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U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project Electric Generating Station
Units 1 and 2
Docket Nos. STN 50-498, STN 50-499
Revised Response to NRC Emergency Preparedness
Exercise Weaknesses (498/9010-02, 03, 05; 499/9010-02, 03, 05)

Pursuant to agreement between the NRC staff and Houston Lighting & Power Company (HL&P) representatives at a meeting held August 30, 1990, HL&P submits the attached changes to our response to Inspection Report 90-10 by letter dated July 11, 1990 (ST-HL-AE-3497). The changes affect HL&P's response to Emergency Preparedness Exercise Weaknesses 9010-02, -03, and -05. Revisions are highlighted by change bars. HL&P understands the importance of correcting the identified weaknesses and will fully address each issue prior to completion of the Emergency Preparedness Enhancement Program.

An issue was discussed at the August 30, 1990 meeting regarding HL&P's inability to resolve NRC comments on the 1990 Graded Exercise prior to the exercise. NRC had substantial comments on the scenario, and HL&P was unable to address these comments adequately because they were not received until the day before the exercise. To alleviate this problem in the future, HL&P proposes to schedule a meeting with the NRC sufficiently before the exercise to review the scenario. This will enable HL&P to ensure NRC's comments are addressed.

If there are any questions, please contact either Mr. V. A. Simonis at (512) 972-8330 or myself at (512) 972-8530.

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Attachments: Revised Response to (498/9010-02; 499/9010-02)
Revised Response to (498/9010-03; 499/9010-03)
Revised Response to (498/9010-05; 499/9010-05)

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Exercise Weaknesses (498/9010-02; 499/9010-02)

I. Weakness

No habitability checks were performed in the Control Room and no dosimetry was issued to the emergency responders in the Control Room during the exercise.

II. Response

The Radiological Manager in the Technical Support Center (TSC) is responsible for ensuring habitability checks are performed in the Control Room. Because the plant simulator located in the Nuclear Training Facility (NTF) was used for the exercise Control Room, the TSC Radiological Manager was uncertain where to send the Health Physics (HP) technicians to perform the habitability checks.

During future drills using the simulator, the TSC drill controller will direct the TSC Radiological Manager to send the HP technicians to the affected unit Control Room to perform habitability checks.

Performance of Control Room habitability checks will be demonstrated during the 1990 and 1991 emergency drills and exercises.

Sufficient quantities of 0-200 mR Self-Reading Dosimeters (SRDs) will be stored and made available for personnel assigned to the Control Room during emergencies by December 31, 1990. A limited number of 0-5R SRDs will be available by March 31, 1991. In addition, personnel designated for onsite emergency facilities will also be issued TLDs.

Lockers with appropriate equipment will be provided at the simulator so that simulator operators can comply with Emergency Plan requirements for entry and exit during drills. This action will be completed by October 31, 1990.

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Exercise Weaknesses (498/9010-03; 499/9010-03)

I. Weakness

Poor radiological practices and failure to follow the radiation protection procedure were observed in the process of determining habitability in the TSC.

- The air sampler was not made functional until 10:34 a.m., although the first radiation habitability survey was logged at 8:55 a.m. This contradicts paragraph 1.1, Addendum 1 of Procedure OEPP01-ZA-0005, "Onsite Radiological Controls," which requires air sampling as one of the conditions for establishing habitability in the TSC.

- Self-reading dosimeters were not issued to the TSC staff. The number of self-reading dosimeters was not consistent with the number of personnel requiring radiation monitoring protection in the TSC. Only six low-range and six high-range dosimeters were available in the facility.

- The TSC ventilation was not shifted to a recirculation mode until 11:36 a.m., approximately 1 hour after the simulated release of radioactivity to environs had been detected. Apparently, the licensee's policy is for the TSC to remain in normal ventilation line-up until unacceptable levels of radioactive contamination are sensed in the induction air plenum. This could lead to unnecessary inhalation of radioactive contamination by members of the TSC staff.

II. Response

Addendum 1 of procedure OEPP01-ZA-0005 addresses emergency accumulative exposure limits. Addendum 8, paragraph 1.1 of the same procedure states initial habitability checks (including air sampling) shall be performed if a release of radioactive material has occurred or is in progress at the time the facility is activated. Records indicate the release of radioactive material began at approximately 10:30 a.m. Although the habitability check was not required until 10:30 a.m., an air sample should have been performed as part of any habitability survey logged as completed prior to 10:30 a.m. Procedures will be revised to clearly specify when air samples are to be taken for habitability checks and appropriate plant personnel will be instructed on the new requirements.

Sufficient quantities of 0-200 mR Self-Reading Dosimeters (SRDs) will be stored and made available for personnel assigned to the Technical Support Center (TSC) during emergencies by December 31, 1990. Sufficient quantities of such SRDs will be similarly kept for the Operations Support Center and Emergency Operations Facility. A limited number of 0-5 R SRDs will also be available at these facilities by March 31, 1991. In addition, personnel designated for onsite emergency facilities will also be issued TLDs. Additional TLDs will be stored and made available for issue during an emergency to emergency response personnel and miscellaneous personnel at the Emergency Operations Facility.

Automatic isolation of the TSC HVAC system will occur following detection of high levels of airborne radiation, toxic gas, or smoke in the intake. Manual activation of isolation is also possible. However, review of the TSC HVAC operational philosophy and design indicates there is no method for remote operation or remote system alignment indication currently available. Therefore, emergency procedures will be revised to reflect the following:

1. If an emergency is declared and there is no potential for a radioactive release, then the TSC HVAC will be left in the normal system alignment.

2. If an emergency is declared and a potential for a radioactive release is found to exist, plant personnel will be dispatched to the TSC HVAC control panel to transfer the system to the recirculation mode.

3. If a release is in progress, plant personnel will be dispatched to the TSC HVAC control panel to verify that automatic transfer to the recirculation mode has occurred, and if it has not, perform the transfer.

The appropriate procedures will be revised and the contingency plan implemented prior to the next graded emergency preparedness exercise.

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Revised Response to NRC Emergency Preparedness
Exercise Weaknesses (498/9010-05; 499/9010-05)

I. Weakness

The locations of all missing persons within the protected area were not established within 30 minutes.

II. Response

STPEGS defines "Accountability" as the process of verifying the general location of essential and non-essential personnel inside the Protected Area (PA). Persons whose location inside the PA cannot be verified within 30 minutes are classified as "missing".

The goals of Accountability at STPEGS are to:

1. Verify the location of essential and non-essential personnel inside the PA within 30 minutes of sounding the Assembly alarm.

2. Determine the names, PA badge numbers, and last known location of missing persons inside the PA within 30 minutes of sounding the Assembly alarm.

Current procedures and training do not consider performing Accountability prior to activation of the Emergency Response Organization. HL&P procedures will be revised and personnel instructed that Accountability is initiated immediately upon sounding the Assembly alarm. Performance of Accountability will be optional following declaration of a Notification of Unusual Event or an Alert, but mandatory following declaration of a Site Area Emergency or General Emergency.

If missing persons are identified during Accountability, Search and Rescue at STPEGS will be initiated following Accountability. Search and Rescue at STPEGS will consist of public address announcements, search of the PA badge racks, and field teams searching buildings and structures within the PA. Field teams will be dispatched from the Operations Support Center (OSC) to search for the missing persons. Following Accountability, the number of missing persons will be acceptable provided the OSC can dispatch an adequate number of field teams used for Search and Rescue to locate all missing persons.

The actions described above will be completed and an Accountability drill conducted no later than December 31, 1990. Future Accountability drills will be scheduled based on the success of this drill.

Note that the difficulty of performing Accountability will be reduced by new office facilities currently under construction outside the PA which will reduce the number of plant personnel inside the PA.