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Gentlemen:

River Bend Station - Unit 1
Refer to: Region IV
Docket No. 50-458/Report 91-08

This letter provides Gulf States Utilities Company's (GSU) response to the exercise weaknesses noted in NRC Inspection Report No. 50-458/91-08. This letter describes GSU's corrective actions and provides anticipated completion dates.

Should you have any questions, please contact Mr. L. A. England at (504) 381-4145.

Sincerely,

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WHO/LAE/JWC/TCC/WMS/km
Attachments

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ATTACHMENT 1

Response to Weakness 50-458/9108-01

REFERENCE

Letter - S.J. Collins to J.C. Deddens, dated March 29, 1991

DESCRIPTION

Several discrepancies were identified in the notification process from the CR and other ERFs as follows:

- Throughout the exercise, the computer clock time was allowed to lag behind the CR clock by 6 minutes. In a similar manner, clocks at different ERFs were not synchronized during the exercise.

- The initial notification for Alert was transmitted using the "long form," which did not agree with Procedure EIP-2-006, "Notifications," that requires the use of the "short form" to increase efficiency for each initial notification message. Furthermore, the Alert follow-up message was transmitted using the short form instead of the long form as was required by Procedure EIP-2-006. During the general emergency, the long form was used to make the initial notification instead of the short form as required by the procedure. The inspectors noted that Procedure EIP-2-006, "Notifications," did not include clear and complete instructions on the use of the short form.

- One of two communicators in the TSC was unfamiliar with notification procedures, the computer keyboard, and the communications software. The inspector concluded that the individual was not proficient in his task as a communicator and would not be able to accomplish his emergency duties without continuous and extensive coaching by the other communicator in the TSC.

- "Zero" instead of the number one was used to designate the first notification message form in a sequence of messages transmitted to off-site agencies. This was identified as an inadequate practice since it can result in message numbering errors further along the accident time line.

GULF STATES UTILITIES COMPANY'S RESPONSE

- The activation procedures for the facilities have a step to synchronize clocks with the Control Room. This was performed; however, since there is no common source between

the Control Room clocks and the computer terminals, it is very difficult to maintain the exact time in all facilities. GSU will evaluate this problem to determine what actions will be taken to correct it. This evaluation will be completed by August 1991 and supplemental response sent at that time.

- EIP-2-006, "Notifications," Revision 12, Page 3 of 25, states in 4.1.2, "Complete the Short Form Notification Message Form (NMF) for the initial emergency classification and for all emergency classification escalations. Each emergency classification has a designated Short Form (Attachment 1, Page 1-4 of 6). Obtain and complete the Long Form NMF for all follow-up messages (Attachment 1, Page 5 of 6). Refer to Attachment 5 for directions on how to fill out the Long Form NMF." The procedure is clear, but the use of the Short Form was an addition to the procedure. Personnel need to receive additional training on the new Short Form. This training will take place during this years training cycle.

- Personnel who are tasked with providing the notifications as communicators will be replaced with persons who are familiar with computers. These individuals will be used during communications testing to allow more familiarization with the equipment.

- GSU tested the software for the notification computer and found it would not print message zero without operator intervention. The training mentioned above should minimize these types of communicator mistakes.

ATTACHMENT 2

Response to Weakness 50-458/9108-02

REFERENCE

Letter - S.J. Collins to J.C. Deddens, dated March 29, 1991

DESCRIPTION

Core damage assessments were made from an uncontrolled letter or memo provided by the core physics specialist. The TSC staff appeared to be unaware of the existence of Procedure COP-1050, "Post Accident Estimation of Fuel Damage." The inspection team noted that Procedure COP-1050 was not available in the TSC desk folder provided for that station. This is the only controlled procedure approved by the licensee on the subject of core damage assessment.

GULF STATES UTILITIES COMPANY'S RESPONSE

The uncontrolled letter or memo will be reviewed for accuracy and determined if it should be part of the Core Damage Assessment EIP. A review of the training modules used to train TSC personnel will be conducted to evaluate which personnel in the TSC need to be aware of COP-1050 and its use. Changes will be made as deemed necessary by this evaluation. All key TSC personnel will be made aware of this procedure and its use. COP-1050 was in the Chemistry/Core Damage Assessment Coordinators notebook in the TSC. The books will be reviewed and copies of COP-1050 will be put in the appropriate desk folders in the TSC.

ATTACHMENT 3

Response to Weakness 50/458/9108-03

REFERENCE

Letter - S.J. Collins to J.C. Deddens, dated March 29, 1991

DESCRIPTION

The TSC staff used Procedure EIP-2-001, "Classification of Emergencies," to classify accident conditions. However, the specific nature of the postulated accident scenario demonstrated that the classification procedure does not fully incorporate the intent of the guidance in NUREG-0654 and impeded, to some extent, players' decisions. This resulted in a delay in the declaration of the general emergency (GE) as follows:

- At 10:15 a.m., a large break LOCA was in progress steadily increasing hydrogen concentration, and containment radiation levels indicated core degradation was ensuing at a rapid pace. In addition, with the loss of reactor heat removal (RHR) pumps water injection capability existed, vessel water level was below two-thirds of the core height and dropping rapidly.

- At 10:30 a.m., vessel water level was near the bottom of the core. Significant core damage was obvious without need for a Post Accident Sample System (PASS) sample.

- According to the classification procedure, it was not until 11:00 a.m. that GE conditions were met. The GE was declared 4 minutes later. The ED, who was in Command and Control in the TSC until about 10:50 a.m., remained indecisive for 45 minutes until plant conditions degraded sufficiently to match the emergency action level specific value of an EAL in the procedure for declaration of GE. This precluded early recommendations to off-site authorities.

- The inspection team compared plant conditions to the EAL guidance in NUREG-0654 and concluded that NUREG-0654 required declaration of GE for "any core melt situation" (NUREG-0654 Appendix 1, General Emergency Initiating Condition No. 4). The inspection team concluded that the licensees EALs did not address accident situations for a general emergency in a manner with the same degree of effectiveness and conservatism.

- The inspection team reviewed other EALs, compared them against existing regulatory guidance, and noted that some other EALs were constrained in such a manner that they did not completely meet guidance requirements.

GULF STATES UTILITIES COMPANY'S RESPONSE

EIP-2-001 is based upon the guidelines in NUREG-0654, FEMA REP-1, Revision 1, Appendix 1, and was approved by the NRC in River Bend SSER 2 and with subsequent submittals of changes to the Emergency Plan and EIP-2-001. EIP-2-001 was undergoing a major revision prior to the exercise, is still being reviewed at this time and will be issued when this review is complete. Emphasis is being placed on being as clear as possible in the wording of the EAL and initiating conditions.

The TSC and EOF (which was not operational at the time) personnel did discuss declaring a General Emergency on loss of two fission product barriers with the potential loss of the third between 10:30 a.m. and 10:45 a.m., but it was felt by the players that the containment integrity was not threatened and therefore decided not to declare the General Emergency.

Because of the plant conditions and the information available at the time, it would have been more prudent to declare a General Emergency at or around 10:30 a.m. when containment monitor readings reached 6,500 R/hr and the containment had only one ventilation damper as a barrier to atmosphere. This was discussed with both the TSC and EOF personnel.

ATTACHMENT 4

Response to Weakness 50-458/9108-04

REFERENCE

Letter - S.J. Collins to J.C. Deddens, dated March 29, 1991

DESCRIPTION

During the later parts of the accident sequence, a number of examples of ineffective Command and Control actions were observed involving principal decision makers in the EOF and TSC, as follows:

- In the TSC, Command and Control functions were emerging continuously from the TSC manager instead of the ED.

- The ED in the TSC who had Command and Control responsibilities until the activation of the EOF at 10:50 a.m., and the recovery manager (RM) in the EOF did not appear to appreciate the extent of plant damage, or to take proper actions in response to emergency conditions which were evident at 10:25 a.m. Instead of acting upon the information available and declaring a General Emergency, the ED and RM waited passively for the post-accident containment monitor to reach 10,000 R/hr in order to meet a specific EAL. At 10:31 a.m., an entry in the EOF recovery manager's log stated that a General Emergency may be declared shortly since the emergency director noted that following a large break LOCA the reactor vessel water level was at -284 inches. The EOF log said that a GE will be declared soon (using Block 14, Scenario 2S) of Procedure EIP-2-007, "Protective Action Recommendation Guidelines," based on the 10,000 R/hr reading. From 10:15 to 10:30 a.m., the containment readings increased from 5,000 R/hr to 6,500 R/hr, and read 7,000 R/hr at 10:45 a.m. indicating a clear trend to increasing accumulation of large amounts of fission products in the containment.

  At 10:36 a.m., the RM (not yet in Command and Control) asked the ED in the TSC whether they were approaching GE conditions. At 10:50 a.m., the EOF was declared operational, and at 10:53 a.m., the containment monitor reached 10,000 R/hr. When presented with this reading, the RM was not sure if both the containment monitor and drywell monitor should read 10,000 R/hr before declaring a General Emergency. At 11:04 a.m., the technical advisor at the request of the RM confirmed that two out of three fission product barriers had been breached. The RM finally declared the GE at that time (11:04 a.m.) and made PARs according to Block 14 of Procedure EIP-2-007.

The inspection team concluded that at 10:31 a.m. conditions were clearly in place requiring the use of Block 11 of Procedure EIP-2-007 and corresponding PARs and that a GE should have been declared from the TSC at that time. As a consequence of the ED and RM not acting decisively, a delay occurred in declaring the General Emergency and in implementing commensurate Protective Action Recommendations.

The inspection team noted that Procedure EIP-2-007, page 10 of Attachment 2, Block 11, indicates "For core melt sequences where significant releases from containment are NOT yet taking place, and large amounts of fission products are NOT yet in containment atmosphere, the protective recommendations are to: Evacuate 2 mile radius and Shelter 5 mile downwind.

The inspection team also noted that procedure EIP-2-001, "Classification of Emergencies," pages 41 and 42 under Emergency Action Level GE 4.b states, in part, that: "Other plant conditions exist that make Release of Large Amounts of Radioactivity in a short time possible. A small or large LOCA with failure of the ECCS to perform leading to a core melt degradation of melt in minutes to hours. Loss of containment integrity may be imminent." However, the same EAL appears to set forth a series of Initiating Conditions which were not met at 10:30 a.m.

- The inspection team observed that the EOF was not orderly and information flow as not converging towards the RM in a systematic way. The EOF instead was disorderly and noisy, and the RM toured the EOF requesting information.

GULF STATES UTILITIES COMPANY'S RESPONSE

- The TSC Manager has a strong personality and was very aggressive in the performance of his duties. The Emergency Director, being a different personality, did not show that same degree of aggressiveness and therefore gave the appearance of not being in command and control. This is a unique circumstance because of the two different people involved. In conclusion, GSU believes that the Emergency Director was in command and control of the TSC.

- Although two of three fission product barriers were lost, the Recovery Manager and the Emergency Director did not realize a potential for loss of the third (containment) fission product barrier. The fact that there was only one damper standing between the containment and atmosphere was discussed with them. Furthermore, at 10:15 a.m. the containment monitor read 5000 R/hr and at 10:30 a.m. the monitor read 6500 R/hr and increasing. It would have been prudent to declare the General Emergency at that time and not wait until the monitor read 10,000 R/hr. The Recovery Manager knew that only the

containment monitor needed to read 10,000 R/hr to declare the General Emergency and did not need a second monitor reading to do this.

- The Recovery Manager stated that he was being briefed by the proper individuals prior to those individuals making plant update announcements to the EOF staff. This fact may not have been observed by the evaluator and gave the impression that the Recovery Manager was not informed. The Recovery Manager did tour the EOF requesting additional information he felt was necessary to keep abreast of all that was happening. This activity was performed to ensure he had up-to-date information. This may have given the impression that information was not converging towards the Recovery Manager in a systematic way. The briefing he received prior to plant status updates did allow a systematic flow of information to him. The EOF appeared to be disorderly and noisy, but this is because GSU encourages different players to talk to other EOF personnel to exchange information in a free manner. Everyone keeps up-to-date from different sources. The noise level was due to the extra players in the EOF.

  Discussions were held following the exercise with the individuals involved. Command and control by the Emergency Director was stressed. The prudency of being more conservative to declare the General Emergency earlier was stressed. The systematic flow of information and the need to keep noise level to a minimum were stressed in the discussions.

  GSU presently has training classes for Recovery Managers and Emergency Directors that stress command and control and other factors relating to those positions. GSU will continue to perform this training.

ATTACHMENT 5

Response to Weakness 50-458/9108-05

REFERENCE

Letter - S.J. Collins to J.C. Deddens, dated March 29, 1991

DESCRIPTION

The inspectors had the following observations regarding OSC activities:

- o During the conduct of the emergency exercise, it became clear that OSC existing status boards were inadequate to efficiently display the available manpower pool and its composition; that is, the types and numbers of personnel available in the OSC according to trade. As a consequence, the OSC coordinator was not always aware of his available manpower and its composition. For example, when asked how many plant operators were present, the OSC coordinator made a headcount based on his personal knowledge of their status.

- o The inspection team noted that status boards were not structured in a manner that would effectively keep track of tasks assigned by the TSC staff and/or their prioritization. The status boards did not maintain status accountability and control of tasks being performed by a large number of teams operating simultaneously.

- o For long periods of time, OSC personnel lost track of the status of completion of tasks being performed by in-plant teams. A factor contributing to the disjuncture between the OSC supervising staff and in-plant repair/corrective teams was the absence of adequate means of communication between them.

- o The practice of requiring that technical briefings of OSC teams take place in a location distant from the OSC and from the entry point to the radiological controlled area (i.e., in the TSC) delayed repair efforts. The practice of sending personnel to the TSC for a technical briefing without knowing what the assigned task will entail, and then returning to the OSC for a radiological briefing is a time-consuming procedure which may prevent the proper selection of individuals most qualified for a specific job.

- o Observed team briefings and debriefings appeared to be adequate, but were performed using "ad hoc" briefing checklist forms which had not been incorporated in the licensee's procedures.

GULF STATES UTILITIES COMPANY'S RESPONSE

- OSC status boards have been in review for some time in order to determine the best format to be used for our needs. The status boards will be improved prior to the next exercise in order to best display the available manpower pool and composition, to keep track of tasks assigned and priority, to maintain status accountability and control of tasks being performed, and the status of completed tasks performed by in-plant teams.

- Communications is hampered by not being able to use radios in the power block when the plant is operating. During actual emergency conditions with the plant shutdown, radios would be a normal method of communications. Effective communication is accomplished through the use of the in-plant page/telephone system while the plant is operating.

- Repair teams are not unduly delayed due to technical briefings in the TSC. Briefings in the OSC would require technical personnel to leave the TSC and go to the OSC. They could lose the ability to obtain any new last minute information that may come in to the TSC during the briefing.

  GSU will evaluate this process and determine if any streamlining could be accomplished in both the assigning of tasks and the radiological briefing of individuals before dispatching them to perform the work.

- The process of briefings and debriefings including the use of improved checklists will be reviewed. Changes will be provided in the supplemental response.