

APPENDIX B

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-498/88-08  
50-499/88-08

Operating Licenses: NPF-71  
Construction Permit: CPPR-129

Dockets: 50-498  
50-499

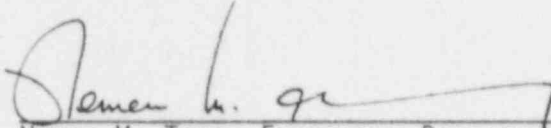
Licensee: Houston Lighting & Power Company (HL&P)

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

Inspection At: STP, Matagorda County, Texas

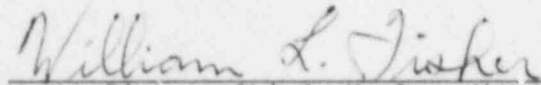
Inspection Conducted: January 25-28, 1988

Inspector:

  
Nemen M. Terc, Emergency Preparedness  
Specialist, Nuclear Materials and Emergency  
Preparedness Branch

3-9-88  
Date

Approved:

  
W. L. Fisher, Chief, Nuclear Materials and  
Emergency Preparedness Branch

3/9/88  
Date

Inspection Summary

Inspection Conducted January 25-28, 1988 (Report 50-498/88-08, 499/88-08)

Areas Inspected: Routine, announced inspection of the operational status of the licensee's emergency preparedness program.

Results: Within the areas inspected, one violation (failure to report emergency implementing procedure changes, paragraph 2) and six deficiencies (paragraphs 3 and 5) were identified.

## DETAILS

### 1. Persons Contacted

#### HL&P

- \*J. Brady, Emergency Preparedness Manager
- \*S. Head, Supervisory Licensing Engineer
- \*L. Meier, Senior Instructor
- \*L. Weldon, Manager, Operations Training
- \*P. Appleby, Training Manager
- \*G. Vaughn, Vice President, Nuclear Operations

#### NRC

- \*J. Jaudon, Deputy Director, Division of Reactor Safety
- \*A. Beach, Deputy Director, Division of Reactor Projects
- \*D. Carpenter, Senior Resident Inspector, STP

\*Denotes those present during exit interview.

### 2. Emergency Plan and Implementing Procedures (82701-02.01)

The NRC inspector interviewed members of the emergency preparedness organization and determined that after STP obtained its operating license on August 21, 1987, the licensee submitted changes to their emergency plan but failed to submit changes that had been made to procedures. 10 CFR 50, Appendix E. V, "Implementing Procedures," requires that changes to the Emergency Plan and Procedures be submitted to the NRC within 30 days of such changes.

The licensee had not submitted any changes to their procedures since they obtained their operating license on August 21, 1987. This is an apparent violation (498/8808-01; 499/8808-01).

### 3. Emergency Facilities, Equipment, Instrumentation, and Supplies (82701-02.02)

The NRC inspector toured the Emergency Response Facilities (ERFs) and noted that the Operational Support Center (OSC) would not be accessible during certain accident scenarios. In particular, Procedure OEPP01-2Z-0016, "Operations Support Center Activation, Operation, and Deactivation Procedure," instructed OSC personnel to move out to the Emergency Operations Center (EOC). This action would prevent any OSC personnel from being available to assist during an emergency if a radioactive cloud were to impact on the OSC area or to be located between the "power block" and the EOC. This constitutes a deficiency (498/8808-02; 499/8808-02).

The licensee stated that prior to this inspection they had been studying the option of moving the entire OSC from its present location in the Administration Building to the "power block," closer to the Technical Support Center (TSC) and the Control Room, but at the time of this inspection no action had been decided upon. The NRC inspector emphasized the need for resolution of this problem to prevent the lack of usable OSC personnel during scenarios that would compromise the habitability of the OSC.

The licensee decided to revise Procedure OEPP01-2Z-0016, "Operations Support Center Activation, Operation, and Deactivation Procedure," to instruct the Emergency Director to ensure that in case relocation of the OSC personnel to the EOC is not feasible, selected OSC personnel would be moved into the TSC so that they would be protected from radiation and provide operational support to the TSC during accidents. This procedure change was implemented immediately following this inspection. Furthermore, the licensee indicated that they would continue to evaluate the option to move the OSC into a convenient location within the "power block."

The NRC inspector noted that the habitability criteria for ERFs was not tailored to each facility. As a consequence, decisions to evacuate personnel from the various emergency response areas could not be made on guidelines that were based on risk versus benefit analyses. The NRC inspector suggested that for each facility and emergency response area the risks of radiation exposure and other hazards be compared with the benefits derived from remaining in a location. For example, it would be expected that a minimal number of essential personnel in the control room necessary to mitigate the consequences of an accident would be allowed to receive a larger radiation dose than those in less vital positions. Failure to have habitability criteria for each ERF constitutes a deficiency (498/8808-03; 499/8808-03).

The NRC inspector noted that inventories in ERFs were performed in accordance with Procedure OEPP02-2A-0002, "Emergency Equipment and Supplies Inventory," and that inventories were limited to instruments, equipment, and supplies located in locked cabinets. Such inventories did not include vital communication equipment, computers, and other items required for a successful emergency response. The potential negative impact of this situation is highlighted in the TSC by the fact that for reasons of fire prevention, the TSC entrance door cannot be locked. Moreover, it appears that emergency planners have no specified responsibilities for overseeing the maintenance of ERFs. For example, emergency planners were not aware that an office had been vacated in the TSC for at least 2 months prior to this inspection. These items constitute a deficiency (498/8808-04; 499/8808-04).

The NRC inspector noted that two copying machines under repair and various boxes were piled up in front of locker No. 2, obstructing the door. During an emergency these objects would become obstacles for emergency

teams attempting to remove self-contained breathing apparatus. This evidence of poor housekeeping practices constitutes a deficiency (498/8808-05; 499/8808-05).

No violations or deviations were identified.

4. Organization and Management Control (82701-02.03)

The NRC inspector determined that a significant change had been made to the emergency organization since the emergency preparedness appraisal. As a consequence of a drill in October 1987, a communicator was added to aid the Site Security Manager. This change improved their emergency response. Moreover, the inspector noted that there appeared to be no changes which could negatively impact offsite emergency organizations.

No violations or deviations were identified.

5. Training (82701-02.04)

The NRC inspector attempted to determine if the licensee was in compliance with 10 CFR 50.54(q), which requires that a licensee maintain in effect emergency plans which meet the standards of 10 CFR 50.47 and the requirements of 10 CFR 50, Appendix E, to provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Specifically, the adequacy of the licensee's training and retraining methods as required by 10 CFR 50.47(b)(15) were reviewed.

The NRC inspector reviewed appropriate sections of the Emergency Plan Procedure IP-8.21Q, Revision 3, "Emergency Preparedness Training Program," and representative, computerized training records for selected key emergency response personnel to ensure that the training program was in place. The review of records revealed that the training program for emergency response personnel was established and that training was in place. Paragraph 5.2 of the procedure describes what appears to be adequate direct training overview and other responsibilities of the Emergency Preparedness Department.

The NRC inspector noted that Attachment IP-8-21Q-01, "Site Specialized Training Matrix," groups directors, managers, coordinators, supervisors, senior reactor operators, and shift technical advisors under the same category, providing these groups with the same scope and detail of training. Training courses were described in a booklet titled, "Emergency Plan Training," dated December 14, 1987. Written exams basically consisted of multiple choice questions. Apparently, emergency procedures were not taught in detail to emergency directors. There was no individualized training for senior control room operators (e.g., shift supervisors). Training methods do not appear to have the scope and depth required for personnel who would be responsible for direction and coordination of emergency response during accidents.

The NRC inspector interviewed available senior members of the operations staff from three different shifts and shift personnel responsible for emergency communications and dose assessment. Interviews consisted of a series of questions involving basic technical and administrative concepts needed for coordinating and directing emergency actions, performing notifications, and dose assessment. Nine persons were interviewed.

As a result of the interviews, the NRC inspector determined that:

- ° Persons interviewed did not demonstrate detailed knowledge of basic technical factors (e.g., range of containment radiation and main stack effluent monitors, the physical units involved, and conversion factors) used to make decisions regarding protective actions for the general public.
- ° The interviewees did not appear to recognize the difference between the delegation of responsibilities and the delegation of work. In addition, they were unclear about the scope and limits of their duties and responsibilities (e.g., did not recognize that they were responsible for accident mitigation and believed it was their duty to enforce their protective action recommendations).
- ° Guidelines for evacuation of the control room under adverse radiological habitability conditions either did not exist or were unknown to interviewees. (See Deficiency 498/8808-03; 499/8808-03.)
- ° Procedure OEPP01-ZA-0001, "Emergency Classification," erroneously specified a site area emergency class as the appropriate classification, instead of a general emergency, when high radiation levels in the reactor containment building exceed  $1.1 \times 10^5$  R/hr (Addendum 2, page 10). This procedural error contributed to a wrong decision made by one of the shift supervisors interviewed, who erroneously indicated a site area emergency and minimal protective action recommendations (i.e., shelter a 2-mile radius) when the scenario would have called for immediate evacuation up to 10 miles. This is a deficiency (498/8808-06; 499/8808-06).
- ° One dose assessment technician ignored default values and erroneously assumed that dose assessment was not possible unless a release of radioactivity to the environment was taking place.
- ° A shift supervisor could not find applicable procedures sections for making decisions required to coordinate and direct emergency response actions. He did not remember when he had training, nor did he recall ever seeing the procedure used for making protective action recommendations. During interviews with the emergency preparedness and training staffs, the NRC inspector noted that procedures were not used to instruct emergency directors.

The above training weaknesses constitute a deficiency (498/8808-07; 499/8808-07).

No violations or deviations were identified.

6. Independent Reviews/Audits (82701-02.05)

The NRC inspector noted that the licensee Quality Assurance (QA) Department had conducted one audit since the emergency preparedness appraisal. This audit, conducted in October 1986, was performed in 8 working days by 2 auditors for a total of 128 hours. The QA auditors interviewed the emergency preparedness and training staffs. Of the six deficiencies identified by the auditors, four remained open, but were being worked on to meet deadlines.

7. Exit Interview

The NRC inspector met with the NRC resident inspector and licensee personnel identified in paragraph 1 on January 28, 1987, and summarized the scope and findings of the inspection as presented in this report.