

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION
REGION IV

NRC Inspection Report: 50-498/92-02
50-499/92-02

Operating License: NPR-76
MPF-80

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

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

Inspection At: STPEGS Site, Bay City, Matagorda County, Texas

Inspection Conducted: January 21-24, 1992

Inspectors: L. T. Ricketson, P.F., Senior Radiation Specialist
Facilities Inspection Programs Section

Approved: Blaine Murray
B. Murray, Chief, Facilities Inspection
Programs Section

2/21/92
Date

Inspection Summary

Inspection Conducted January 21-24, 1992 (Report 50-498/92-02; 50-499/92-02)

Areas Inspected: Routine, announced inspection of portions of the licensee's radiation protection program including organization and management controls, training and qualifications, and program for maintaining occupational exposures as low as reasonably achievable (ALARA).

Results: Within the areas inspected, one violation, involving the failure to evaluate student response concerning the course content and quality of instruction of certain general employee training, was identified. (See paragraph 4.) The violation was not cited because of its low safety significance and the licensee's prompt initiation of corrective actions. No deviations were identified.

The Health Physics Division was sufficiently staffed and placed no reliance on contract radiation protection technicians during routine operations. Corporate support had increased through the addition of a radiological assessor. Comprehensive audits had been performed and the audit team included personnel with health physics expertise. The Health Physics Division was responsive to

audit findings. A good radiological occurrence reporting program had been established. Good radiation protection procedures had been maintained.

Qualified and experienced instructors provided excellent instruction for general employee and health physics technician training. Training opportunities for health physics supervisors and professionals was evident by allowing their attendance at offsite, technical courses. Professional advancement was encouraged for health physics technicians through their registration by the National Registry of Radiation Protection Technologists.

The ALARA program had received strong support from both management and workers. Annual person-rem was low, and goals were challenging. The ALARA program received good worker acceptance. Continued efforts were being made to reduce the plant source term.

DETAILS

1. PERSONS CONTACTED

HL&P

- *W. H. Kinsey, Vice President, Nuclear Generation
- *P. J. Appleby, Training Manager
- *H. W. Bergendahl, Health Physics Division Manager
- *R. A. Dally, Engineering Specialist, Licensing
 - H. E. Dudley, Support Services Supervisor
 - B. A. Franta, Professional & Support Services Division Manager
 - W. G. Isereau, Quality Engineering Supervisor
 - R. Logan, ALARA General Supervisor
- *J. R. Lowell, Technical Services Manager
 - R. W. Pell, Health Physics Operations General Supervisor
 - T. Powell, Health Physics Operations Support General Supervisor
 - H. L. Russell, Technical Training Supervisor
 - T. Tesmer, Training Coordinator
- *M. R. Wisenburg, Plant Manager
- *W. D. Wood, Senior Staff Consultant, Performance Assessment

NRC

- *J. Tapia, Senior Resident Inspector
- R. Evans, Resident Inspector

*Denotes those present at the exit meeting on January 24, 1992.

2. FOLLOWUP ON PREVIOUS INSPECTION FINDINGS

(Closed) Violation 498/9109-01; 499/9109-01 - Failure to Control Adequately Personnel Entrance into a High Radiation Area - This item was discussed in NRC Inspection Report 50-498/91-09; 50-499/91-09 and involved a security guard who entered the truck bay while it was posted as a high radiation area, contrary to the instructions of the radiation work permit under which he was working. The licensee's immediate corrective actions were documented in the same report. Additionally, the inspector verified that the licensee revised the radioactive waste shipment procedure instructions to require the notification of Security, Radiation Protection, and Plant Operations prior to removing high integrity containers from shielded containers and after they were returned. The procedure also required plant announcements be made concerning these actions. A memorandum was issued to radiation protection personnel to reaffirm that verbal instructions shall never indicate that radiation work permit instructions can be disregarded, unless there is an immediate personnel risk and the event was discussed in radiation worker training to emphasize the need for compliance with radiation work permit instructions and radiological postings. This matter is closed.

(Closed) Open Item 498/9109-02; 499/9109-02 - Plant System Knowledge of Radiation Protection Technicians Writing Radiation Work Permits - This item was

discussed in NRC Inspection Report 50-498/91-09; 50-499/91-09 and involved the concern that reliance on "general information" about plant systems might lead to a failure to survey adequately. The inspector reviewed this item and found that the licensee had established files for 28 plant systems thus far; these files consisted of system drawings, system descriptions, and history logs. The history logs contain information about the systems collected from the chemistry, operations, and plant engineering departments. Additionally, the training department provided instruction on plant systems as part of the continuing training program. This matter is considered closed.

3. ORGANIZATION AND MANAGEMENT CONTROLS (83750)

The inspector reviewed the organization and management controls with respect to the radiation protection program to determine compliance with Technical Specifications 6.2 and 6.5; commitments in Chapter 13 of the Updated Final Safety Analysis Report; and agreement with Regulatory Guide 1.33.

Licensee representatives informed the inspector of organizational changes in the Health Physics Division scheduled to take effect February 1, 1992. Changes included the consolidation Unit 1 and Unit 2 Health Physics Operations under one general supervisor and the creation of another branch for ALARA matters under the ALARA/Work Control General Supervisor. The other two branches were Health Physics Operations Support and Health Physics Technical Support. Licensee representatives stated that they had conducted a task analysis of their duties and concluded that the new organization would be more proactive in finding ways to improve radiation safety. The inspector reviewed position descriptions for all newly created positions and concluded that they listed the duties and responsibilities of each in sufficient detail.

The Manager, Health Physics was designated as the Radiation Protection Manager. The inspector noted that Interdepartmental Procedure 2.3 Q, "Radiation Protection and ALARA Programs," required that he be granted direct access to the plant manager for resolution of concerns regarding ALARA and radiation protection programs. Procedure UPRP01-ZA-0033, "Health Physics Division Conduct of Operations," provided lines of succession within the division.

The Health Physics Division was sufficiently staffed with approximately 80 people. The licensee placed no reliance on contract radiation protection technicians during routine operations.

The inspector reviewed Quality Assurance Audit 91-03, "Radiological Controls," conducted February 18 through March 1, 1991. The audit team included a former member of Health Physics and a technical expert. The audit resulted in the identification of deficiencies, concerns, and recommendations. Health Physics had been responsive to the audit findings.

The inspector reviewed selected surveillance of radiation protection activities and determined that the surveillances were in sufficient number and of sufficient depth to be a useful management overview tool.

The licensee had added the position of radiological assessor to its corporate staff. The individual reported to the manager of Planning and Assessment, who in turn reported to the Group Vice President, Nuclear. The position description stated the function of the individual was to:

- ° Assess the effectiveness of overall station radiological performance, which includes radiological controls, radioactive waste, training of radiation workers and radiation protection technicians, radiological environmental monitoring, and personnel dosimetry.
- ° Assess the effectiveness of the following related programs: emergency preparedness, industrial safety and health, chemistry, and radiochemistry.

The individual filling the position was formerly a general supervisor in Health Physics Operations.

The inspector reviewed the licensee's program of radiological occurrence and radiological controls deficiency reporting programs and concluded that they appeared to be an effective method of recording, analyzing, and trending radiological events. Quarterly summaries of the occurrences were prepared for the plant manager's review.

The manager of Health Physics, through Standing Order 31, required that supervisory personnel within the division take part in plant inspection tours on a rotating basis to identify potential radiological problems. The inspector reviewed selected examples of the results of these inspections.

The inspector reviewed the procedures listed in the attachment and determined that they provided suitable guidance. The inspector noted that some procedures seemed to be illogically placed (in the procedure organization) for quick reference. Licensee representatives acknowledged the inspector's observation and stated that there was additional work to be done in organizing the procedures.

Conclusions

Health Physics was sufficiently staffed and placed no reliance on contract radiation protection technicians during routine operations. Corporate oversight and support had increased through the addition of a radiological assessor. Audits of the program were comprehensive, and the audit team employed suitable technical expertise. Health Physics was responsive to audit findings. The radiological occurrence reporting programs worked successfully. Procedures provided sufficient guidance.

4. TRAINING AND QUALIFICATIONS (83750)

The inspector interviewed members of the training organization and reviewed lesson plan and student handouts to determine compliance with 10 CFR 19.12 and Technical Specification 6.4; the commitments in Chapter 13 of the Updated Final Safety Analysis Report; and the recommendations of Regulatory Guides 8.8, 8.10, 8.13, 8.27, and 8.29.

The general employee training group was sufficiently staffed with experienced instructors. Appropriate facilities were provided. Contract instructors occasionally supplemented the staff during outages. The inspector reviewed lesson plans for general employee training and noted that instruction included information listed in regulatory guides and industry standards.

The licensee continued to have an accredited program for instruction of health physics technicians. The program had four experienced instructors, most coming from the onsite health physics organization. Licensee representatives stated that they have relied on contract support for specific courses and expect to use a contract instructor for training related activities for approximately eight weeks, this year. Instructors visited the plant often to observe operations.

The radiation protection technician continuing training addressed topics such as: industry events, new or infrequently performed and difficult tasks, and changes in procedures and equipment. Training was presented on plant systems with consideration to the associated radiation hazards.

Sufficient reference libraries were available to the instructors. Licensee representatives stated that new facilities would be ready for training activities later in the year.

The inspector reviewed records of offsite training and professional meeting attendance and concluded that management had demonstrated strong support for continuing technical training of health physics supervisors and professionals. The licensee promoted the professional development of health physics technicians and, as a result, 15 more people from the division were registered by the National Registry of Radiation Protection Technologists. The inspector also noted that a high percentage of the personnel in the Health Physics Division were either degreed or in a degree program. Several people were certified by or were seeking certification by the Health Physics Society.

The inspector reviewed the licensee's method for soliciting feedback from students and evaluating the effectiveness of training. Nuclear Training Procedure 112, "Course/Instructor Evaluation," Section 6.1.1 and 6.1.1.1 state, "Feedback on course adequacy shall be solicited from trainees upon completion of a course of instruction... GET [general employee training] courses shall complete assessment forms quarterly." Although the licensee is not committed to the latest revision of the industry standard, its procedural guidance is consistent with Section 6.2 (6) of ANSI/ANS-3.1-1987. The inspector reviewed training course evaluation records and identified that records of evaluation of course content and instruction for general employee training, radiation worker training, respiratory protection training, and self contained breathing apparatus training were generally not available for the second, third, and fourth quarters of 1991. (A course content assessment dated May 5, 1991, was available for general employee training.) A licensee representative confirmed that the training courses were offered during periods in question. The failure to follow procedures is an violation of Technical Specification 6.8.1.a, which requires that written procedures be established, implemented, and maintained covering the activities referenced in Appendix A of

Regulatory Guide 1.33, Revision 2, February 1978, which in turns lists the general category, "Training in radiation protection," in Section 7.e.(6). However, because the safety significance of the matter was low and the licensee initiated corrective actions prior to the end of the inspection, the item met the criteria of paragraph V.A. of Appendix C to 10 CFR Part 2 and a Notice of Violation will not be issued. Immediate corrective actions taken by the licensee included the filing of a station problem report, adding the procedure requirement to the computer tracking/scheduling system, and planning to solicit feedback at the next course offering.

On February 7, 1992, the licensee supplied a written statement as to why the item should not be identified as a violation. The statement concluded:

"Because NTP-112 is not classified either as a "quality-related" procedure, or a "safety-related" procedure, then the non-conduct of all or a portion of it does not constitute a violation of either the 10 CFR Part 50 requirements or the Regulatory Guide 1.33 requirements."

Although outside of the original inspection period, the licensee's statement is answered herein to provide all the facts in one place.

The requirement to have a procedure to control radiological training is clear (TS 6.8.1.a and Regulatory Guide 1.33, Revision 2, February 1978). The fact that this procedure was not classified as "safety related" indicates a minor breakdown in the licensee's system of classification. There is a requirement, and there was a procedure which met this requirement. The failure to follow the procedure's requirements is a violation, albeit of minor safety significance.

Conclusion

Qualified and experienced instructors provided excellent instruction for general employee and radiation protection technician training. Management showed excellent support by providing opportunities for supervisor and professional continuing technical training. The licensee promoted the professional advancement for health physics technicians by encouraging their registration by the National Registry of Radiation Protection Technologists. Evaluation of student perceptions of the adequacy of general employee training was not performed as required. One noncited violation was identified involving the failure to follow training procedures.

5. MAINTAINING OCCUPATIONAL EXPOSURE ALARA (83750)

The inspector reviewed the licensee's program to maintain occupational exposure ALARA to determine compliance with requirements of 10 CFR 20.1(c) and agreement with the commitments in Chapter 12.1 of the Update Final Safety Analysis Report and recommendations of RG 8.8 and 8.10.

The inspector noted that the new Health Physics organization, discussed in paragraph 3, will give the ALARA program a higher level of visibility. The

ALARA/Work Control group will consist of approximately 14 people, including one full-time outage planning specialist.

The licensee accrued a site-wide exposure of 257 person-rem in 1991; the goal had been established as 300 person-rem. The goal for 1992 is 200 person-rem.

The inspector noted that the licensee's ALARA suggestion program received 71 suggestions in 1991. Thirty of the suggestions had been evaluated and acted upon, and no suggestion older than a year was awaiting action.

The licensee had initiated a program of source term reduction within support systems. Hot spots were identified, tracked, trended. The cause for the hot spots were determined, and corrective actions were taken. The source term reduction program as described in paragraph 7 of NRC Inspection Report 50-498/91-09; 50-499/91-09 continued. The inspector noted also that the ALARA group tracked and trended personnel exposures and radiological occurrences.

The inspector reviewed minutes of the ALARA committee and noted that the committee consisted of members from both management and crafts organizations. The committee met as required and held special meetings to consider outage related activities.

Conclusion

The ALARA program had received strong support from both management and workers. Annual person-rem exposure numbers were low, and the goals were challenging. The ALARA program appeared to have good worker acceptance. Continued efforts were being made to reduce source term.

6. EXIT MEETING

The inspector met with the senior resident inspector and the licensee's representatives denoted in paragraph 1 at the conclusion of the inspection on January 24, 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 materials provided to, or reviewed by, the inspector during the inspection. On February 7, 1992, the licensee submitted a written statement in opposition to the identification of the violation.

Houston Lighting & Power Company

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Mr. Joseph M. Hendrie
50 Bellport Lane
Bellport, New York 11713

Bureau of Radiation Control
State of Texas
1101 West 49th Street
Austin, Texas 78756

Judge, Matagorda County
Matagorda County Courthouse
1700 Seventh Street
Bay City, Texas 77414

Licensing Representative
Houston Lighting & Power Company
Suite 610
Three Metro Center
Bethesda, Maryland 20814

Houston Lighting & Power Company
ATTN: Rufus S. Scott, Associate
General Counsel
P.O. Box 61867
Houston, Texas 77208

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L. T. Ricketson, FIPS