

APPENDIX

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

NRC Inspection Report: 50-458/89-46

Operating License: NPF-47

Docket: 50-458

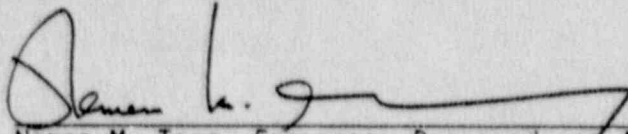
Licensee: Gulf States Utilities

Facility Name: River Bend Station (RBS)

Inspection At: RBS, St. Francisville, Louisiana

Inspection Conducted: December 11-15, 1989

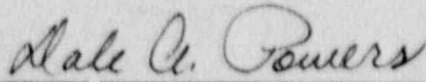
Inspector:

  
Nemen M. Terc, Emergency Preparedness Analyst  
Security and Emergency Preparedness Section

1-31-90

Date

Approved:

  
Dr. D. A. Powers, Chief, Security and  
Emergency Preparedness Section

1-31-90

Date

Inspection Summary

Inspection Conducted December 11-15, 1989 (Report 50-458/89-46)

Areas Inspected: Routine, unannounced inspection of the operational status of the emergency preparedness program, including changes to the emergency plan and implementing procedures, changes to emergency facilities, equipment, instrumentation, and supplies. The inspection also reviewed licensee organization and management control, independent audits of the emergency preparedness program, and training of emergency response personnel.

Results: Within the areas inspected, no violations or deviations were identified. A tour of emergency facilities and a review of the licensee's emergency organization and procedures revealed that the licensee is continuing its efforts to maintain a good quality program. Interviews conducted with a sample of emergency responders indicated that personnel were knowledgeable of their emergency duties, but that additional training and procedure revisions would improve the performance in certain areas. The inspector concluded, based on the results of this inspection, that the operational status of the emergency preparedness program at RBS was adequate.

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DETAILS

1. Persons Contacted

Gulf States Utilities

- \*Dale L. Andrews, Director, Nuclear Training
- J. Bowlby, Shift Supervisor
- J. Boyle, Shift Supervisor
- \*Lyddie L. Broussard, Nuclear Training Representative
- \*John G. Cadwallader, Supervisor - Emergency Planning
- \*T. C. Crouse, Manager - Quality Assurance
- \*William L. Curran, Cajun Electric - Site Representative
- \*David L. Davenport, Nuclear Training Representative
- J. Deddens, Senior Vice President - Nuclear
- \*Mark K. Dreher, Senior Emergency Planner
- \*Peter E. Freehill, Assistant Plant Manager - Outage Management
- P. Freehill, Shift Supervisor
- \*Wayne C. Hardy, Radiation Protection Supervisor
- \*David N. Lorfing, Supervisor - Nuclear Licensing
- \*John C. Maher, Engineer - Nuclear Licensing
- \*W. H. Odell, Manager - Administration
- \*William M. Smith, Emergency Management Specialist
- \*Dennis Spencer, Nuclear Training Representative
- \*Ken E. Suhrke, Manager, Project Management

\*Denotes those present at the exit interview.

The inspector also held discussions with other station and corporate personnel in the areas of security, health physics, operations, training, and emergency response.

2. Followup on Previous Inspection Findings (92701)

(Closed) Deficiency (458/8807-01): Notification Delay - The computer system software used during the 1988 exercise, which was identified as being the cause for the delay in notifying the state and local governments, was corrected on August 29, 1988. In addition, the licensee incorporated a User's Guide on October 18, 1988, to facilitate the use of the computer program used to perform notifications. Pertinent training was completed on January 5, 1989, and a drill conducted on January 25, 1989, showed that during the drill notifications to offsite agencies were completed within 15 minutes.

(Closed) Deficiency (458/8807-02): Failure to Follow Procedure and Inadequate Procedure - During the 1988 exercise a radiation protection technician was not sent to the emergency operations facility (EOF) to perform a habitability survey during a site area emergency. The licensee noted that the procedure did not clearly specify the conditions that would mandate the habitability survey.

The inspector verified that Procedure EIP-2-017, "Operations Support Center-Support Function," was revised on September 30, 1988, to mandate a habitability survey at a site area emergency. In addition, during the 1988 exercise, Attachment 3 of Procedure EIP-2-009, "Medical Emergency," was not used. The inspector noted that retraining of first-aid responders was completed on December 13, 1988.

(Closed) Exercise Weakness (458/8909-01): Apparent Lack of Information Feedback Protocol - During the 1989 exercise some important directives given by the shift supervisors were not carried out. The licensee noted that two procedures existed which addressed effective communication. These procedures are ADM-0022, "Conduct of Operations," and OSP-0009, "Author's Guide/Control and Use of Emergency Operating Procedures." The exercise weakness stemmed from the inability of the control room personnel to maintain awareness of the importance of feedback during communications to ensure that directions are carried out. The inspector noted that the licensee has incorporated, since May 5, 1989, a program to reinforce the importance of proper communication techniques. This included a videotape entitled, "Closed-loop Communications." In addition, discussions with the licensee revealed that a drill was conducted on July 13, 1989. This drill showed that operations personnel and other emergency response personnel performed well and displayed constant awareness of the importance of feedback on closed-loop communications.

(Closed) Exercise Weakness (458/8909-04): Failure to Follow Procedure - During the 1989 exercise, the operations support center (OSC) coordinator did not dispatch a radiation protection technician to accompany an in-plant maintenance repair team. Discussions with the licensee revealed that although Procedure EIP-2-017, "Operations Support Center-Support Function," mandated that a radiation technician accompany every in-plant team, the licensee determined that for that particular activity a radiation protection technician was not needed. As a consequence, the licensee realized that the procedure was too restrictive and did not properly utilize personnel resources during emergency conditions. The procedure was changed on September 25, 1989, to allow the licensee to perform an analysis and evaluation to determine whether or not a radiation technician would be required to accompany a maintenance repair team.

3. Emergency Plan and Implementing Procedures (82701-02.01)

The inspector reviewed changes to the emergency plan and implementing procedures to verify that these changes have not adversely affected the licensee's overall state of emergency preparedness. The inspector also reviewed the licensee's emergency preparedness program to verify if major or significant changes to the emergency plan and implementing procedures had been reviewed, approved, and distributed in accordance with licensee's procedures and 10 CFR 50.54(q) requirements.

The inspector reviewed the licensee's Emergency Plan and Emergency Plan Implementing Procedures, and noted that two revisions were made to their emergency plan. Revision 3 was dated January 24, 1989, and Revision 4 was dated September 28, 1989. Revision 3 pertained to the update of the

Final Safety Analysis Report (FSAR) into the Updated Safety Analysis Report (USAR). Additionally, it incorporated a newly revised set of the Emergency Action Levels (EALs).

Revision 4 of the plan reflected the addition of three new positions in the licensee's emergency response organization. These new positions were: an emergency notification system (ENS) communicator located in the technical support center (TSC), a health physics network (HPN) communicator located in the TSC or EOF, and a control room/TSC communicator located in the control room who is responsible for transmitting information from the control room to the TSC and EOF. These changes were implemented partially in response to findings during the 1989 exercise. In addition, Revision 4 directed the use of a new method for ascertaining the impact of radioactive liquid releases.

The inspector noted that the licensee performed a 10 CFR 50.54(q) review in order to ensure that changes to the plan did not decrease their emergency response readiness. This review was made using Procedure EIP-2-101, "Periodic Review of the Emergency Plan."

The inspector noted that 41 procedure changes were made since September 1988. These changes were submitted in accordance with the requirements of 10 CFR 50, Appendix E. Procedure changes were checked for consistency against other related procedures, and when finalized, they were distributed to users on a timely basis using mechanisms for document control contained in Administrative Procedure SSP-1-001, "Preparation, Revision, and Control of Station Support Manual Procedures."

No violations or deviations were identified in this program area.

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

The inspector toured key emergency facilities and equipment to verify that they were adequately maintained, and to determine if changes made since the last inspection were technically adequate, met NRC requirements and licensee commitments, were appropriately incorporated into the emergency plan and implementing procedures, and had no adverse effect on the licensee's emergency readiness.

The inspector noted that emergency response facilities were equipped in accordance with licensee's emergency procedures, equipment was in place and operable, inventories had been taken periodically, and adequate supplies were available.

The inspector observed that the criteria used for establishing the number of dosimeters was not clear and that the number of dosimeters (i.e., 20 dosimeters with a range of 0-500 mrem, and 20 dosimeters with a range of 0-10 rem) did not take into account those needed for federal and state

officials that would be present at the EOF during an accident. The same consideration applies to TLDs. In addition, the inspector noted that there were no provisions for performing response and operability checks of radiation detection instruments prior to use. Finally, the inspector determined that habitability criteria for emergency response and security facilities were not provided in terms of integrated doses, but rather in terms of dose rates which do not yield the most accurate way of achieving the protection of emergency responders and the general public. The inspector noted that a risk-versus-benefit analysis for each individual facility would provide better guidance to decision makers during accident situations. At the end of the inspection, the licensee was evaluating actions to address these concerns.

The above described dosimetry, response and operability checks of radiation detection instruments, and habitability in ERFs are considered to be an open item pending further NRC review. (458/8946-01)

No violations or deviations were identified in this program area.

5. Organization and Management Control (82701-02.03)

The inspector reviewed the emergency response organization and/or management control systems to determine if changes had been properly incorporated into the emergency plan and implementing procedures and had not adversely affected the licensee's emergency response readiness.

The inspector determined that there were three new positions in the licensee's emergency response organization. These new positions were: an ENS communicator located in the TSC, an HPN communicator located in the TSC or EOF, and a control room/TSC communicator located in the control room who is responsible for transmitting information from the control room to the TSC and EOF. These changes were implemented in response to findings during the 1989 exercise to compensate for the deficient flow of information among the control room, the TSC, and the EOF.

The inspector noted that there were also changes to the emergency planning staff because a senior emergency planner, in charge of the onsite emergency planning program, accepted another position within GSU. Discussions with the licensee staff indicated that the licensee was actively attempting to hire a person with similar background and expertise to fill this position. The licensee is diligently searching for a qualified senior emergency planner to perform the onsite emergency preparedness functions. For the interim, the licensee formally assigned a qualified person to provide necessary coverage to the emergency planning department on a temporary basis until the position is filled permanently.

No violations or deviations were identified in this program area.

6. Training (82701-02.04)

The inspector reviewed the training of emergency responders to verify if changes to the program since the last inspection were incorporated into the training program and to determine if emergency responders were aware of such changes, understood them, and had been properly trained to implement them. The inspector also interviewed a small sample of selected key emergency responders.

The inspector interviewed five teams. Three teams were composed of the shift supervisor, the control operations foreman (COF), and a communicator. One team was composed of the emergency director, the TSC manager, the radiation protection coordinator, and a communicator. One team was composed of the recovery manager, EOF manager, the radiation protection adviser, and a communicator.

Each interview lasted 2 hours and consisted of two parts. One part presented ten conceptual questions dealing with basic technical knowledge required for an adequate emergency response. The other part of the interview consisted of presenting a scenario which directed the interviewees to classify, notify, perform dose assessment, and make protective action recommendations (PARs).

The inspector noted that all teams performed well, but made the following observations:

- ° Four teams were not clear on what the site boundary was, and as a consequence, their definition of a site area emergency became unclear.
- ° Two teams identified 100,000 R/hr as the post-accident containment monitor reading indicating that core damage existed beyond the release of gap activity (the proper value was 10,000 R/hr).
- ° Four teams were not certain that a procedure for correlating core damage to the post-accident containment monitor existed. (The procedure is COP-1050, "Post-Accident Estimation of Fuel Core Damage.")
- ° One team documented on the notification form incorrect protective action recommendations. As a result, the team recommended sheltering and evacuating the same sections.
- ° The use by emergency response personnel of the term "communications" instead of "notifications" was not consistent with regulatory guidance.

When these observations were presented to the licensee's management, they agreed to review Procedure EIP-2-007, "Protective Action Recommendations," in order to simplify the procedure to eliminate confusion pertaining to protective actions in particular sections. In addition, the licensee

agreed to review training lessons and to retrain emergency response personnel as necessary to prevent the recurrence of the above errors.

The above described review and retraining on PAF are considered to be an open item pending further NRC review. (458/8946-02)

No violations or deviations were identified in this program area.

7. Independent Audits (82701-02.05)

The inspector examined independent and internal audit reports for the licensee's emergency preparedness program since the last inspection to determine compliance with the requirements of 10 CFR 50.54(t), and to determine whether licensee commitments and protective actions were implemented in a timely manner. The inspector also examined the licensee's audit program to determine if it had a corrective action system for deficiencies and weaknesses identified during drills and exercises, and to ascertain whether appropriate corrective actions were implemented in a timely manner. The inspector held discussions with the quality assurance staff and examined independent and internal audit reports for the licensee's emergency preparedness program since the last inspection. The inspector also examined the licensee's audit program to determine whether appropriate means existed to record and follow up each item until corrective actions were completed.

The inspector reviewed the annual quality assurance audit of the emergency preparedness program to see if it met the requirements of 10 CFR 50.54(q). The independent review was performed during the period June 20-29, 1989, by a certified lead auditor, three certified auditors, an emergency planning consultant, and a supervisor of emergency planning from another nuclear power facility. This review included the observation of the onsite integrated drill conducted on June 21, 1989. The audit also included: the status of emergency action item tracking, emergency plan implementing procedures, emergency facilities, training of emergency responders, interviews with selected emergency planning personnel and with members of the emergency response organization, and interfaces with the state and local governments.

The inspector noted that the scope and depth of the audit appeared to meet the requirements of 10 CFR 50.54(t), and that the use of additional emergency preparedness expertise outside of the licensee's organization enhanced the quality of the audit.

No violations or deviations were identified in this program area.

8. Exit Interview

The inspector met with licensee representatives denoted in paragraph 1 on December 15, 1989, 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.