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UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

IN THE MATTER OF

Docket Nos. 50-458 OL  
50-459 OL

GULF STATES UTILITIES  
COMPANY, et al

(ASLBP No. 82-468-01-OL)

(River Bend Station, Unit 1  
and 2)

March 15, 1983

SUPPLEMENTAL PETITION OF  
THE STATE OF LOUISIANA

The State of Louisiana, appearing herein through William J. Guste, Jr. and other undersigned counsel, respectfully submits the following Supplemental Petition as required by 10 CFR 2.714(b).

On October 5, 1981, the State of Louisiana filed a "Petition For Leave To Intervene In Facility Operating License Proceedings". On February 10, 1982, in its "Memorandum and Order Ruling on Petitions to Intervene," this Honorable Licensing Board ordered "that the State of Louisiana shall be admitted as an interested state under Section 2.715 to any proceedings which may result from the filing of an admissible contention and may be admitted as a party under Section 2.714 contingent upon its filing an admissible contention." On August 20, 1982, this Board ordered contentions to be filed by December 15, 1982. On December 2, 1982, Louisiana filed a "Motion for Extension of Time within which

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to File Contentions." By order of December 21, 1982, Louisiana's Motion for Extension of Time was granted in part and this Board ordered the State of Louisiana to file contentions by March 15, 1983.

Louisiana notes that under the Rules of Practice, petitioners under Section 2.714 are not required to submit contentions until fifteen (15) days prior to the special pre-hearing conference. Louisiana respectfully trusts therefore that if any of its contentions are found to be inadequate, it will be allowed to amend them until fifteen (15) days prior to the special pre-hearing conference set for Tuesday, May 24, 1983.

Louisiana respectfully requests this Board to disregard and treat as having never been filed its contentions of December 15, 1982 and now supplements its Petition For Leave To Intervene by submitting the following contentions:

CONTENTION 1

Applicants have "failed to allow for proper consideration of the uncertainties concerning the long-term isolation of high-level and transuranic wastes, and ...failed[ed] to allow for proper consideration of the health, socioeconomic and cumulative effects of fuel-cycle activities."<sup>1</sup>

Basis

Under the provisions of the National Environmental

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<sup>1</sup> NRDC v. NRC, Civ. Action No. 74-1586 (D.C. Cir., April 27, 1982), slip opinion, pp. 11-12.

Policy Act, (NEPA) 42 USC 4332 et seq., it is clearly required "that environmental concerns be integrated into the very process of agency decisionmaking" and that "environmental values and consequences [must] have been considered during the planning stage." It is further clear under NEPA that the contribution of the fuel-cycle to the environmental costs of licensing an individual nuclear power reactor must be considered. Applicant has failed to consider, and has not shown, the environmental cost of the uranium fuel-cycle with respect to River Bend Station, Unit 1.

#### CONTENTION 2

Applicant's Emergency Plan does not provide reasonable assurance that appropriate measures can and will be taken in the event of an emergency to protect public health and safety and prevent damage to property.

#### Basis

10 CFR Part 50, Appendix E (Emergency Plans for Production and Utilization Facilities), Section III, ("The Final Safety Analysis Report"), provides:

"The Final Safety Analysis Report shall contain plans for coping with emergencies. The details of these plans and the details of their implementation need not be included, but the plans submitted must include a description of the elements set out in section IV [Content of Emergency Plans] to an extent sufficient to demonstrate that the plans provide reasonable assurance that appropriate measures can and will be taken in the event of an emergency to protect public health and safety and prevent damage to property."

Further, Section IV to Appendix E ("Content of Emergency Plans") provides that emergency plans shall contain "procedures for use in emergencies."

In its FSAR, Sec. 13.3, "Emergency Planning," Applicant has failed to adequately address the requirements of 10 CFR Part 50, Appendix E, Sections III and IV, especially with respect to the evacuation of personnel. Specifically, Applicant has failed to affirmatively demonstrate that appropriate measures can and will be taken to assure the adequate evacuation and care of patients in Parish and State hospitals within the Emergency Planning Zone (EPZ) and the evacuation and security of prisoners in the Pointe Coupee Parish jail, West Feliciana Parish jail and Dixon Correctional Institute. By way of example, it is apparent from reading of Appendix D of Section 13.3 of the FSAR (especially Section II, "Evacuation Routes" and Section III, "Special Evacuation Areas") that applicant assumes that school buses will be available for use and available in sufficient numbers to evacuate ambulatory patients. Such an assumption is untenable.

Further, applicant has failed to vary the perimeter of the plume exposure EPZ to take into account the particular characteristics of the area surrounding the site location. As may be seen from Appendix D, Map 6 ("River Bend Parishes Evacuation - 10 Mile Emergency Planning Zone") of Section 13.3 of the FSAR, the EPZ is an area with a radius of 10 miles. However, NUREG-0654 (Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in

Support of Nuclear Power Plants) states on page 11: "Although the radius for the EPZ implies a circular area, the actual shape would depend upon the characteristics of a particular site." (See also Figure 1, "Concept of Emergency Planning Zone," and Table 1, "Guidance on Size of the Emergency Planning Zone," pages 16-17, especially the notation to Table 1 stating: "Judgment should be used in adopting this distance based upon considerations of local conditions...")

### CONTENTION 3

Applicant has failed to adequately consider the effect of a release of radioactive materials into surface and ground drinking water supplies.

#### Basis

River Bend Station, five (5) miles south of St. Francisville, Louisiana, is situated geographically and geologically in such a manner that release of radioactive materials would have the potential to affect both surface drinking water supplies, namely the Mississippi River, and ground water supplies, namely the Baton Rouge Regional Acquifer.

The Mississippi River serves as the sole source of drinking water for approximately 1 1/2 - 2 million people (the figure varies due to the seasonal influx of visitors, tourists and workers) and numerous commercial enterprises using this water for food and beverage preparation and production, down river from St. Francisville, and additionally is used by numerous industries which discharge varying quantities and types of

effluents into the river. River Bend Station is directly situated on top of a shallow aquifer known as the Shallow Upland Pleistocene Terrace Deposit which recharges directly into the Mississippi River. Applicant has failed to adequately consider the effect of an accidental or planned release of radioactive materials on the health and welfare of those persons for whom the Mississippi River is the sole source of potable water, and has additionally failed to adequately consider the synergetic effect of such radioactive materials combining with industrial effluents discharged into the river.

Further, River Bend Station is situated in the recharged zone of the Baton Rouge Regional Aquifer, which is the sole source of drinking water for in excess of 400,000 persons and numerous commercial enterprises using this water for food and beverage preparation and production. Applicant has failed to consider the effect of the contamination of the Baton Rouge Regional Aquifer by radioactivity on the health and welfare of those persons and commercial enterprises for whom this aquifer is the sole source of potable water.

#### CONTENTION 4

Applicants have not adequately considered the effect of a failure of the Old River control structure on the safe operation of River Bend Station.

#### Basis

70 miles North of Baton Rouge, and thus North of the

River Bend Station site, the Mississippi River is attempting to divert its course to the Atchafalaya River to take advantage of a shorter, steeper route to the Gulf of Mexico. It is prevented from doing so only by an antiquated and structurally questionable barrier known as the Old River control structure. Should this structure fail, the Mississippi River would naturally divert its course away from its present channel resulting in the formation of miles of silt deposits just downstream of the structure and reducing the flow of fresh water through its present course by more than half. Engineer Ralph Kazmann of Louisiana State University estimates there is a 50-50 chance that the Old River control structure will fail during the next 20 to 40 years, corresponding roughly to the operating life of River Bend Station.

Applicant's have failed to adequately consider the consequences of such failure on the safe operation of River Bend Station, Unit 1, specifically, the effect of a reduced flow and heavy siltation of the Mississippi River on the intake of cooling water, on the relative increase in thermal pollution resulting from the discharge of cooling water into a reduced volume of river water, and the possible effect of salt water intrusion into cooling and other safety and non-safety related systems utilizing Mississippi River water.

#### CONTENTION 5

Applicant has failed to consider the effect of the resumption and continuation of construction activities on Unit 2 on the safe operation of Unit 1.

Basis

Section 1.1, "Introduction," of the Applicant's FSAR, Vol. 1 reads in pertinent part on page 1.1-1 that:

"Unit 1 is scheduled for completion in October 1983, and commercial operation is expected to begin in April 1984. Unit 2 is currently not scheduled and construction has been halted."

There is no indication as to whether or not construction has been permanently halted, or whether or not construction will resume again on Unit 2. It is therefore reasonable to assume that Applicant may resume construction on Unit 2.

10 CFR 50.34(b)(6)(vii) provides:

"On or after February 5, 1979, applicants who apply for operating licenses for nuclear powerplants to be operated on multiunit sites shall include an evaluation of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multiunit sites."

Applicant must therefore "include an evaluation of the potential hazards to the structures, systems, and components important to the safety of operating units resulting from construction activities" on Unit 2 as they will affect operations of Unit 1.

CONTENTION 6

Applicant has failed to provide adequate assurance that River Bend Station components and systems relying on



Mississippi River water for their operation will be adequately protected against infestation of Asiatic Clams (Corbicula leana).

Basis

I&E Bulletin 81-03 "Flow Blockage of Cooling Water to Safety System Components by Corbicula sp. (Asiatic Clam) and Mytilus sp. (Mussel)" raised a unique issue with the potential to affect numerous safety and non-safety related components at River Bend Station, namely infestation of Asiatic Clams into systems and components utilizing Mississippi River water.

In correspondence between Applicant and NRC Region IV, Office of Inspection and Enforcement, Applicant addressed the issue and "committed to perform an assessment of the components and systems for their adequacy to prevent or detect fouling." In its letter of February 14, 1983, (a copy of which is attached), Applicant answered Region IV Inspection and Enforcement Director Karl V. Seyfrit's request for additional information, and stated that they "...[did] not have sufficient data to make a detailed assessment of intrusion potential," and that "[c]hlorination treatment will provide control [of infestations]."

The State of Louisiana believes that chlorination treatment alone will fail to provide control of Asiatic Clams, and therefore feels that Applicant has failed to affirmatively demonstrate that it can and will control such infestation in such a manner that components and systems relying on

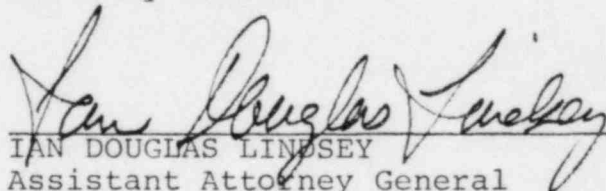
Mississippi River water for their operation will be adequately protected.

THEREFORE, the foregoing having been considered, the State of Louisiana respectfully requests that its contentions be accepted and that it be permitted to be admitted as a party to these proceedings.

Respectfully submitted,

STATE OF LOUISIANA

WILLIAM J. GUSTE, JR.  
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Dated at Baton Rouge, Louisiana,  
this 15th day of March, 1983.

GULF STATES UTILITIES COMPANY

February 14, 1983  
RBG-14,374  
File Nos. G9.5, G9.33.1

Mr. Karl V. Seyfrit, Director  
U. S. Nuclear Regulatory Commission  
Region IV, Office of Inspection and Enforcement  
611 Ryan Plaza Drive, Suite 1000  
Arlington, Texas 76011

FEB 16 1983

Dear Mr. Seyfrit:

River Bend Station Units 1 and 2  
Refer To: RIV  
Docket Nos. 50-458/I&E Bulletin 81-03  
50-459/I&E Bulletin 81-03

This letter is in response to your December 10, 1982, request for additional information concerning Gulf States Utilities Company's December 9, 1981 final response to I&E Bulletin 81-03, "Flow Blockage of Cooling Water to Safety System Components by Corbicula sp. (Asiatic Clam) and Mytilus sp. (Mussel)." The information requested focuses on two items. The first, was to provide an assessment of Corbicula sp. or Mytilus sp. intrusion potential once River Bend Station (RBS) becomes operational. The second, was concerning the effectiveness of preventive chlorination practices during operation.

In GSU's July 10, 1981 letter we stated that Chapter 2, Section 2.7.2.4 of the Environmental Report-Construction Permit Stage (ER-CPS) contained the results of Louisiana State University studies performed for GSU on the middle and upper Mississippi River. The studies did not identify the mussel (Mutilus sp.) in the river. The studies did identify the the Asiatic clam (Corbicula sp.) as the principal bivalve mollusk in the samples. Although a few other mollusks occur in the river near the site, only the Asiatic clam (Corbicula sp.) is likely to be entrained in the RBS cooling water systems in any substantial quantities. There are, as yet, no data on the ambient densities of the clam's planktonic veliger larvae (small, unshelled, free-living stages), which will be the most vulnerable life-stage for entrainment by the cooling tower makeup water intake. Monitoring for larval clam densities in the immediate vicinity of the RBS intake will be initiated as spawning temperatures are reached (mid-to-late-spring) in 1983. Unless pronounced increases occur in the ambient densities of juvenile and adult clams near the intake, the potential exists for entrainment of only a few hundreds to a few

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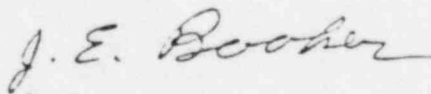
thousands of these older individuals per day during the summer and autumn months. During normal operating conditions, most, if not all, of the larger shelled individuals (as well as fragments of those crushed in pumps) will be removed by the strainers and upflow clarifiers. At this time, GSU does not have sufficient data to make a detailed assessment of intrusion potential. Entrainment of the planktonic veliger larvae is expected to be in direct proportion to their ambient densities in the river. Until special monitoring for these larvae demonstrates their absence or scarcity, GSU must assume that sufficient quantities will be entrained to produce infestations unless controlled. Chlorination treatment will provide this control.

The RBS design provides for the introduction of sodium hypochlorite at three points in plant cooling systems: (1) the makeup water intake line upstream of the clarifiers; (2) the service water pump discharge; and (3) the circulating water system downstream of the circulating water pump. Chlorination of the intake line is not intended for biofouling control, but rather to enhance the performance of polyelectrolytes used in the clarification process. Therefore, the feedrates and concentrations will vary with influent water quality and can only be established on the basis of clarifier operating experience. Chlorination of the service water will be continuous by means of metered pumps to maintain a chlorine residual of 0.03 to 0.40 ppm. It is estimated that the circulating water system will be chlorinated to a concentration of at least 5 ppm for about 30 minutes three times per day during the warmer months and once or twice per day during winter. These practices should be adequate to maintain lethally-toxic levels of chlorine for larval Corbicula under normal operating conditions.

GSU is developing a routine surveillance schedule to be implemented by the RBS Operation's Maintenance Group. The surveillance program is designed to detect flow blockage in potentially affected systems and components listed in our July 10, 1981 letter.

GSU trusts this response satisfactorily answers your concerns. We will be glad to discuss any further comments you may have concerning our response.

Sincerely,



J. E. Booker  
Manager-Engineering,  
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River Bend Nuclear Group

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF

GULF STATES UTILITIES  
COMPANY, et al

DOCKET NOS. 50-458 OL  
50-459 OL

(River Bend Station, Unit 1  
and 2)

CERTIFICATE OF SERVICE

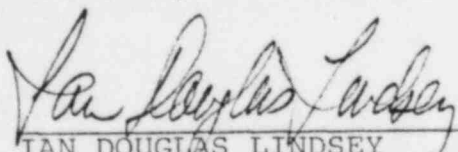
I hereby certify that copies of the Supplemental Petition of the State of Louisiana in the above-captioned proceeding have been served on the following by deposit in the United States mail, postage prepaid, first class, this 15th day of March, 1983.

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