



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

April 22, 1992

Docket No. 50-458

MEMORANDUM FOR: Suzanne C. Black, Director  
Project Directorate IV-2  
Division of Reactor Projects III/IV/V

FROM: Seymour H. Weiss, Director  
Non-Power Reactors, Decommissioning and  
Environmental Project Directorate  
Division of Advanced Reactors  
and Special Projects

SUBJECT: RIVER BEND STATION ENVIRONMENTAL ISSUES  
(TAC NO. M79902)

We have completed our review of the issues at the River Bend Station (RBS), that were listed in the staff's April 30, 1991, letter to Gulf States Utility Company (GSU or the licensee). The review was based on the licensee's July 26, 1991, response to the staff's April 30, 1991, letter, a site visit by the staff on January 15-16, 1992, and discussions with local citizens.

A detailed discussion of each of the five issues is contained in the enclosure. Based on the results of our review and the commitments made by the licensee, as set forth in the enclosure, we have concluded that issues have been properly addressed and no additional review is needed. However, the review of issue 4 regarding alternate evacuation routes, appears to be outside the scope of typical environmental issues. Thus, you may choose to have the Emergency Preparedness Branch review our response. This review was performed by Michael Masnik of my staff. Mr. Masnik can be reached on 504-1191.

A handwritten signature in cursive script, reading "S. H. Weiss", is written over the typed name.

Seymour H. Weiss, Director  
Non-Power Reactors, Decommissioning and  
Environmental Project Directorate  
Division of Advanced Reactors  
and Special Projects

Enclosure:  
As stated

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RIVER BEND STATION  
DISCUSSION OF ENVIRONMENTAL ISSUES RAISED IN THE APRIL 30, 1991  
MEMORANDUM TO GSU

1. Herbicide Application for Transmission Line Rights-of-way Clearance

Section 5.5.1.2 of the January 1985 Final Environmental Statement (FES) for the River Bend Station (RBS) states that "Pesticides or herbicides will not be used (ER-OL Section 5.6.1), ..." for the maintenance of transmission rights-of-way. According to Section 3.1 of the Appendix B (Environmental Protection Plan) to the RBS Technical Specifications the licensee may make changes in RBS operations that may affect the environment, provided such activities do not involve an unreviewed environmental question. This section further requires that before engaging in additional operational activities which may significantly affect the environment, Gulf States Utilities Company (GSU or the licensee) shall prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity involves an unreviewed environmental question, GSU shall provide a written evaluation of such activity and obtain prior NRC approval.

In March, 1988, GSU evaluated the change concerning the use of herbicides for controlling vegetation on transmission line rights-of-way associated with RBS and determined that the change did not fit the criteria for an unreviewed environmental question. Therefore, the licensee concluded that it did not require NRC approval prior to implementation.

A member of the GSU staff also discussed telephonically the possible use of herbicides with a member of the NRC staff. The environmental evaluation was prepared on January 23, 1988, and concluded that the use of herbicides would "result in a decrease adverse impact over manual cutting since herbicides will reduce erosion and disturbance to wildlife nests and dens due to mechanical equipment and allows for selection of plant communities beneficial to wildlife." Therefore, the licensee concluded in the environmental evaluation that "the use of herbicides to control vegetation growth on rights-of-way will not result in a "significant" adverse environmental impact." Based on the results of the environmental analysis GSU began using herbicides on the transmission rights-of-way in the vicinity of RBS. GSU formally notified the NRC of the use of herbicides in GSU's Annual Environmental Operating Report (Nonradiological) dated November 23, 1988.

On January 15, 1992, NRC staff met with GSU representatives to discuss this and other environmental issues. The results of the meeting were summarized by D. Pickett (NRC) in a meeting summary dated February 27, 1992. At the January 15, 1992, meeting it was determined that no aerial application of herbicides were used on the RBS lines. Aerial spraying had been used elsewhere in the GSU service area but not at RBS. Manual application had been used along the transmission rights-of-way. The Louisiana Department of Agriculture requires that anyone applying herbicides must be supervised by a

certified applicator. In the Baton Rouge, La. service area (which includes RBS), the licensee exceeds the state requirements and requires contractor applicators that apply herbicides to be certified. GSU has a program to verify proper application by contractors that includes inspections and the requirement for full documentation of activities.

At the conclusion of the discussion the licensee committed to not use aerial spraying to apply herbicides. As stated in the February 27, 1992, meeting summary NRC and GSU later agreed that this commitment not to use aerial spraying along RBS transmission rights-of-way as GSU policy and that GSU would notify NRC staff in writing if aerial spraying was planned for the RBS transmission corridors.

On January 15, 1992, members of the NRC staff examined several transmission rights-of-way road crossings and found that there was minimal disturbance of vegetation and no significant erosion. One member of the NRC staff, M. Masnik, also conducted an aerial overflight of all RBS associated transmission rights-of-way with licensee personnel. Some erosion was observed in the area of highest relief, immediately south and west of the River Bend site. The erosion appeared to be the result of soil disturbance during construction of the right-of-way. The less fertile subsoil, exposed during construction, is less capable of supporting erosion controlling vegetation. There was evidence of some terracing activity on the part of the licensee to control the erosion in these areas. The majority (greater than 95 percent) of the three transmission rights-of-way showed no evidence of erosion or misapplication of herbicides. One other area, not related to the transmission rights-of-way, was found to have some erosion. Downstream of the channelized section of West Creek, where the creek exits a culvert, a section of about 50 meters of eroded stream bank was observed. The GSU representative present during the aerial overflight also observed the erosion and agreed to follow-up on the eroded stretch of stream bank.

The staff has concluded that the licensee properly followed the requirements of the EPP in making the decision to use herbicides, and the licensee is applying the herbicides appropriately utilizing appropriately trained personnel. Apparently no aerial spraying of herbicides has taken place on the River Bend transmission rights-of-way. Some erosion along the transmission rights-of-way was observed; however, it appeared not to be related to inappropriate herbicide application.

## 2. Transmission Tower Shoring Permit and Aerial Inspection of Transmission Rights-of-Way

The base of a transmission tower (structure 276) on a 500kV line near the Amite River north of GSU's McKnight substation is experiencing erosion and the licensee requested and received in 1990 an emergency permit from the U.S. Army Corps of Engineers to repair and stabilize the foundation of the tower. The concern is that the licensee was not conducting monthly aerial inspections of the towers as specified in Section 8.2.1.3 of the Updated Safety Analysis Report (USAR).

Based on the licensee's letter dated July 29, 1991, and the meeting between GSU and NRC personnel held on January 15, 1992, the staff has determined that transmission tower 276 is beyond the transmission grid evaluated for RBS licensing. Therefore, the NRC staff would not normally be informed or involved in evaluating the significance of tower foundation problems.

At the time of RBS licensing, GSU had monthly aerial inspections of the transmission corridors. The frequency of the overflights was stated as monthly in the USAR. In mid-1987, the Beaumont office of GSU changed the frequency of overflights to three times per year. GSU states that this frequency is sufficient, and more frequent overflights would not allow adequate time for the identification and subsequent inspection and correction of problem areas by field crews before the next aerial overflight.

The licensee has agreed to update the USAR to reflect the current aerial inspection program. The issue of compliance by GSU to their USAR has been referred to NRC Region IV.

The staff has concluded that the transmission tower identified in the allegation is outside the transmission system evaluated for RBS licensing and would not normally be evaluated by the NRC staff. The aerial overflight frequency was not specified by any NRC requirement; however, it was a commitment in the USAR. The licensee has agreed to update the USAR to reflect the present overflight frequency. The issue of noncompliance to the USAR has been referred to NRC Region IV personnel. No environmental impact attributed to the failure to make frequent overflights of the RBS transmission corridors was observed during the staff overflight.

### 3. Sediment Buildup in the Man-Made Channel of West Creek

A number of RBS licensing documents, including the USAR, the 1985 Final Environmental Statement, the Safety Evaluation Report, and the Supplemental Safety Evaluation Report states that the licensee will periodically monitor deposited sediment, accumulated vegetation, and debris in the man-made portion of the West Creek. The commitment was made by the licensee that if the accumulated sediment buildup is greater than one foot deep, the channel will be cleaned. The concern is that the buildup of sediment will impede the flow of water through the channel. The staff in its letter to GSU, dated April 30, 1991, requested that the licensee provide documentation concerning inspection and maintenance efforts performed in compliance with the commitment to maintain the waterway. The licensee in their response of July 29, 1991, stated that the last sediment removal program in West Creek was completed in 1985. The licensee submitted in their response of July 29, 1991, the results of surveys conducted between 1985 and 1990. A review of the survey results indicate a gradual buildup of sediment in the West Creek over the years, with some transects averaging greater than 12 inches of sediment, however, the overall depth of sediment in the creek averaged less than the 12 inch limit. Based on the results of the 1990 survey it is likely that sediment removal will be necessary soon.



On January 15, 1992, the NRC staff inspected the West Creek waterway. Sedimentation of the waterway was evident, however, the staff could not determine the extent. The sediment level on January 15, 1992, would not have impeded the flow of water to any significant extent at high water levels due to the design of the watercourse and the unconsolidated consistency of the sediments. The Fabriform (grout-filled nylon fabric) channel is 34 m (110 feet) wide at the top and 15.5 m (50 feet) wide at the base. The sediment in the watercourse does provide a beneficial habitat for wildlife as well as a substrate for aquatic emergent vegetation.

The staff has concluded that the licensee has an effective program to monitor the sedimentation, and the accumulation of debris in the West Creek channel. Although there has been some buildup of sediment in the man-made portion of the West Creek the extent of the sedimentation would not result in any appreciable decrease in the capacity of the creek divert flow from the site. Furthermore, the deposited sediment and associated vegetation does provide some benefit to wildlife.

#### 4. Evacuation Route to the Alternate Evacuation Point

Emergency Implementing Procedure (EIP) 2-026 "Evacuation" describes the route to the Alternate Evacuation Point. There has been some confusion over the correct name of the road along a portion of the evacuation route. The map of the route, however, is correct, the confusion arises over the name associated with various segments of the road. Additionally, the concern was raised that erosion due to periodic flooding at the base of a transmission line tower and along sections of the route may hamper evacuation.

GSU, in their July 29, 1991, response stated that there is confusion in the correct name of the various sections of the road along a portion of the alternate evacuation route. The licensee committed to updating EIP-2-206 to distinguish between Louisiana Highway 965 and West Feliciana Parish 7 Road to avoid any further confusion. The licensee stated that the evacuation route would only be used by plant personnel in the event that the primary route was closed. The public would not use this route. All site personnel are familiarized with the alternate assembly point and evacuation route during the annual site General Employee Training (GET). During an actual emergency requiring the evacuation of plant personnel the licensee will have security personnel and signs along the route.

The licensee also stated in their July 29, 1991, response that although there has been some flooding and minor erosion in and near Grants Bayou in the vicinity of the Alternate Evacuation Point Assembly Area, neither the assembly area nor the road to and from the assembly area is affected.

On January 15, 1992, the NRC staff toured the site and walked a portion of the evacuation route. No evidence of erosion or recent flooding severe enough to significantly hamper or prevent the evacuation of site personnel was observed. Representatives of GSU stated that they could not recall any past flooding of the route. The staff did observe, however, that the actual Alternative Evacuation Point Assembly Area may not be sufficiently large enough to

comfortably accommodate all station personnel in the event of an actual evacuation. The licensee agreed to evaluate the adequacy of the assembly area.

The staff has concluded that although there was some confusion on the appropriate names of the road along the alternate evacuation route this confusion would likely not have resulted in personnel being unable to get to the alternate assembly point. Furthermore, the licensee has agreed to correct the confusion in EIP-2-206. The NRC staff also concludes that erosion or the possibility of flooding along the alternate route to the extent that it would impede evacuation is unlikely.

5. Flow Restrictions in Alligator Bayou Resulting from the River Access Road

The licensee built the River Access Road between the site and the Mississippi River. Due to the local topography the road was constructed of fill and crosses the Alligator Bayou perpendicularly. The road bed essentially dams the flow of the Alligator Bayou. The installation of large culverts along one stretch of the road bed allows the continued flow of Alligator Bayou. The concern was raised that during periods of high flow in Alligator Bayou, the culverts would not be able to handle the flow, the water level behind the River Access Road in Alligator Bayou would rise and overtop the low point in the levee along the Mississippi River. Overtopping of the levee and River Road along its summit occurred naturally prior to RBS construction from both high river stage and rainfall induced flooding in Alligator Bayou. This overtopping would result in damage to River Road which parallels the Mississippi River. The licensee acknowledges that the construction of the River Access Road restricts flow in Alligator Bayou. As stated in the FES (Section 5.3.3.1) for RBS, the flow restrictions caused by road construction in the floodplain are not significant. The staff further states in the FES that "the applicant's policy of repairing erosion caused by overtopping of the River Road in the vicinity of the low point will alleviate the only damage that may, in part, be induced by the [River Access] road crossing."

The staff inspected on January 15, 1992, both the River Access Road and associated culverts and the low point along River Road where overtopping of the levee is most likely. There was evidence that overtopping of the road in the vicinity of the low point had occurred in the recent past, however, the road was passible. The licensee stated that the repair of the road was the responsibility of the local Police Jury, however, the GSU has committed to maintaining the road in the vicinity of the low point in the levee.

The NRC staff reaffirms its conclusion in the FES for RBS that the hydraulic effects of the construction of the River Access Road on the Alligator Bayou with respect to flooding is not significant. The licensee's commitment to keep the low point in the River Road in repair alleviates the only likely flood damage that may be associated with the River Access Road.