

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-498/88-55  
50-499/88-55

Operating License: NPF-76  
Construction Permit (CP): CPT-129

Dockets: 50-498  
50-499

Licensee: Houston Lighting & Power Company (HL&P)  
P.O. Box 1700  
Houston, Texas 77001

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

Inspection At: STP, Matagorda County, Texas

Inspection Conducted: August 1-31, 1988

Inspectors: D M Hunnicutt 9/27/88  
for J. E. Bess, Senior Resident Inspector, Project Date  
Section D, Division of Reactor Projects

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for J. I. Tapia, Senior Resident Inspector, Project Date  
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D. M. Hunnicutt, Senior Project Inspector, Date  
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Approved: E. Holler 9/29/88  
E. Holler, Chief, Project Section D, Date  
Division of Reactor Projects

Inspection SummaryInspection Conducted August 1-31, 1988 (Report 50-498/88-55)

Areas Inspected: Routine, unannounced inspection included plant status, licensee actions on previous inspection findings, review of licensee action on reported events (LERs), operational safety verification, ESF system walkdown, maintenance observations, and surveillance observations.

Results: Within the areas inspected, no violations or deviations were identified.

Inspection Conducted August 1-31, 1988 (Report 50-499/88-55)

Areas Inspected: Routine, unannounced inspection included loose part monitoring system test, remote reactor shutdown test, control rod system test, fuel handling building inspection, QA program (test and experiments) review, design changes and modification, preoperational test witnessing, and allegation followup.

Results: Within the areas inspected, no violations or deviations were identified.

DETAILS1. Persons ContactedHL&P

- \*C. R. Beavers, Plant Engineer
- \*A. C. McIntyre, Manager, Support and Engineering
- \*S. Eldridge, Operations Support Manager
- \*J. Loesch, Plant Operations Manager
- \*G. L. Parkey, Plant Superintendent, Unit 2
- \*J. A. Slabinski, Operations Quality Control (QC) Supervisor, Unit 2
- \*A. W. Harrison, Supervising Project Engineer
- \*K. M. O'Gara, Project Compliance Engineer
- \*J. T. Westermeier, Project Manager
- \*S. L. Rosen, General Manager Operations Support
- \*S. D. Phillips, Licensing Engineer
- \*J. R. Lovell, Technical Service Manager
- \*S. M. Head, Supervisor, Licensing Engineer
- \*M. L. Duke, Staff Engineer
- \*D. R. Keating, Quality Engineer Manager
- \*R. A. Gangluff, Chemical Analysis Supervisor
- \*T. E. Underwood, Chemical Operations Analysis Manager
- \*R. C. Hardison, Construction Supervisor
- \*L. Giles, Plant Operations Manager, Unit 2
- \*T. J. Jordan, Project Quality Assurance (QA) Manager
- \*S. M. Dew, Operations Support Manager
- \*G. Ondriska, Startup Supervisor
- \*M. F. Polishak, Lead Engineer, Project Compliance

Bechtel

- \*R. W. Miller, Project Quality Assurance Manager
- \*M. Herman, Quality Assurance Engineer
- \*C. R. O'Neil, Unit 2 Engineer Manager

Ebasco

- \*R. A. Moore, Assistant Quality Control (QC) Site Supervisor
- \*E. P. Rosol, Site Manager

In addition to the above, the NRC inspectors also held discussions with various licensee, architect engineer (AE), constructor and other contractor personnel during this inspection.

\*Denotes those individuals attending the exit interview conducted on September 2, 1988.

## 2. Plant Status

On August 3, 1988, at 11:30 a.m. (CDT), STP Unit 1, reached 100 percent reactor power and begin a 100-hour Nuclear Steam Supply System (NSSS) acceptance run. On August 6, 1988, after more than 70 hours of continuous operation at 100 percent power, the speed controller for the No. 12 Steam Generator Feed Pump Turbine (SGFPT) was lost due to a blown fuse. The loss of No. 12 SGFPT caused a feed flow/steam flow mismatch causing a turbine run back to approximately 87 percent reactor power before the plant was stabilized. This terminated the 100-hour NSSS acceptance run. On August 11, 1988, the plant entered Mode 3 (hot standby) to perform maintenance on the steam generator main feedwater regulating valves (MFRV). The maintenance included repacking the MFRVs and several other maintenance tasks.

On August 16, 1988, at approximately 10:54 a.m., Unit 1 reactor tripped from 100 percent reactor power approximately 14 hours into the second attempt to complete the 100-hour NSSS acceptance run. The trip occurred during removal of a stator cooling pump from service to perform preventive maintenance. The turbine tripped because of a low stator cooling differential pressure. The reactor trip was caused by the turbine trip. The licensee will report this incident in greater detail pursuant to 10 CFR 50.73. On August 24, 1988, STP, Unit 1, successfully completed the 100-hour NSSS acceptance run and the licensee declared STP, Unit 1, in commercial operation.

STP, Unit 2, is 98 percent complete. Hot Functional Testing was completed on August 29, 1988. The first shipment of fuel assemblies was received on September 8, 1988. Preparations are currently in progress for the Structural Integrity and Integrated Leakage Rate Tests.

## 3. Licensee Action on Previous Inspection Findings (92701 and 92702)

The NRC inspector performed an onsite review of previous inspection findings to determine whether the licensee had taken appropriate corrective actions as stated in applicable licensee event reports (LERs), revised procedures and plant logs. The NRC inspector also determined whether or not responses were adequate and met regulatory requirements, license conditions, and licensee commitments.

(Closed) Violation (498/8771-01 - EA 87-240): Safety Injection (SI) Cold Leg Injection Valves Found Closed When Required to be Open

The plant was operated in Mode 4 from October 31 to November 2, 1987, (a total of 51 hours) without two operable Emergency Core Cooling System (ECCS) flow paths as required by Technical Specification (TS) 3.4.3.1.c. This event was reported to the NRC by the licensee in LER 87-12. All three High Head SI cold leg injection valves were closed during this 51-hour period (TS 3.5.3.1 requires that with less than two operable flow paths a minimum of two flow paths must be restored

within 1 hour or that the plant be in cold shutdown within the next 20 hours). The licensee issued Field Change Requests (FCRs) and revised the following procedures:

- . 1POPO2-RH-0001, "Residual Heat Removal System Operation," Revision 8, dated January 22, 1988
- . OPGPO3-ZA-0063, "Plant Operations Shift Turnover," Revision 6, dated January 22, 1988

The NRC inspector reviewed the revised procedures and turnover log changes. The procedure revisions and turnover log changes, when implemented, should prevent similar occurrences. The licensee completed appropriate remedial training for licensed operators. This violation is closed.

(Closed) Violation (498/8806-01 - EA 87-240): Pressurizer Low Pressure SI Setpoint Set Too Low Due to Procedural Error

The plant entered Mode 3 on November 22, 1987, with all four pressurizer pressure-low trip channels set to trip at 1850 psi instead of at a minimum value of 1861 psi. This event was reported to the NRC by the licensee in LER 87-17. TS Table 3.3-4, Item 1.e required the pressurizer pressure-low setpoints to be set equal to or greater than 1869 psi with an allowable value equal to or greater than 1861 psi. TS Table 3.3-3, Item 1.e, required the pressurizer pressure-low trip function to have a minimum of three safety injection trip channels operable prior to entering Mode 3 of plant operation. The licensee issued FCRs and subsequently changed the trip setpoint values from "1850 psi" to "1869 psi" and changed required TS allowable minimum and maximum values in the following procedures:

- . 1PSP02-RC-J455, "Pressurizer Pressure Set 1 ACOT (P-0455)," Revision 1, dated September 14, 1987
- . 1PSP02-RC-0456, "Pressurizer Pressure Set 2 ACOT (P-0456)," Revision 1, dated September 14, 1987
- . 1PSP02-RC-0457, "Pressurizer Pressure Set 3 ACOT (P-0457)," Revision 1, dated September 15, 1987
- . 1PSP02-RC-0458, "Pressurizer Pressure Set 4 ACOT (P-0458)," Revision 1, dated September 15, 1987
- . 1PSP05-RC-0455, "Pressurizer Pressure Set 1 Calibration (P-0455)," Revision 1, dated September 11, 1987
- . 1PSP05-RC-0456, "Pressurizer Pressure Set 2 Calibration (P-0456)," Revision 1, dated September 19, 1987

- . 1PSP05-RC-0457, "Pressurizer Pressure Set 3 Calibration (P-0457)," Revision 1, dated September 11, 1987
- . 1PSP05-RC-0458, "Pressurizer Pressure Set 4 Calibration (P-0458)," Revision 1, dated September 11, 1987

While reviewing and evaluating the pressurizer pressure-low trip setpoint values, the licensee discovered that the TS setpoint for power range flux high positive rate was not covered by surveillance procedures. The licensee issued FCRs (Nos. 88-1296, 88-1297, 88-1298, and 88-1299) to revise the following procedures (reset high range trip setpoints to TS value of 109 percent) to correct this omission and provide completion of Regulatory Guide 1.68, "Initial Test Programs for Water Cooled Nuclear Power Plants," startup sequence:

- . 1PSP02-NI-0041, "Power Range Neutron Flux Channel I ACOT (N-0041)," Revision 2, dated February 5, 1988
- . 1PSP02-NI-0042, "Power Range Neutron Flux Channel II ACOT (N-0042)," Revision 2, dated February 5, 1988
- . 1PSP02-NI-0043, "Power Range Neutron Flux Channel III ACOT (N-0043)," Revision 2, dated February 5, 1988
- . 1PSP02-NI-0044, "Power Range Neutron Flux Channel IV ACOT (N-0044)," Revision 2, dated February 5, 1988

The NRC inspector reviewed procedure changes, which corrected these errors, and licensee audit reports. These audit reports stated that no additional TS translation errors existed. The licensee changed the program, subsequent to this event, to require verification of implementation of TS changes by the Nuclear Assurance Department. This violation is closed.

(Closed) Violation (498/8804-01): Failure to Provide Adequate Procedure for Operational Control of Plant System

The licensee reviewed Station Procedure 1POP03-ZG-0003, "Secondary Plant Startup," and found it inadequate in that it did not specify temperature or pressure limitations for using the main feedwater system to increase water level in the steam generators (SG). Procedure 1POP03-ZG-0003 was revised (Revision 5) by adding Step 4.8. This step required maintaining the deaerator pressure less than 50 psig to ensure deaerator temperature remained less than SG temperature during plant heatups. Support Engineering set up a task force made up of Bechtel, Westinghouse, and Houston Lighting and Power (HL&P) representatives to review the secondary system plant operating procedures with respect to potential hydraulic transients (water hammer). The comments from this task force were evaluated and incorporated, as applicable, into plant procedures and training requirements. The licensee conducted licensed operator training

in heat transfer and fluid flow related to water hammer. The training related to water hammer is documented in the Course Attendance Station Requal Training Records. This violation is closed.

(Closed) Violation (498/8809-04): Four Cases Where TS Surveillance Requirements Were Not Met

The NRC inspector reviewed procedure changes, applicable LERs and related corrective actions, licensee evaluations and reviews, methodology for changing test frequency, and methods for approving changes to surveillances. The following was noted regarding the four cases cited in the violation:

- a. Periodic surveillance test for Pressure Transmitter CV-PT-204 had not been developed.

A surveillance procedure had not been developed for CV-PT-204 because the instrument had not been addressed in the SRP TS. This event was reported to the NRC in LER 88-10. The LER was based on the instrument loop being inoperable because it could not be calibrated. The condition was not recognized during a review of the Maintenance Work Request (MWR). Corrective action required an evaluation of the program for generation and approval of MWRs. The licensee revised Procedure OPGP03-ZM-0003, "Maintenance Work Request Program," (Revision 16). Step 4.12.3 of the procedure now requires the approval authority review of the work scope to ensure that the associated equipment does not affect the TS and includes checking design documents as applicable.

- b. Missed surveillance test on 11B Essential Chill Water Pump.

This missed surveillance was caused by inadequate control of the surveillance test package. Also, the missed surveillance test did not appear on the Overdue Report. This event was reported to the NRC in LER 88-11. Procedure OPGP03-ZE-0004, "Plant Surveillance Program," Revision 7, created the positions of Divisional Surveillance Coordinators and assigned these coordinators the responsibility for following surveillance test packages assigned to the respective divisions. The methodology for changing the test frequency and the method for approving changes to surveillance dates have been added to Procedure OPGP03-ZA-0055, "Plant Surveillance Scheduling," Revision 3.

- c. Missing stroke time in pump and valve inservice test (IST) plan.

This problem was caused by failure to incorporate revisions to the IST plan into implementing procedures. This event was reported to the NRC in LER 88-12. A temporary procedure, 1TSP03-CV-0001, "Charging Flow Control Valve FCV-0206 Operability Test," Revision 0, corrected the deficiency and allowed the valve to be declared



operable. Revision 3 to this procedure incorporated the stroke time limiting value. Procedure 1PSP03-CV-0011, "Chemical and Volume Control System Valve Operability Test (Cold Shutdown)," Revision 4, included provisions for obtaining the open stroke time for CV-FCV-0205. Procedure OPGP03-ZE-0021, "Inservice Testing Program for Valves," Revision 3, included controls to review the implementing procedure. The licensee's reviews of the IST and other pump and valve inservice surveillance tests did not identify any other discrepancies.

- d. No periodic surveillance testing of feedwater isolation/turbine trip logic channel time delay relays.

This event resulted from a personnel error and was reported to the NRC in LER 88-13. Procedure OPGP03-ZA-0002, "Plant Procedures," was revised (Revision 11) to require a second, independent technical review of procedures written or revised to ensure accuracy and adequacy. Procedure OPGP03-ZE-0005, "Plant Surveillance Procedure Preparation," was revised (Revision 9) to require that available information be reviewed to ensure that the circuit being tested by the procedure is physically the circuit required to be tested by the surveillance requirements.

This violation is closed.

(Closed) Violation (498/8809-05): Failure to Implement TS Action Requirements

The NRC inspector reviewed procedure changes, applicable LER and related corrective actions, licensee evaluations and reviews, review of the operability requirements for containment isolation valves with the Licensed Operators (documented in simulator scenarios and the related course attendance records) between March 28 and April 29, 1988. Also, the latest revision to the Licensed Operator Training Program was reviewed to ensure that TS are taught with emphasis on practical applications.

The licensee failed to recognize and initiate a cooldown to Mode 4 when two main steam isolation valves (MSIVs) were found to be inoperable (TS LCO 3.7.1.5 permits one MSIV to be inoperable in Mode 3). The MSIVs became inoperable when the valve packing glands on the two MSIVs were overtightened. The overtightened packing glands rendered both MSIVs inoperable while the plant was in Mode 3. This event was reported to the NRC in LER 88-15. Procedure OPGP01-ZQ-0030, "Maintenance of Plant Operations Logbooks," Revision 3, when implemented, should prevent recurrences of similar events. This violation is closed.

(Closed) Violation (498/8824-04): A Plant Procedure was not Followed in that Boundaries were not Correctly Controlled

Plant Procedure OPGP03-ZO-0001, "Equipment Clearance," Revision 7, described the requirements for controlling system boundaries and the



logging of components within these boundaries. The lubricating (lube oil) oil system on Nu. 13 emergency diesel generator (EDG) was cleared but personnel did not properly execute the requirements of the procedure. The licensee failed to list the components inside the boundary valves. This resulted in an incomplete valve alignment check of the EDG lube oil system. When the licensee placed this system back in service, approximately 1000 gallons of lubricating oil was pumped from the lube oil sump onto the floor of the diesel generator building.

The NRC inspector reviewed the licensee's directive to operations personnel reinforcing the need to follow procedures and the policy for having an observer in the vicinity when starting or stopping major components. Operations personnel signed and dated a memorandum to acknowledge receipt and understanding of the "Equipment Clearance Procedure." The licensee's corrective actions should prevent similar occurrences. The licensee completed appropriate remedial training for operations personnel. This violation is closed.

(Closed) Open Item (499/8831-02): Training of Construction Personnel in the Use of Hoisting Devices in Unit 2

The NRC inspector reviewed the licensee's lesson plan, "Proper Use of Hoisting Devices." This plan (training supplement) provided information on proper use of certain types of hoisting devices, including electrical, hydraulic, and hand operated equipment used by various crafts. The lesson plan included introduction to types of equipment, lifting requirements, proper storage of lifting equipment, and precautions required during installation and operating equipment. Appropriate licensee craft personnel were trained in the use of hoisting devices in accordance with the lesson plan. This open item is closed.

No violations or deviations were identified in the review of this inspection area.

### 3. Review of Licensee Action on Reported Events (LERS) (92700)

The NRC inspector performed onsite review on the following LERS to determine whether the licensee had taken appropriate corrective actions as stated in the LERS and whether responses to the events were adequate and met regulatory requirements, license conditions, and licensee commitments.

(Closed) LER 87-10: Fuel Handling Building (FHB) Radiation Monitor Causes Engineering Safety Feature (ESF) Actuation

On July 20, 1987, and again on September 26, 1987, with Unit 1 in Mode 5, a FHB Ventilation System auto-actuation to filtration mode occurred due to an apparent failure (a "loss of counting ability") of FHB atmosphere radiation monitor (AIRA-RT-6035).

The cause of this spurious auto-actuation could not be identified. The plant computer (PC) boards were inspected and the electrical contacts

cleaned, the input/output and preamplifier PC boards were replaced and the calibration surveillance procedure was satisfactorily performed. This monitor (RT-8035) has functioned properly since the "loss of counts" that occurred in September 1987. This LER is closed.

(Closed) LER 88-01: Reactor Coolant Pump Start with Secondary Water Temperature Greater than 50 Degrees Fahrenheit Above the Reactor Coolant System (RCS), and Pressurizer PORV Actuation

On January 2, 1988, with Unit 1 in Mode 5 and the RCS solid, RCS Pump 1A was started while filling and venting the RCS. The RCS cold leg temperature was less than 350°F. The secondary water temperature was greater than 50°F above the RCS cold leg temperature. The temperature differences between the RCS cold leg and the secondary system temperature exceeded the limits stated in TS Section 3.4.1.4.1. Starting RCS Pump 1A under these conditions resulted in the RCS pressure exceeding the Cold Overpressure Mitigation System pressure setpoint. The overpressure caused Pressurizer PORV PCV-0656A to open momentarily.

The licensee revised Procedure 1POPO2-RC-0003, "Filling and Venting the Reactor Coolant System," Revision 5, dated January 4, 1988, to include a specific instruction on how to take RCS and secondary side water temperature measurements, and operators were trained on this event. Operator requalification training included temperature stratification and the difference between SG vessel surface temperatures and bulk water temperature. Licensee Engineering evaluated the incident and determined that no RCS structural damage had occurred. The TS limits (Section 2.1.2, "RCS pressure," and Section 2.2.2, "Pressure and Temperature Limits") for RCS pressure as a function of temperature (Appendix G of ASME B&PV Code, Section III) were not exceeded. This LER is closed.

(Closed) LER 88-05: Inadequate Surveillance Performed on a Control Room Intake Air Radioactivity Monitor

On January 10, 1988, with Unit 1 in Mode 5, the licensee failed to maintain a surveillance interval of 12 hours as specified in TS Section 4.3.1 for a control room intake air radioactivity monitor (RT-8034). Operators had recorded the Hi-Alarm setpoint rather than the actual gaseous activity for the channel check for five shifts. The monthly surveillance procedure did not ensure that the monitor display was returned to normal following a routine surveillance on Train "A" of the Control Room Emergency Ventilation System (CREVS).

The licensee's analysis of this event determined that the Control Room Intake Air Radioactivity Monitors were operable. The monitor would have initiated an Engineered Safety Feature (ESF) actuation and placed the CREVS in the recirculation mode, if an actuation signal had been received.

The licensee reviewed and revised operations procedures which affect the Radiation Monitoring Panel displays to assure that upon completion of

tests and surveillances the monitors display the appropriate activity values. Operating log procedures were reviewed and revised to assure that radiation monitor readings are compared to limits and/or against each other. Operators received additional guidance on detailed operation of the radiation monitors. This LER is closed.

(Closed) LER 88-12: Failure to Fully Implement TS Surveillance Requirements Due to Procedural Deficiency

On January 29, 1988, with Unit 1 in Mode 4, prior to initial criticality, a limiting value for stroke time (measurement and recording of the open stroke time) on Valve CV-FCV-0205 was omitted.

The licensee prepared a temporary procedure, 1TSP03-CV-0001, "Charging Flow Control Valve FCV-0205 Operability Test," and performed an operability test of the valve with the stroke timing requirement incorporated. The licensee revised Procedure OPGP03-ZE-0021, "Inservice Testing Program for Valves," Revision 3 (to include stroke timing for Valve CV-FCV-0205), and Procedure OPGP03-CV-0011, "Chemical and Volume Control System Valve Operability Test (Cold Shutdown)," Revision 3 (to include additional review controls), to correct the deficient condition. The licensee performed independent reviews of other pump and valve inservice surveillance tests. The reviews were performed to assure agreement between the implementing procedures and the IST Plan. In addition, the stroke time limiting value for CV-FCV-0205 was incorporated into Revision 3 of the IST Plan. This LER is closed.

(Closed) LER 88-24: During Review of Solid State Protection System (SSPS) Design the Licensee Discovered that SI can be Blocked Under Certain Conditions

On March 16, 1988, with Unit 1 in Mode 3, a design error was discovered. The error could cause a blockage of the SI actuation on Train A, B, or C when the safeguards test cabinet master reset switch was operated and the reactor trip breakers were open.

A design change had been issued to modify the circuitry. The Shift Supervisor (SS) ensured that the testing policy for the SSPS was carried out on Unit 1. The design change had been incorporated and installation of the design change verified. This LER is closed.

(Closed) LER 88-26: Degraded Undervoltage Coincident with SI Surveillance Deficiency Due to a Deficient Procedure

On December 12, 1987, with Unit 1 in Mode 4, prior to initial criticality, the licensee determined that the Trip Actuation Device Operational Test (TADOT) on degraded undervoltage coincident with SI had not been tested (TS Table 4.3-2, Item 8.b) as required. All three ESF busses were declared inoperable.

The cause of the event was determined to be a deficient surveillance procedure resulting from a personnel error in interpreting the requirements of the monthly TADOT. A new procedure, 1PSP06-PK0005, "4.16KV Class 1E Tolerable Degraded Voltage Coincident With SI And Sustained Degraded Voltage Relay Channel Calibration/TADOT-Channel 1," Revision 1, dated July 14, 1988, was prepared and satisfactorily performed on each ESF bus. The licensee established a station policy for relay testing to provide additional definitions and guidance for use by plant personnel in implementation of the TS surveillance requirements and reviews. The licensee conducted independent reviews of other Instrumentation & Control (I&C) and electrical surveillance tests and procedures to assure that other required testing requirements were incorporated in the surveillance procedures. This LER is closed.

(Closed) LER 88-30: Toxic Gas Monitor High Alarm Placed Control Room Envelope on Toxic Gas Recirculation

On May 6, 1988, with Unit 1 in Mode 5, an automatic actuation of the control room ventilation to recirculation mode occurred as a result of a high level trip of the hydrochloric acid (HCl) channel on gas analyzer XE-9325.

The cause of the actuation could not be identified. Available evidence suggested that a "puff" of HCl gas or gaseous hydrocarbon was detected by the analyzer. The licensee verified that the toxic gas analyzers responded to HCl samples. Public address announcements of toxic gas actuations will be made. A memorandum emphasizing the sensitivity of the toxic gas analyzers to gases and fumes and the need to notify the control room of activities that produce gases or fumes in or around the power block was issued. This LER is closed. These announcements will require personnel involved in activities producing any gases or fumes to immediately contact the control room (this requirement should assist plant personnel in determining the sources of gases that cause any future actuations).

No violations or deviations were identified in the review of this inspection area.

4. Operational Safety Verification - Unit 1 (71707)

The purpose of this inspection was to ensure that the facility is being operated in conformance with the requirements established under 10 CFR Part 50 and the TS. This inspection also included verifying that selected activities of the licensee's radiological protection programs were being implemented in conformance with plant policies and procedures, and the licensee's compliance with the approved physical security plan.

The NRC inspector performed inspection in the control room on a daily basis and verified:

- . Proper control room staff was maintained.
- . Operators were adhering to approved procedures for ongoing activities.
- . Operability of reactor protective systems and engineered safety components was as required.
- . Control room was free from distractions such as nonwork-related reading materials.

The NRC inspector toured various areas of the plant to observe work in progress. Posting of Radiation Work Permits (RWPs), the proper use of personnel dosimetry, and the correct methods for frisking when exiting the radiation protected area (RPA) were observed.

The NRC inspector verified that the licensee's security plan was being implemented in accordance with its security program. The NRC inspector observed that packages and personnel were properly checked prior to entry into the protected area (PA), illumination in the PA was adequate to observe all areas during hours of darkness, and personnel inside the PA had proper identification badges.

No violations or deviations were identified.

5. Engineered Safety Feature (ESF) System Walkdown - Unit 1 (71710)

The NRC inspector conducted a walkdown of the accessible portions of Train "A" of the safety injection (SI) system to independently verify the operability of the system. A review was performed to confirm that the licensee's system operating procedure matched plant drawings and the as-built configuration. Equipment condition, valve and breaker positions, housekeeping, labeling, permanent instrument indication and calibration, and operability of support systems essential to actuation of the ESF system were observed.

The NRC inspector identified the following items to licensee management:

- . The label on Breaker E1A2-P2 indicated as follows, "LHSI Pump 1A Recirc. to RWST MOV-0014A." The SI electrical lineup indicated this breaker supplied power to LHSI Pump 1A miniflow valve.
- . The label on Breaker E1A2-P1 indicated as follows, "LHSI Pump 1A Recirc. to RWST MOV-0013A." The SI electrical lineup indicated this breaker supplied power to LHSI Pump 1A miniflow Valve MOV-0013A.
- . The label on Breaker E1A2-Q3 indicated as follows, "HHSI Pump 1A Recirc. to RWST MOV-0012A." The SI electrical lineup indicated this breaker supplied power to HHSI Pump 1A miniflow Valve MOV-0012A.



- . The label on Breaker E1A2-Q2 indicated as follows, "HHSI Pump 1A Recirc. to RWST MOV-0013A." The SI electrical lineup indicated this breaker supplied power to HHSI Pump 1A miniflow Valve MOV-0013A.
- . The label on Breaker E1A2-N2 indicated as follows, "Containment Sump Isolation Valve MOV-0016A." The SI electrical lineup indicated this breaker supplied power to Emergency Sump Suction.
- . Valve S10071A showed indication of minor leakage as evidenced by the crystallization of boron around the valve body.

During previous inspections, the NRC inspector has identified these types of discrepancies to the licensee. In response to the concerns expressed by the NRC inspector, the licensee stated that a plan to walkdown all safety-related systems had been implemented. The licensee also stated that the criteria to be used when evaluating the systems are:

- . Compare component/valve labeling with piping and instrument diagrams (P&IDs).
- . Compare breaker labeling with electrical wiring diagrams.
- . Compare "Noun Namer" on labeling and related procedures.
- . Install labeling in the field.
- . Make required procedural changes.

The licensee estimated that the above items would be completed by November 30, 1988.

No violations or deviations were identified.

6. Monthly Maintenance Observation - Unit 1 (62703)

The station maintenance activities listed below were observed and documentation was reviewed to ascertain if the activities were conducted in accordance with approved procedures.

On August 12, 1988, Maintenance Work Requests (MWRs) FW-65273, FW-46608, and FW-46609 were initiated to perform maintenance on the four Main Feedwater Regulating Valves (MFRVs). The valves were leaking excessively during power operation. The NRC inspector observed the repacking of the MFRVs and verified that the work was being performed in accordance with Procedure, OPMP04-ZG-0003, "General Valve Repacking," Revision 6. The NRC inspector concluded that the work packages provided adequate instructions to maintenance personnel for the circumstances.

No violations or deviations were identified.

7. Surveillance Observations - Unit 1 (61726)

The NRC inspector observed selected portions of the surveillances listed below to verify that the activities were being performed in accordance with the TS and surveillance procedures. The applicable procedures were



reviewed for adequacy. Test instrumentation was verified to be in calibration, and test data was reviewed for accuracy and completeness. The inspector verified that deficiencies identified were properly resolved.

- . Procedure 1PSP02-EA-0002, "ESF Power Availability," Revision 3.
- . Procedure 1PSP03-SI-0013, "Accumulator Isolation Valve Verification," Revision 1.

The NRC inspector verified the following items during the inspection:

- . Test results were reviewed by personnel other than the persons directing the test.
- . The surveillance testing was completed at the required frequency per TS requirements.
- . Testing was performed by qualified personnel using approved procedures.

No violations or deviations were identified.

8. Loose Parts Monitoring System Test Unit 2 (70450)

The NRC inspector reviewed Acceptance Test Procedure 2-IB-A-01, "Loose Parts Monitoring System," Revision 0, dated June 16, 1988. The purpose of this test was to verify that the Vibration and Loose Parts Monitor (V&LPM) would provide the information and initiate the alarms required to alert operations personnel of unusual occurrences within the scope of the measuring devices in the V&LPM system. The test was conducted as required by the test procedure; Regulatory Guide 1.68, "Initial Test Programs for Water Cooled Nuclear Power Plants"; Regulatory Guide 1.133, 1981, Revision 1, "Loose Parts Detection Program for the Primary System of Light-Water-Cooled Reactors"; and Final Safety Analysis Report (FSAR), Section 4.4.6.4 - Amendment 01.

The NRC inspectors observed portions of this V&LPM test and determined that the test was performed in accordance with the approved procedure, Regulatory Guides 1.133 and 1.68, applicable portions of the FSAR, and proposed TS. The V&LPM system was adequately tested to ensure that NRC requirements and licensee commitments were satisfied. The test equipment was properly installed and calibrated. Approved procedures were available to the personnel conducting the test. The test data was collected and recorded in accordance with this procedure. The licensee personnel were qualified to conduct this test, record the test data, and evaluate the test results.

The V&LPM system responded to test signals, operated in accordance with established parameters, remained within calibration requirements, and demonstrated the ability to monitor the various plant components.

The test results were reviewed and approved by qualified licensee personnel. The NRC inspector's review of the approved test results agreed with the licensee's evaluation of this test.

No violations or deviations were identified in the review of this inspection area.

9. Remote Reactor Shutdown Test Unit 2 (70452)

The NRC inspectors reviewed preoperational Test Procedure 2-RC-P-10, "Remote Shutdown," Revision 1, dated February 5, 1988. The purpose of this test was to demonstrate the ability to perform a cold shutdown from outside the control room. The test was conducted in accordance with this test procedure; Regulatory Guide 1.68, "Initial Test Programs for Water Cooled Nuclear Power Plants"; FSAR, Section 14.2.12.2 (98), "RCS Hot Functional Preoperational Test Summary," Test Objective 21 and Method 19 (a through e); and FSAR, Section 7.4.1.9, "Safe Shutdown from Outside the Control Room."

The NRC inspectors observed portions of this remote reactor shutdown test and determined that the test was performed in accordance with the approved procedure, Regulatory Guide 1.68, applicable portions of the FSAR, and proposed TS. The following activities were performed by the NRC inspectors:

- . Attended the pretest briefing held in the control room.
- . Verified that communications were established between the auxiliary shutdown panel, control room, and remote locations in the plant where manual equipment manipulations occurred.
- . Observed the transfer of equipment and plant control from the control room to the auxiliary shutdown panel.
- . Observed and verified plant cooldown to 350°F and 350 psig.
- . Verified the operation of the pressurizer power operated relief valves from the auxiliary shutdown panel by observation of pressure drop from the brief opening and closing of the valve.
- . Observed transfer to the residual heat removal (RHR) system for additional cooldown at a rate that did not exceed TS requirements.

The test equipment was properly installed and calibrated. The procedures were available to personnel conducting the test. The test data was collected and recorded in accordance with this procedure. Licensee

personnel were qualified to conduct and record data related to this test. With the exception of the manual charging bypass valve described below, the test procedure was successfully implemented.

Upon transfer from the automatic charging bypass valve to the manual charging bypass valve, the manual valve failed "shut" after a short period of time. Charging control was returned to the automatic bypass valve and was controlled from the auxiliary shutdown panel. A nonconformance report was issued for the damaged valve and a test change notice (TCN) was issued because manual charging flow control could not be maintained throughout the cooldown as required by the test procedure.

The remote reactor shutdown system responded to test signals, operated in accordance with established parameters, and remained within calibration requirements. The input signals demonstrated the ability of the remote reactor shutdown system to adequately shut down and maintain the reactor in cold shutdown condition. The electrical independence and redundancy performance functions, operations conducted at the remote shutdown instrument and control panel, including communications and status and equipment indications, and operation of override control functions were adequately tested and verified to operate in accordance with design requirements.

The NRC inspector's review of the test procedure and observations during this test verified that errors previously reported (NRC Inspection Report 50-498/88-01, paragraph 7.3.2, "Conclusions Concerning the Safe Shutdown Drill") in the procedure and training of operators had been corrected.

The NRC inspectors will review the approved test results when the licensee has completed the evaluation of these test results.

No violations or deviations were identified in the review of this inspection area.

10. Auxiliary Feedwater (AFW) System Test Unit 2 (70438)

The NRC inspector reviewed Preoperational Test Procedure 2-AF-P-03, "AFW Water Hammer Test," Revision 0, dated February 2, 1988. The purpose of this test was to provide assurance that flow instabilities, such as water hammer, will not occur in AFW system components or piping. The test objective was met under simulated AFW actuation conditions with the SG at the 2/4 low-low steam generator level, all four reactor coolant pumps running, and the steam dump system in the pressure control mode.

The NRC inspector observed portions of the valve lineup conducted during preparation for the test prerequisites. The NRC inspector also witnessed the implementation of the water hammer test. The NRC inspector determined that the test was performed in accordance with the approved procedure, the test procedure was available to the personnel conducting the test, the

test equipment was properly installed, and the test data was collected and recorded in an approved manner. The test procedure was implemented correctly and the test results were satisfactory.

No violations or deviations were identified.

11. Control Rod System Test Unit 2 (70432)

The NRC inspector reviewed Preoperational Test Procedure 2-RS-7-02, "Control Rod Drive Mechanism Operation," Revision 0, dated March 28, 1988. The purpose of this test was to verify and record the current profiles provided by the slave cyclers for each control rod drive mechanism (CRDM) when operated in both the insert and withdraw modes at the maximum operating speed. This test showed that each slave cycler provided its associated power cabinet with the appropriate command signals to obtain the proper CRDM timing and signatures during control rod insertion and withdraw operations at maximum speed.

The NRC inspector verified that the testing was conducted in accordance with the approved procedure. During the test, the NRC inspector verified the cabinet test points for the visicorder recording of Rod "B-8" and the control bank position and the cabinet group select position at Power Cabinet 1AC. This power cabinet supports three groups of rods with each group containing four rods. The NRC inspector also witnessed the taking of lift, measurable gripper, and stationary gripper current tracings and verified the adequacy of the recorded times for each sequence. The test was implemented correctly and the test results were satisfactory.

No violations or deviations were identified.

12. Fuel Handling Building Unit 2 (50073)

A final construction inspection of the FHB was performed to assess its adequacy for handling new fuel and to verify completeness of construction. The inspection consisted of a complete walkdown of every room and system. The following items were noted by the NRC inspector:

- Bay "A" at elevation -29 feet along the east wall does not fully drain because the wall penetration is not at floor level.
- High Head and Low Head SI and Containment Spray suction piping in "B" and "C" train were leaking at the flanges. Flange FO-1423 in Room 205 was also leaking.
- Hand wheel was missing on a 2-inch valve, No. SI-0164.
- Valves SI-0101C and DW-0607 had minor seat leaks.

- . In the primary sample room, Cabinet 9Z5442LP666 had a broken plastic line (Connection 2Y to Hcl). Also, in Cabinet 9Z5427LP738, the liquid gross Actuator Meter R15H2519 and Integrator AIT2463 were not installed.
- . Excessive vibration was noted on Safety Valves PSV4612 (Line CC-1441-WA3) and PSV4610 (Line CC-1440-WA3).
- . Filter casing leaks (liquid waste) and coupling guard was not installed on Pump 7R302NPA-215A in Room WL-001.
- . Heating, ventilating and air conditioning (HVAC) drip pans in Room 002 were stopped up and water was running over into the housing.

Various miscellaneous items such as left over construction items, missing cover bolts, excessive lubricant and on going housekeeping items were noted and corrective action was taken during the inspection. It appeared that the FHB was complete and ready for receipt of new fuel.

No violations or deviations were noted.

13. Quality Assurance (QA) Program (Test and Experiments) Unit 2 (35749)

The licensee's program for review and evaluation of changes, tests, and experiments in accordance with 10 CFR 50.59 is described in Procedure IP-03.20Q, "Interdepartmental Procedures," Revision 1, dated November 20, 1987. This procedure addressed applicability of 10 CFR 50.59 to control, process, and implement procedures and facility modifications, tests, and experiments. The procedure applied to the following:

- ° Safety-related and nonsafety-related modifications
- ° Permanent, temporary, and emergency facility changes
- ° Permanent, temporary, and emergency changes to operations-related and engineering-related procedures
- ° Technical Specifications changes
- ° Software changes (i. e., safety-related)

The procedure defined appropriate terms, including changes, tests, experiments, and unreviewed safety questions. The procedure defined the responsibilities for reviewing proposed changes, tests, and experiments; performing required 10 CFR 50.59 evaluations; and developing implementing procedures. This procedure described the appropriate actions for the originating group; Plant Engineering Manager; Plant Operating Review Committee (PORC) as required by Procedure OPGP03-ZA-0004, "Plant Operations Review Committee," Revision 7; Plant Manager; Nuclear Assurance; and Nuclear Licensing. The procedure included the requirements for retention of records of facility changes, safety evaluations, tests,

experiments, and procedures. Attachments to the procedure included a flow chart to aid in the processing of 10 CFR 50.59 evaluations, guidelines for complying with 10 CFR 50.59, and a copy of the form to be used as a record of the evaluation.

Procedure OPGP03-ZA-0003, "License Compliance Review," Revision 8, dated March 18, 1988, established administrative controls for performing License Compliance Reviews on plant procedures, instructions, modifications, special tests, and experiments, including changes and other items addressed by STP plant policies, programs and procedures.

The procedure required reviews of proposed changes, tests, and experiments to the facility or procedures to determine whether or not a 10 CFR 50.59 evaluation is required. The proposed change, test, or experiment must be evaluated to determine whether or not a change to the FSAR, TS, or an unreviewed safety question could be involved. A record of the review is required to be maintained. The evaluations must be conducted by personnel with appropriate technical expertise and approved by the department manager. The procedure required that Nuclear Licensing submit an annual report to the NRC with a description of changes, tests, and experiments, including a summary of the 10 CFR 50.59 evaluations.

The licensee's QA program related to the control of changes, tests, and experiments was in conformance with Regulatory Requirements (Section 6 of the proposed TS and 10 CFR 50, Appendix B, Criteria I and XI), licensee commitments in FSAR Sections 13.5 and 17.1, and appropriate industry guides and standards (ANSI N45.2.8-1975 and ANSI N18.7-1976).

No violations or deviations were identified in the review of this inspection area.

#### 14. Design Changes and Modifications Unit 2 (35744)

The NRC inspector determined that the licensee had developed and implemented a QA program related to the control of design changes and modifications. The licensee's Quality Assurance Plan (QAP) was in conformance with Regulatory Requirements (Section 6 of the proposed TS and 10 CFR 50.59); licensee commitments (FSAR Section 17.2.3, "Design Control"); ASME B&PV Code, Section XI, Articles IWP 3000 and IWV 3000; and industry guides and standards (ANSI N45.2.11-1974 and ANSI N18.7-1976).

The NRC inspector reviewed STP's design changes and modifications program as described below:

- . FSAR, Section 17.2.3, "Design Control"
- . Operations Quality Assurance Plan (OQAP) Section 5.0, "Maintenance, Installation of Modifications and Related Activities," Revision 1, dated December 2, 1986, and Section 6.0, "Design and Modification Control," Revision 2, dated January 30, 1987



- . OEEEE03-IP-03.010, "Plant Modifications," Revision 3, dated May 12, 1988
- . The following Operations Engineering Procedures (OEP):
  - OEP-1.01Q, "Engineering Organization and Responsibilities," Revision 3, dated March 28, 1988
  - OEP-1.02Q, "Engineering Approval Authority," Revision 3-CN-1, dated March 28, 1988
  - OEP-2.02Q, "Design Verification," Revision 3, dated February 15, 1987
  - OEP-3.04Q, "Preparation of Modification Evaluation Package," Revision 3, dated May 23, 1988
  - OEP-3.05Q, "Preparation of Modification Design Package," Revision 3, dated May 23, 1988
  - OEP-3.10Q, "Modification Closeout," Revision 3, dated May 23, 1988
  - OEP-3.13Q, "Design Control Program," Revision 3, dated May 16, 1988
  - OEP-6.02Q, "Maintenance and Control of Drawings," Revision 3-CN-1, dated May 16, 1988
  - OEP-6.03Q, "Design Document Change Control," Revision 2-CN-2, dated June 7, 1988
- . Design Criteria Manual, STP, Bechtel Energy Corporation, Volumes I, II, III, and IV
- . Procedure OPGP03-ZO-0003, "Temporary Modifications and Alterations," Revision 9, dated June 15, 1988

The NRC inspector reviewed the status of implementation of the plant design change and modification program. Modifications have not been performed by Nuclear Plant Operations Department (NPOD) or HL&P Engineering. Modifications required during construction have been processed under engineering guidelines.

Modification requests are initiated by completion of a Modification Traveler (MT). The MT is used to process and track the modification. Check lists are maintained from the modification's conception through installation and testing phases to assure that issues were addressed, evaluated, and completed. A modification is processed as follows:

- . Modification Evaluation Package - the package identifies and describes the modification
- . Modification Design Package - the package includes the detailed engineering design, and license compliance reviews, and 10 CFR 50.59 evaluation, if applicable.
- . Modification Installation Package - the package contains the installation and prerequisite testing information
- . Modification Completion Package - the package contains the acceptance test and operability checks

This review of the licensee's procedures determined that the administrative controls and requirements were adequate to control the plant design and modification program. The licensee's program included procedure review and approval, verification that TS (proposed) requirements were maintained, and that 10 CFR 50.59 evaluations are performed. The technical reviews were adequately controlled, approved procedures were used, and the status of designs and modifications was tracked from the conceptual stage through the testing and operational phases.

No violations or deviations were identified in the review of this inspection area.

15. Preoperational Test Witnessing Unit 2 (70312)

For each of the preoperational tests witnessed, the NRC inspectors witnessed and reviewed the following:

- . The NRC inspectors determined that the proper procedure and most recent revision of that procedure was on file. The inspectors verified that the procedure used by the test group (crew) was the appropriate revision of the specified procedure and that the test groups (crews) were familiar with the procedural requirements, including the precautions, limitations, and other applicable requirements (i.e. hold points, equipment and/or instrumentation, data taking, expected parameters, etc.).
- . The NRC inspectors assured that test procedure requirements were met by the licensee's test personnel, including minimum test group (crew) and personnel qualifications of each member of the test group (crew).
- . The NRC inspectors verified that procedural prerequisites and initial conditions were met. The NRC inspectors reviewed records, including valve lineups, instrumentation calibrations, and line item signoffs by designated test personnel. The NRC inspectors observed and/or monitored instrumentation, equipment operation, and personnel actions while tests were being performed.

- . The NRC inspectors observed that the appropriate plants systems were in operation or available for service prior to start of tests, during conduction of tests, and subsequent to completion of tests.
- . The NRC inspectors verified that equipment/instrumentation was properly calibrated and was within the specified calibration time periods.
- . The NRC inspectors verified that the tests were performed in accordance with the appropriate approved procedures and that criteria for interruption, repeat, and continuation of testing were specified in the procedures.
- . The NRC inspectors verified that testing data was recorded, that test discrepancies, unusual events or conditions, unanticipated problems or conditions, and significant events were documented.
- . The NRC inspectors observed test group (crew) members performing procedural steps, recording data, starting and operating equipment, and that communications between tests members and remote locations were adequate. The inspectors determined on a random basis that procedural limitations, precautions, and test steps were adhered to during conduct of the various tests.
- . The NRC inspectors verified that acceptance criteria were stated in each test procedure and that the various test group (crew) members were familiar with the acceptance criteria. The NRC inspectors verified that the data was recorded as required by the procedure and that the person in charge of each test assured that the data was recorded, assembled, and transferred to the appropriate group for review and evaluation.
- . The NRC inspectors determined that temporary modifications (i.e. jumpers, special equipment, or instrumentation) were installed, tracked, and identified by administrative procedures.
- . The NRC inspectors independently reviewed and evaluated the test results and data. The NRC inspectors were cognizant of test activities, test results, and plant parameters that could affect specific tests or test conditions.
- . The NRC inspectors determined that the test group (crew) members met training requirements specified by the licensee. This training included specific training to assure appropriate knowledge level of the procedure and test requirements. Qualification/training records for personnel involved in preoperational testing were available for examination by the NRC inspectors.

Portions of the following preoperational tests were observed, reviewed and/or evaluated by the NRC inspectors:

<u>Licensee Procedure</u>	<u>Procedure Title</u>	<u>NRC Inspection Report</u>
2-SH-MS-01	Specific Prerequisite Test Procedure for SG Secondary Hydro Test	498;499/88-10
2-RC-P-01	RCS Cold Hydro Test	498;499/88-16
SG-E-01	Breaker Testing	498;499/88-28
2-SI-P-02	SI Accumulators	498;499/88-28
2-SI-P-01	SI System Train A	498;499/88-28
2-DG-P-02	Testing of Standby Diesel Generator #2, Train B	498;499/88-35
2-DG-P-02	Emergency-Standby Power Supply System Test	498;499/88-35
2-CH-P-01	Essential Chilled Water System	498;499/88-41
2-DG-P-03	DG No. 23	498;499/88-41
2-CV-P-01	CVCS Charging, Let-down & Seal Injection	498;499/88-41
2-SI-P-02	SI Accumulators	498;499/88-50
2-SF-P-03	Safeguard Test Cabinet Train A	498;499/88-50
2-SF-P-04	Safeguard Test Cabinet Train B	498;499/88-50
2-SI-P-04	SI System Train B	498;499/88-50
2-SF-P-05	Safeguard Test Cabinet Train C	498;499/88-50
2-SP-P-01	Solid State Protection System (SSPS)	498;499/88-50
2-SP-P-02	Reactor Protection Master Relay Test	498;499/88-50
2-HM-P-01	MAB HVAC System	498;499/88-50

2-HE-P-02	Electrical Space HVAC System	498;499/88-50
2-CH-A-03	MAB Chilled Water System	498;499/88-50
2-IB-A-01	Loose Parts Monitoring System Test	498;499/88-55
2-RC-P-10	Remote Reactor Shut-down Test	498;499/88-55
2-RS-P-01	Rod Control System	498;499/88-56
2-HM-P-01	Mechanical Auxiliary Building HVAC System	498;499/88-56
2-HE-P-02	Electrical Penetration Space HVAC System	498;499/88-56
2-CH-A-03	Mechanical Auxiliary Building Chilled Water System	498;499/88-56
2-RS-A-01	CRDM Power Supply (Motor Driven Generator Sets)	498;499/88-56

No violations or deviations were identified in the review of this inspection area.

16. Allegation (Technically Closed) 88-A-0035 (92701)

An allegation was made that an individual in the Physical/Dimensional Laboratory (Met Lab) may have signed off on calibrations of torque wrenches which he did not perform or was not qualified to perform also, the alleged was concerned about possible falsification of documents.

An investigation of the allegation by the licensee's SAFETEAM determined the following:

- a. The allegation was directed to nonsafety-related concerns.
- b. The alleged, a pipefitter, brought Torque Wrench No. ST-CC-6499 and Adapter No. CNR-0076 to the met lab. The pipefitter indicated that the documented foot-pound values for the dial readings and actual torque applied, did not appear normal/correct when compared to other similar measuring and test equipment (MTE) he had previously used. The lab leader concurred that the documentation did not indicate the normal expected accuracy span for this type instrument.

- c. The lab leader requested that a technician not previously involved in these calibrations (Tech B) recalibrate the wrench and adapter. The recalibration confirmed existing data that indicated the normal expected accuracy span. The recalibration data was completely different from the documented data developed by the technician who originally performed the calibration (Tech A).
- d. The torque wrench and adapter had been documented as calibrated by Tech A less than 24 hours prior to this recheck. The torque wrench and adapter had been issued to the field, but had not been used.
- e. The pipefitter returned a total of six suspect wrenches and adapters. Four of the six were recalibrated by a met lab tech (not Tech A) on April 29, 1988. During the recalibrations, it was noted that:
  - . the documentation for four items displayed an improper accuracy span,
  - . recalibrations showed significantly different data than original documentation, and
  - . the suspect MTE had all been calibrated and documented less than 24 hours earlier by Tech A. The results of re-calibration on the other two items were inconclusive because of differences in calibration of MTE.
- f. Met Lab management requested that Tech A demonstrate that he knew the proper procedure and could use proper technique to calibrate torque wrenches and adapters. During this demonstration, Tech A demonstrated that he knew the appropriate procedure and that he could calibrate torque wrenches and adapters properly. The calibration data obtained by Tech A agreed with calibration data generated by Tech B, who had previously recalibrated this MTE.
- g. Tech A could not reproduce his original documented data on these items.
- h. Met Lab management concluded Tech A had knowingly calibrated MTE incorrectly.
- i. To determine if wrong/incorrect calibrations had been performed previously by Tech A, 5 percent of Tech A's calibration data for the last 6 months was reviewed. Met Lab records indicated that Tech A had performed 894 calibrations during this period. Met Lab management randomly selected 45 items from Tech A's previous calibrations for recalibration verification by other lab techs. The recheck on Tech A's previous calibrations indicated that Tech A's prior calibration activities were acceptable. Met Lab management concluded that there was no data to indicate that Tech A's prior work was wrong/incorrect.



- j. Training and qualification records indicated that Tech A met or exceeded the minimum experience required by ANSI N18.1, 4.5.2. He was certified to ANSI N45.2.6 as a Level II and was qualified to perform calibrations identified on the Level II meteorology task qualification training matrix.
- k. Records indicate that while employed at HL&P, Tech A performed 1,149 torque wrench calibrations of which 286 included an adapter.
- l. The investigation substantiated the concern that Tech A had knowingly calibrated the MTE incorrectly. The investigation could not determine whether or not Tech A had falsified calibration documentation, although evidence was revealed that indicated Tech A had falsified completing required reading assignments.
- m. Tech A resigned on May 3, 1988.

A review of the SAFETEAM investigation substantiated the allegation insofar as torque wrenches and adapters associated with nonsafety-related matters had been improperly calibrated by a particular technician.

No violations or deviations were identified.

This allegation is technically closed.

#### 17. Exit Interview

The NRC inspectors met with the licensee personnel (denoted in paragraph 1) on September 2, 1988. The NRC inspectors summarized the scope and findings of the inspection. The licensee did not identify as proprietary any of the information provided to, or reviewed by, the NRC inspectors.