

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-498/92-19  
50-499/92-19

Operating Licenses: NPF-76  
NPF-80

Licensee: Houston Lighting and Power Company  
P.O. Box 1770  
Houston, Texas 77251

Facility Name: South Texas Project Electric Generating Station (STPEGS)

Inspection At: STPEGS, Matagorda County, Texas

Inspection Conducted: June 8-12, 1992

Inspector: L. T. Ricketson, P.E., Senior Radiation Specialist  
Facilities Inspection Programs Section

Approved:

*Blaine Murray*  
B. Murray, Chief, Facilities Inspection  
Programs Section

*7/9/92*  
Date

Inspection Summary

Inspection Conducted June 8-12, 1992 (Report 50-498/92-19; 50-499/92-19)

Areas Inspected: Routine, announced inspection of the solid radioactive waste management and radioactive materials transportation programs.

Results: Within the areas inspected, no violations or deviations were identified. The following is a summary of the inspection results:

- o The quality assurance audit of this area was adequate.
- o Surveillances were of good quality, but the frequency had declined during the first half of 1992.
- o The Health Physics Department performed an excellent audit of the radioactive waste management program.
- o An interim, low level radioactive waste storage building was being readied for use, if necessary.

- o The solid waste management program was well implemented. An industry computer code was used to classify and characterized radioactive waste and prepare waste manifests.
- o Current copies of applicable transportation regulations and other necessary documents were maintained. Procedural guidance was good and shipping documentation was complete.
- o The transportation program area was well implemented.
- o No violations had been identified at burial sites involving the licensee's shipments of radioactive waste.

DETAILS

1. PERSONS CONTACTED

HL&P

- # G. L. Parkey, Plant Manager
- P. E. Adams, Radiation Protection Supervisor
- # H. W. Bergendahl, Manager, Technical Services
- \*W. Bullard, Lead Health Physicist (Radwaste)
- \*M. K. Chakravorty, Executive Director, Nuclear Safety Review Board
- J. S. Gilstrap, Nuclear Assurance Training Coordinator
- W. Isereau, Quality Engineering Supervisor
- #\*W. J. Jump, Manager, Nuclear Licensing
- #\*R. W. Pell, Manager, Health Physics
- G. T. Powell, General Supervisor, Health Physics Operations Support
- \*R. J. Rehkugler, Director, Quality Assurance
- J. Sepulveda, Radiation Protection Supervisor

NRC

- \* R. Evans, Resident Inspector

\*Indicates those present at the exit meeting on June 12, 1992.

# Indicates those present at the management briefing on June 11, 1992.

2. FOLLOWUP ON PREVIOUS INSPECTION FINDINGS

(Closed) Open Item (498/8944-02; 499/8944-02) - Sanitary Sewer Sludge Disposal. This item was discussed in NRC Inspection Report 50-498/89-44; 50-499/89-44 and involved potentially contaminated sewer sludge that had been released from the site without being surveyed.

Licensee representatives stated that they located the potential sources of contamination and that the major contributor was determined to be the modesty garment laundry. The licensee eliminated the source of contamination and established procedures which required the sampling of sewer sludge. The sludge was sampled on a weekly basis during 1990 and on a monthly basis during 1991. The licensee detected nothing above  $1.5 \text{ E-8}$  microcuries per gram using gamma spectral analysis. Sanitary Waste System Operation Procedure OPCP11-ST-0002 was revised to add controls on the movement of sludge and to disallow the disposal of contaminated sludge. Sludge was stored on site in one of the waste treatment plants which was no longer in use. Licensee representatives further stated that they have decided that all sewer sludge will be kept (land farmed) on owner controlled property.

### 3. SOLID RADIOACTIVE WASTE MANAGEMENT AND TRANSPORTATION OF RADIOACTIVE MATERIALS (IP 86750)

The licensee's program was inspected to determine compliance with Technical Specifications 6.8 and 6.11; 10 CFR 20.311, 61.55, 61.56, and 71; Department of Transportation Regulations 49 CFR Parts 171 through 178; and NRC Bulletin 79-19; and agreement with Chapter 11.4 of the Final Updated Safety Analysis Report.

#### 3.1 Audits and Appraisals

Transportation activities were addressed in Quality Assurance Audit 91-17, "Radioactive Waste." The audit was good, covering most areas of the program. However, it did not address such items as waste stream sampling and classification and characterization of radioactive waste in preparation for shipment and disposal.

Quality Assurance surveillances supplemented the audit well and contained good observations of on-going activities; however, the number of surveillances declined in 1992. Quality assurance management stated that they were unaware of the decline and would evaluate the inspector's observation to determine the cause and possible effect of the reduction in surveillances.

The inspector verified that audits were performed on vendors supplying radioactive waste shipping casks and performing waste compaction and disposal.

The Health Physics Department performed an internal audit of the radioactive waste management program. The assessment was thorough, produced many suggestions for improvement, and demonstrated the ability to be self-critical. It also identified a program weakness concerning the failure to sample and analyze waste streams on an annual basis and proposed corrective actions. The inspector verified that the corrective actions have been implemented and waste streams were sampled and analyzed properly.

The inspector reviewed radiological condition deficiency reports and station problem reports concerning transportation activities and confirmed that corrective actions had been taken in connection with identified deficiencies.

#### 3.2 Changes

Licensee representatives stated that there had been no major changes in the organization, facilities, programs, or equipment. The radiation protection supervisor responsible for the transportation program during the previous inspection of this area terminated his employment and was replaced by a radiation protection supervisor who had served as his alternate. The licensee adapted RADMAN as its computer code to classify and characterize radioactive waste. Procedures have undergone revisions and refinements. A building was being readied for possible use as a low level radioactive waste storage building. (See paragraph 3.4.)

### 3.3 Training and Qualifications

NRC Bulletin 79-19 required, in part, that licensees provide training and periodic retraining in the U.S. Department of Transportation and NRC regulatory requirements, the waste burial license requirements, and the licensee's instructions and operating procedures for all personnel involved in the transferring, packaging, and transporting of radioactive material. It further required that the licensee maintain a record of training dates, attendees, and the subject material for future inspections. (The licensee's response to NRC Bulletin 79-19 was discussed in NRC Inspection Report 50-498/87-20; 50-499/87-20.)

In-house radiation protection technician training provided a basic overview of transportation requirements. However, in May 1991, a vendor provided comprehensive training of transportation requirements, which met the intent of NRC Bulletin 79-19. The inspector reviewed an attendance list of this training and verified that the appropriate health physics personnel had attended the course. The inspector also noted that one quality assurance representative and one quality control representative had attended the training course.

The license subscribed to a service which provided computer disks which contained regulation changes and updates. Other vendors also send excerpts from the Federal Register containing changes.

The inspector reviewed qualification cards of selected technicians involved with preparing radioactive materials or radioactive waste for transportation and determined that they had completed the necessary training and had demonstrated the required skills and abilities.

### 3.4 Implementation of the Solid Radioactive Waste Program

All dry activated waste was sent to a vendor for sorting, incineration, and/or supercompacting. In the interest of cost effectiveness, the licensee did not distinguish between clean and contaminated trash coming from within the radiological controlled area and loaded all material into sea/land vans for shipment to the processor. The licensee had six vans stored in the fenced yards outside the truck bays of the units. Arrangements for shipment of the vans were being made at the time of the inspection. The inspector toured the dry activated waste sorting area and noted that it appeared that the licensee had sufficient interim storage capacity until some or all of the sea/land vans were returned from the waste processor. The inspector reviewed sea/land van loading logs and selectively verified that the procedurally required radiation surveys were made after each loading.

The licensee discussed with the inspector plans to build an interim low level waste storage building. Warehouse D, located west of the units, will be available for storage of dry activated waste. Renovation of the warehouse is scheduled for completion in the middle of July 1992. Across the street will be a storage yard for concrete onsite storage containers for resins and

filters. The only mixed waste the licensee had was approximately 10 liters of liquid scintillation cocktail.

The radiation protection supervisor was the primary user of the computer program RADMAN. This computer program was used to ensure compliance with waste classification requirements in 10 CFR Part 61.55. A health physicist from the health physicist technical support group served as backup. Two senior technicians also had a working knowledge of the program and had used it under the supervision of the radiation protection supervisor or the health physicist. The licensee relied on vendor operating procedures for guidance in the use of the computer program. The program had various subroutines for classifying shipments of radioactive materials, dry activated waste, resins, and filters. Calculations for classifying any irradiated hardware will be done on a contract basis.

Some of the current scaling factors in the computer program data base were derived from information gathered from a similar pressurized water reactor. The inspector reviewed these scaling factors and noted that their use was a conservative approach to classifying waste, when compared with recent site data. The licensee will replace these figures with site specific values as its data base grows. Calculations for waste classification from both units relied on the same scaling factors. Licensee representatives stated that they felt this was appropriate for the present but would reevaluate the situation if significant fuel failure occurred in either unit. As the result of a recommendation which was made during the self assessment of the waste management program, manual calculations will be performed on an annual basis to verify the accuracy of the computer program with its updated data base. Also as a result of the self-assessment, waste stream sampling was entered into the licensee's task tracking system in order to provide notification of sampling due dates.

### 3.5 Shipping of Low-Level Wastes for Disposal and Transportation

The licensee did not make a shipment during the week of the inspection; therefore, direct observation of activities was not possible.

The inspector reviewed documentation for selected radioactive shipments and identified no deficiencies. Shipping packages included copies of the proper waste manifests, bills of lading, surveys, and notifications. As a matter of routine, the licensee photographed each shipment to document labeling, marking, and placarding.

The inspector confirmed that the licensee maintained copies of burial site licenses and certificates of compliance for NRC-approved shipping containers. The licensee was registered as a user of the containers.

The licensee had an approved quality assurance program (#71-0645) which expires January 31, 1993.

There have been no accidents or enforcement actions involving shipments of the licensee's radioactive material or radioactive waste.

### 3.6 Conclusions

The quality assurance audit of this area was of good quality.

Surveillances, likewise, were of good quality, and they complemented the audit well in 1991, but their frequency declined significantly in the first half of 1992.

The Health Physics Department performed an excellent audit of the radioactive waste management program.

There were minimal changes to the licensee's program in this area; however, an interim, low level radioactive waste storage building was being readied for use, if necessary.

Health physics personnel had received the required training to comply with NRC Bulletin 79-19; however, by the end of the inspection, the licensee had not provided information which confirmed that quality control personnel had met the same requirements. This is an unresolved item.

The solid waste management program was well implemented. The licensee used an NRC-approved computer code to classify and characterized radioactive waste and prepare waste manifests.

Current copies of applicable regulations and other necessary documents were maintained. Procedural guidance was good and shipping documentation was complete. The transportation program was well implemented and consequently, no violations had been identified at burial sites involving the licensee's shipments of radioactive waste.

### 4. EXIT MEETING

The inspector met with the resident inspector and the licensee's representatives denoted in paragraph 1 at the conclusion of the inspection on June 12, 1992, and summarized the scope and findings of the inspection as presented in this report. The licensee did not identify as proprietary any of the material provided to, or reviewed by, the inspector during the inspection. At the licensee's request, a management briefing was conducted on June 11, 1992. At that time, the unresolved item discussed in paragraph 3.3 had not been identified.