux" (last test)
OPSP10-NI-0002	"Determination of Quadrant Power Tilt Ratio (QPTR) (last 4 tests)
1PSP02-HC-0937	"Containment Pressure Set 1 ACOT (P-0937) (last 4 tests)
OPSP10-II-0003	"Determination of Limiting Hot Channel Factors and Axial Offset" (last 2 tests)
OPSP06-PK-0007	"4.16kV Class 1E Degraded Voltage Relay Channel Calibration/TADOT-Channel 3" (last 4 tests)
1PSP06-DJ-0002	"125 Volt Class 1E Battery Quarterly Surveillance Test" (last 4 tests)
1PSP05-FW-0549	"SG 1D Narrow Range Level Set 2 Calibration (L-0549) (last test)
1PSP03-DG-0008	"Standby Diesel 12 Loop Test" (last test)
1PSP05-RC-0456	"Pressurizer Pressure Set 2 Calibration" (last test)
OPSP03-SP-0005R	"SSPS Logic Train R Functional Test" (last 2 tests)

UNIT 2

OPGP03-ZE-0005	"Plant Surveillance Procedure Preparation"
OPGP03-ZE-0004	"Plant Surveillance Program"
OPGP03-ZA-0055	"Plant Surveillance Scheduling"
2PSP05-RC-0455	"Pressurizer Pressure Set 1 Calibration" (last 4 tests)
2PSP05-RC-0456	"Pressurizer Pressure Set 2 Calibration" (last 4 tests)
2PSP05-RC-0457	"Pressurizer Pressure Set 3 Calibration" (last 4 tests)
2PSP05-RC-0458	"Pressurizer Pressure Set 4 Calibration" (last 4 tests)
2PSP05-RC-0655	"Pressurizer Pressure Calibration Control" (last test)
2PSP03-SP-008A	"SSPS Train A Slave Relay Test" (last test)
2PSP03-SP-008B	"SSPS Train B Slave Relay Test" (last test)
2PSP03-CV-0001	"Centrifugal Charging Pump 2A Inservice Test" (last 4 tests)
2PSP03-CV-0002	"Centrifugal Charging Pump 2 B Inservice Test" (last 4 tests)
2PSP03-CV-0004	"Centrifugal Charging Pump 2B Reference Values Measurement" (last 4 tests)
2PSP03-CV-0009	"Monthly Boration Flow Path Verification" (last 2 tests)
2PSP03-CV-0014	"CVCS Equipment Verification" (last test)
OPSP11-SI-0021	"Safety Injection system Check Valve Disassembly and Inspection" (last test)
2PSP03-DG-0007	"Standby Diesel 21 Loop Test" (last test)

2PSP03-DG-0008	"Standby Diesel 22 Loop Test" (last test)
2PSP03-DG-0009	"Standby Diesel 23 Loop Test" (last test)
2PSP03-FP-0001	"Fire Protection System Valve Operability Test" (last test)
0PSP03-FP-0002	"Monthly Diesel Fire Pump Test" (last 4 months)
2PSP03-HC-0001	"Reactor Containment Fan Cooler Operability" (last 2 tests)
2PSP03-SP-0013	"Safety Injection Actuation and Response Time Test" (last 2 tests)
2PSP03-SP-0014	"Safety Injection Automatic Recirculation Actuation and Response Time Test" (last 2 tests)
2PSP03-AF-0001	"Auxiliary Feedwater Pump 21 Inservice Test" (last 4 tests)
2PSP03-AF-0002	"Auxiliary Feedwater Pump 22 Inservice Test" (last 4 tests)
2PSP03-AF-0003	"Auxiliary Feedwater Pump 23 Inservice Test" (last 4 tests)
2PSP03-CC-0001	"Component Cooling Water Pump 2A Inservice Test" (last test)
2PSP03-CG-0001	"Containment Hydrogen Recombiner System Functional Test" (last 4 tests)
2PSP03-CH-0001	"Essential Chilled Water Pump 21A" (last 4 tests)
2PSP03-CH-0002	"Essential Chilled Water Pump 21B Inservice Test" (last 4 tests)
2PSP03-CS-0001	"Containment Spray Pump 2A Inservice Test" (last 2 tests)
2PSP03-CS-0002	"Containment Spray Pump 2B Inservice Test" (last 2 tests)

0PSP03-NI-0001 "Daily Power Range NI Channel Calibration"
(last 10 tests)

2PSP03-RC-0009 "Reactor Coolant System Valve Operability Test"
(last 2 tests)

2PSP03-RC-0001 "Pressurizer Power Operated Relief Valve Operability
Test"
(last 2 tests)

2PSP03-RC-0011 "Reactor Vessel Head Vent Flow Verification and Valve
Operability test (Cold Shutdown)
(last test)

2PSP03-RH-0001 "Residual Heat Removal Pump 2A Inservice Test"
(last test)

2PSP03-RH-0010 "Residual Heat Removal system Valve Leak Test"
(last test)

2PSP03-SI-0014 "ECCS Valve Checklist"
(last test)

2PSP03-SI-0016 "Containment Integrity Checklist"
(last test)

2PSP03-SI-0017 "Containment Spray Valve Checklist"
(last 2 tests)

2PSP03-SI-0023 "SIS Pressurize Isolation Check Valve Leak Test"
(last 4 tests)

2PSP03-SP-0006R "Train R Reactor Trip Breaker TADOT"
(last 2 tests)

2PSP03-SP-0006S "Train S Reactor Trip Breaker TADOT"
(last 2 tests)

2PSP03-ZQ-0002 "Modes 1, 2, 3, and 4 Operator Logs"
(last 2 months)

2PSP02-HC-0936 "Containment Pressure Set 2 ACOT"
(last 2 tests)

2PSP02-HC-0937 "Containment Pressure Set 1 ACOT"
(last 2 tests)

OPSP13-RC-0455	"Response Time Set Pressurizer Pressure Set 1" (last test)
OPSP10-NI-0002	"Determination of Quadrant Power Tilt Ratio (QPTR)" (last 4 tests)
2PSP05-ED-7812	"Containment Normal Sump Level Calibration" (last test)
2PSP05-ED-7823	"Containment Normal Sump Discharge Flow Calibration" (last test)
2PSP05-ED-7839	"Containment Normal Sump Level Channel Calibration" (last test)
OPSP05-NI-0042	"Power Range Neutron Flux Channel II Calibration" (last test)
OPSP10-ZG-0003	"Shutdown Margin Verification" (last test)
OPGP03-ZF-0002	"Fire Brigade Drills" (last 2 drills)
2PSP03-DG-0013	"Standby Diesel 21 Loop ESF Actuation Test" (last 2 tests)
2PSP03-DC-0014	"Standby Diesel 22 Loop-ESF Actuation Test" (last 2 tests)
2PSP03-DG-0015	"Standby Diesel 23 Loop-ESF Actuation Test" (last 2 tests)
OPGP03-ZE-0021	"Inservice Testing Program"