### APPENDIX

## U.S. NUCLEAR REGULATORY COMMISSION REGION IV

NRC Inspection Report: 50-498/86-16 50-499/86-16 Construction Permits: CPPR-128 CPPR-129

- Dockets: 50-498 50-499
- Licensee: Houston Lighting & Power Company (HL&P) P. 0. Box 1700 Houston, Texas 77001
- Facility Name: South Texas Project Electric Generating Station Units 1 and 2 (STP)
- Inspection At: Energy Development Center (EDC), Houston, Texas South Texas Project, Matagorda County, Texas

Inspection Conducted: August 11-15, 1986

Inspector:

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Russell Wise, Radiation Specialist, Facilities Radiological Protection Section

Approved:

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Blaine Murray, Chief, Facilities Radiological Protection Section

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## Inspection Summary

Inspection Conducted August 11-15, 1986 (Report 50-498/86-16; 50-499/86-16)

<u>Areas Inspected</u>: Routine, announced preoperational inspection of the licensee's radiological environmental monitoring program (REMP) including: (1) organization and management controls; (2) training and qualifications; (3) audits; (4) radiological environmental monitoring program;

(5) meteorological monitoring program;(6) facilities, equipment, and supplies;(7) environmental monitoring procedures;(8) quality control of radiological analytical measurements; and(9) quality assurance (QA) program.

<u>Results</u>: Within the areas inspected, no violations or deviations were identified. One new open item is discussed in paragraph 3.

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## DETAILS

#### 1. Persons Contacted

### HL&P

- \*W. H. Kinsey, Plant Manager
- \*J. W. Loesch, Plant Superintendent
- \*G. L. Jarvela, Health & Safety Services Manager (HSSM)
- \*J. D. Sherwood, Radiological Laboratory Supervisor (RLS)
- R. E. Lockwood, Senior Health Physicist
- G. E. Williams, Special Projects, Health Physicist
- A. R. Passafuma, Radiation Protection Technician
- E. M. Hardcastle, Radiation Protection Technician
- C. E. Shipley, Radiation Protection Technician
- D. J. Cody, Manager, Nuclear Training Department
- D. A. Dayton, Instructor, Nuclear Training Department
- M. A. Ludwig, Maintenance Manager
- \*M. H. Carnley, Maintenance, Instrumentation and Controls (I&C) Supervisor
- \*S. M. Head, Project Compliance, Lead Licensing Engineer
- \*J. S. Pfabe, Project Compliance, Licensing Engineer
- \*W. G. Isereau, Quality Assurance, Audits/Surveillance Supervisor
- \*T. E. Underwood, Chemistry Manager

### Others

\*D. R. Carpenter, NRC Senior Resident Inspector

\*Denotes those present during the exit briefing on August 15, 1986.

### 2. Licensee Action on Previous Inspection Findings

(Open) Open Item (498/8409-01; 499/8409-01): <u>Meterological Monitoring</u> <u>Program (MMP)</u> - This item involved the need for the licensee to establish MMP calibration and maintenance procedures, implement a QA/QC program for MMP, establish a qualification program for I&C technicians, determine the reliability for the meteorological monitoring system, and provide for meteorological data readout in the plant control rooms. The licensee had not completed all actions necessary to resolve the NRC inspector concerns. This item remains open. (See paragraph 7).

3. Open Items Identified During This Inspection

Open items are matters that require further review and evaluation by the NRC inspector or the licensee. Open items are used to document, track, and ensure adequate followup on matters of concern to the NRC inspector.

Open Item Description Refe

498/8616-01; 499/8616-01 QA Audits

Reference Paragraph

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### 4. Organization and Management Controls

The NRC inspector reviewed the licensee's administrative and functional organizations and management controls regarding the preoperational environmental monitoring program to determine agreement with commitments made in Section 13.1 of the Final Safety Analysis Report (FSAR), as depicted in Figure 13.1-2G of the FSAR, and STP procedures.

## a. Organization

The NRC inspector verified that the organizational structure within the Health and Safety Services Division at STP and the Radiological Services Laboratory (RSL) agreed with commitments in the FSAR.

## b. Management Controls

The NRC inspector reviewed radiation protection procedures and RSL position descriptions for the assignment of responsibilities for the management and implementation of the REMP. The current management controls as described in STP procedures pertaining to the REMP had been implemented.

No violations or deviations were identified.

#### 5. Training and Qualifications

The NRC inspector reviewed the training and qualifications of the RSL staff located at the EDC and the radiation protection staff located at STP to determine agreement with Section 13.2 of the FSAR.

The RSL staff is responsible for collection, documentation, and analysis of all radiological environmental samples with the exception of the environmental air samples which are exchanged by the radiation protection staff at STP. The radiation protection technicians at the RSL have completed all phases of the radiation protection training course required for HL&P radiation protection qualification.

The NRC inspector reviewed selected personnel training records for RSL staff and radiation protection staff including supervisory personnel and verified that the required training had been completed and that training results had been documented in official training records.

No violations or deviations were identified.

## 6. Audits

The NRC inspector reviewed the licensee's QA audit program to determine agreement with commitments made in Section 17 of the FSAR, and the recommendations of ANSI N45.2.23-1978 and Regulatory Guide (RG) 1.146-August 1980.

The NRC inspector noted that an audit of the REMP had not been performed by the operations QA department. However, an audit of the REMP is scheduled for the fourth quarter 1986. This item is considered an <u>open</u> item (498/8616-01; 499/8616-01) pending performance of a scheduled audit of the REMP during the fourth quarter of calendar year 1986.

No violations or deviations were identified.

### 7. Radiological Environmental Monitoring Program

The NRC inspector reviewed the licensee's REMP to determine agreement with the requirements in Section 6 of the Environmental Report and the recommendations in the Branch Technical Position, Revision 1 (November 1979), and NUREG 0472.

The NRC inspector reviewed the annual preoperational radiological environmental monitoring report for 1985 and determined that the proposed REMP had been implemented.

The NRC inspector inspected selected environmental media sampling stations associated with the REMP. The following types of sampling stations were inspected: airborne, soil, direct radiation, vegetation, and surface water. The NRC inspector verified that the required equipment at the selected sampling stations was in place, calibrated, and operational.

The NRC inspector discussed with RSL personnel provisions established to implement necessary changes to the REMP during emergency conditions. During an emergency, samples would first be analyzed at the training center laboratory. If this area is not available, samples would be transported to the RSL at the EDC for analysis, if possible, or another laboratory's assistance would be solicited.

The Offsite Dose Calculation Manual (ODCM) was submitted in 1985 with the proposed Technical Specifications to the NRC Office of Nuclear Reactor Regulation (NRR), but approval from NRR had not been received at the time of this inspection.

No violations or deviations were identified.

### 8. Meteorological Monitoring Program (MMP)

The NRC inspector reviewed the licensee's meteorological monitoring program to determine agreement with commitments made in Section 2.3 of the FSAR and the recommendations of RG 1.23, and ANSI/ANS 2.5-1984.

The licensee had established calibration and maintenance procedures for the meteorological monitoring system and qualification procedures for the I&C technicians and a QA/QC program for the MMP as recommended in RG 1.23 and ANSI/ANS 2.5-1984.

The NRC inspector reviewed the meteorological towers, data recording equipment, calibration procedures, maintenance procedures, qualification procedures and calibration records. It was noted that the meteorological monitoring system was being calibrated quarterly according to procedure.

The NRC inspector discussed with the licensee the recommendation in RG 1.23 and ANSI/ANS 2.5-1984 concerning a reliability test to verify that the meteorological tower instrumentation data recovery is at least 90 percent, and that the meteorological data readout is operational in the control room prior to plant operation. The NRC inspector noted that the licensee's program did not meet the recommendations of RG 1.23 and ANSI/ANS 2.5-1984. Therefore, <u>Open Item 498/8409-01; 499/8409-01</u> will remain open pending licensee action to:

- Determine that the reliability of the meteorological system is greater than 90 percent prior to plant operation
- Provide for meteorological data readout in the plant control rooms prior to plant operation

No violations or deviations were identified.

### 9. Facilities, Equipment, and Supplies

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The NRC inspector inspected the RSL located at the EDC including the environmental sample receipt and preparation area, radiochemistry counting room, and environmental sample storage area. The laboratory areas were equipped with the necessary chemicals, labware, sample processing and analytical instrumentation to perform the required analytical procedures. The laboratory facilities and equipment appeared to be adequate to perform the required REMP laboratory requirements to support the STP operation.

No violations or deviations were identified.

## 10. Environmental Monitoring Procedures

The NRC inspector reviewed the licensee's procedures for environmental media sample collection, sample preparation, and sample analyses.

The STP plant procedures for administration of the REMP and collection of the environmental samples were reviewed. These procedures appeared to be written in sufficient detail to ensure collection and processing of required REMP samples. The NRC inspector noted that the RSL staff reviews procedures associated with the REMP and part of the review process included recommendations for procedure changes.

No violations or deviations were identified.

# 11. Quality Control of Radiological Analytical Measurements

The NRC inspector reviewed the RSL program for calibration and quality control of radiological analytical measurements to determine agreement with the recommendations in RG 4.15.

The NRC inspector reviewed the RSL quality control procedures, counting instrument's calibration data and performance check data, and other documentation of instrument performance. The quality control procedures appeared to be adequate and the records associated with quality control of the counting instruments were reviewed and found to be documented in accordance with procedures. The NRC inspector reviewed the RSL performance in the Environmental Protection Agency (EPA) crosscheck program during 1985, and verified that the licensee's analytical results were normally within the acceptance criteria established by the EPA.

The NRC inspector reviewed the licensee's results of participation in the International Environmental Dosimeter Intercomparison Project for 1983 and 1984, and found that the results of the tests had been acceptable. The results from the 1985 intercomparison test were not yet available from the Intercomparison Project laboratory.

No violations or deviations were identified.

### 12. Quality Assurance (QA) Program

The NRC inspector reviewed the QA activities associated with the REMP.

The STP station procedures indicate that personnel have been identified who are responsible for management of sampling and sample analysis activities associate with the REMP. The procedures contain detailed descriptions of environmental sample locations, methods for sample collection, sample preparation and preservation, and requirements for sample control, documentation and analysis. The procedures also provide for review of each analysis result to ensure compliance with sampling and analysis schedules, and to ensure that discrepancies are reviewed and appropriate corrective action is taken.

No violations or deviations were identified.

#### 13. Exit Briefing

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The NRC inspector met with STP representatives and the NRC senior resident inspector identified in paragraph 1 at the conclusion of the inspection at the STP site on August 15, 1986. The NRC inspector summarized the purpose and scope of the inspection and discussed the inspection findings.