ISSUE DATE: 7/17/84

PROPOSED MINUTES FOR THE
RIVER BEND NUCLEAR STATION SUBCOMMITTEE MEETING
JUNE 7-8, 1984 - BATON ROUGE, LOUISIANA

The River Bend Subcommittee met in open session to review Gulf States Utilities Company's and Cajun Electric Power Cooperative's application to operate the one unit BWR, River Bend. The meeting was held June 7-8, 1984. Prior to the meeting on June 8, 1984, the Subcommittee toured the River Bend facilities. The meeting convened at 1:00 p.m. on June 7, 1984, and concluded for the day at 7:00 p.m. The meeting reconvened on June 8, 1984 at 8:30 a.m. and ended at 5:00 p.m. One written statement from a member of the public was submitted to the Subcommittee. Four oral statements were made by members of the public.

Copies of the agenda, attendance list, the written public statement and the Federal Register Notice are attached as enclosures 1, 2, 3, and 4. A copy of the meeting handouts and other documents provided to the Subcommittee will be filed with the office copy of the minutes.

ACRS Members in attendance were: D. Okrent, Chairman, and J. Ebersole. Also in attendance were ACRS Consultants: T. Theofanous and M. Trifunac. G. Quittschreiber was the designated federal official for the meeting.

NRC STAFF'S REPORT E. Weinkam, NRR/DL Project Manager
J. Jaudon, R IV
D. Allison, I&E

E. Weinkam open the meeting's presentations with a brief description of the "key" or unique features of the River Bend design. These features were described as follows:

- Two safety grade containment coolers in lieu of containment sprays are used to condense bypass steam. No containment sprays are provided in the River Bend design. The coolers are supplied with normal station service water (water from the turbine building chiller system) at all times with the exception of accident conditions or the loss of offsite power. In these two cases water to the coolers are supplied by the standby emergency service water system which is cooled by the ultimate heat sink. The coolers are automatically initiated on high containment pressure and have an interlock to delay initiation for ten minutes upon receipt of a high drywell pressure signal. The water supply for the coolers is automatically isolated (to preclude an overcooling event) at a -0.43 psig in the containment.

- The drywell of the containment is conservatively designed to withstand a negative pressure differential of 20 psi, thus, no drywell vaccum breakers are provided in the River Bend design.

- The smaller drywell pool volume of the River Bend design, obviates the need for automatic suppression pool make up during an accident.

- A positive leakage control system is provided to minimize fission product release from the main steamline and process lines penetrating the containment which are not vented to the standby gas treatment system or the fuel building charcoal filtration system. This system uses safety grade Category I air compressors and are manually actuated.

- A Mechanical draft, Seismic category I, and tornado missle protected cooling tower is employed as the ultimate heat sink for River Bend. Make up water to the tower is provided from the Mississippi River and from shallow and deep wells in the area of River Bend.

At the time of the meeting, there existed 18 open items, 64 confirmatory issues and 8 licensing conditions from the NRC Staff's review of River Bend. E. Weinkam pointed out to the Subcommittee that the NRC Staff does not forsee any problems that may preclude the resolution of these issues and delay the licensing of River Bend. The following open issues were highlighted by E. Weinkam.

Issue (1) The NRC Staff has requested that GSU provide assurance that the accumulation from the local intense precipitation in the Unit 2 evacuation will not produce hydrostatic loads on Unit 1 safety structures in excess of what the structures were originally designed for. In response to the Subcommittee's questions, E. Weinkam mentioned that the Staff at the time of the meeting was reviewing information provided by GSU which showed that the accumulation from the Probable Maximum Precipitation would not produce any excessive hydrostatic loads on the Unit 1 structures.

Issue (9) GSu believes that the existing design of the bypassed and inoperable indication in the control room complies with the guidance provided in Regulatory 1.47. The staff believes that a positive indication of protection system status is not provided to the operator when essential support systems are bypassed or rendered inoperable.

Issue (10) The Staff requests that GSU provide for review the qualification program for their Transamerica Delaval R-48 emergency diesel generators.

Issue (13) The Staff disagrees with the applicant on the magnitude and the time for a fire to spread and engulf the control room and for the time for the operator to manually isolate certain systems in the control room. Thus, the Staff believes that sufficient electrical isolation from the control room, as a consequence of fire, is not provided

in the River Bend alternate safe shutdown design. The Staff requests that GSU modify both their alternate safe shutdown system and procedures to meet the requirements for alternate shutdown capability.

Issue (14) The power sources for the intraplant communication system are not seismically qualified. The Staff requests that the applicant show that adequate communication will be maintained following a seismic event and/or for an extended loss of offsite power.

Issue (15) Certain portions of the lighting power supply for the main control room and other safety areas of the plant are not seismically qualified. The NRC Staff requests that GSU provide adequate assurance that sufficient lighting will be available following a seismic event.

D. Okrent asked why hydrogen control for River Bend was categorized as a confirmatory issue. E. Weinkam responded by mentioning that hydrogen control for Mark III plants is a generic issue and that GSU is participating with Hydrogen Control Owners Group to resolve the issue of hydrogen control. If the HCOG does not achieve a satisfactory closure of the issue by the time of licensing then some interim facilities will be required. D. Okrent considered the response to be an unsatisfactory definition of a confirmatory issue. He asked whether there were any other confirmatory issues like hydrogen control where it is unclear how the issue will be resolved technically.

In response to a question raised by J. Ebersole, E. Weinkam mentioned that potential dam failures upstream of the River Bend site do not pose a flooding problem (as they do for Grand Gulf) since the Station is

located on a bluff overlooking the Mississippi River at a plant grade of elevation 95 ft MSL and the west bank of the Mississippi is at an elevation of 57.5 ft MSL.

In reference to license condition 3, fuel rod internal pressure, D. Okrent asked whether GE and the NRC Staff believes it is crucial that internal fuel rod pressure not exceed reactor coolant system pressure. He wondered whether GE will take the position that fuel rod internal pressure is to be kept below system pressure or that the internal pressure can exceed system pressure by a certain amount. J. Quirk, GE, responded that GE believes that the performance of the rods will not be degraded to any large degree with fuel rod pressure greater than coolant system pressure.

Two contentions have been admitted by the ASLB for litigation. One contention is GSU failure to provide adequate assurance that the components and systems relying on Mississippi water for cooling will be protected against infestation from asiatic clams. The other contention concerns the failure of the Old River Control Structure and its effect on the safe operation of River Bend. Failure of the structure is conjectured to seriously reduce the flow of the Mississippi River and as a consequence influence the safe operation of the River Bend Station.

J. Jaudon summarized the enforcement history for River Bend. In a review of the violations against River Bend, there has been only one severity level III violation cited for River Bend. This violation involved the failure of GSU to properly report a construction deficiency under 10 CFR 50.55(e). No civil penalty was assessed with this violation on the basis of the prompt action taken by GSU and SWEC. Two Systematic

Assessment of Licensee Performance have been performed for River Bend. In the area rated, GSU has had no Category 3 ratings (increased licensee performance and NRC surveillance is required). In the most recent SALP GSU management control of the River Bend project has been given a Category I rating. D. Okrent asked whether J. Jaudon would be surprised if a large number of deficiencies in quality turned up in the next year, in view of the SALP ratings. J. Jaudon replied that he would not be surprised given that certain deficiencies will not become apparent until the startup testing surfaces them.

River Bend is the fourth plant design to be inspected under the NRC interoffice Integrated Design Inspection program, the others being Callaway, Byron, and Seabrook. The NRC team leader for the River Bend IDI, D. Allison, described the recently completed IDI (April 19-May 8, 1984) on River Bend and presented the preliminary findings of the IDI. He mentioned that the IDI team saw high quality work in those safety structures and system design reviewed but identified problems in the following areas:

- There are problems in both the modeling and the stress analysis performed on the ADS discharge lines which employ ball joints. The ball joints serve to take the loads off the discharge nozzle of the ADS valves in the main steamline piping.

- The anchorage for the radial shear bar or "Z" bar located in the shield building is of insufficient length and detailing and does not conform to the ACI codes regarding the anchorage of such reinforcements. Stone and Webster Engineering Corporation (SWEC) is currently performing a reanalysis which they believe will show that the anchorage is technically adequate given the reduction in shear loads to the containment shield building by the annular concrete fill.

- The IDI team questioned the SWEC calculations which are being used to justify the lack of reinforcement in the auxiliary building basemat. The ACI codes specify two ways to check for shear loads

in such structures. SWEC used a third way that was not based on either of the two ACI code methods.

- Incorrect values in the RHR flowrate calculations were used. In particular, where GE/SWEC interface requirements dictated to place orifices as necessary to limit pump runout flow to 6,060 gpm, SWEC used an incorrect flowrate of 5,700 gpm. There is a chance that additional orifices in the RHR system will be needed as a result of this error.

- There are errors in the calculation of post-LOCA flooding effects. In one part of the calculation, the warning time for the operator of a pump or valve leak in the RHR pump room is required. The calculation of this warning time took into account the leakage from the RHR pumps, however, failed to take into account the leakage from two other pumps located in the room which will have a greater capacity for leakage.

- SWEC made an erroneous assumption that there is no need for the accumulator check valves located in the ADS valve air supply lines to be leak tight. Leak tight checking is not provided. Technical specifications will be necessary to keep the accumulators at 150 psi and to ensure that leak testing is performed on the accumulator check valves.

The IDI team will issue their report on the River Bend by the end of July 1984, at which time they will make known whether further inspection of the River Bend design or licensing action is warranted.

APPLICANT PRESENTATIONS

Containment Systems - D. Lorfing, C. Lambert, L. England, T. McIntyre, and E. Zoch.

D. Lorfing started the GSU presentations with a brief overview of the major differences between River Bend's containment and other Mark III's. He reviewed those features previously discussed in the NRC presentations with the following elaborations:

Unit Coolers in Lieu of Sprays - River Bend's design never included containment sprays. At the time that the initial design of River Bend was conceived, GSU requested SWEC to provide a containment design which would eliminate the need for containment vaccum breakers. The breakers were employed in the GE Standard design to mitigate the effects of an overcooling and depressurization transient resulting from an inadvertant operation of containment sprays. Containment sprays are utilized in the GE Standard design and in the Perry, Grand Gulf, and Clinton designs to address the problem of steam bypass of the suppression pool. In answer to both the problem of overcooling events and the need for containment vaccum breakers, and the issue of suppression pool bypass, SWEC upgraded the design of the existing containment unit coolers from non safety grade to safety grade.

Inadvertant operation of the unit coolers produces a less severe overcooling event than what would be expected from the inadvertant operation of containment sprays. River Bend's free standing steel containment is designed for a negative pressure differential of 0.6 psi. The unit coolers automatically isolate of a pressure of 0.43 psi.

No Drywell Vaccum Breakers - Unlike other Mark III's, River Bend does not employ vaccum breakers for the drywell depressurization event following a LOCA. The drywell is designed for a negative 20 psid. The GSU/SWEC's analyses of the depressurization (which assumes instantaneous condensation of steam on the drywell, ECCS flow from the reactor vessel is at suppression pool temperatures, and all air is purged from the drywell during the blowdown) event shows that the worst case maximum negative pressure in the drywell is 19.4 psid.

No Upper Pool Dump - River Bend's drywell holdup volume design has been reduced in order to obviate the need for automatic suppression pool make up during an accident. The smaller volume has come about by reducing the height of the weir wall, raising the height of the drywell hold up pool with a concrete fill and sealing the reactor pedestal cavity from the drywell holdup pool. Since water is not held up as much in the drywell and River Bend does not employ containment sprays an upper pool dump is not needed to maintain ECCS pump NPSH and suppression pool vent coverage during an accident.

Noting that GSU plans to seal the reactor vessel pedestal cavity from the drywell holdup volume (a door exists for construction purposes between the reactor pedestal cavity and the drywell holdup volume), T. Theofanous asked GSU to consider the implications of the cavity being sealed from the drywell in the event of a severe accident where the molten core drops into the cavity. He mentioned that from the point of view of severe accidents, it may be prudent to leave the cavity unsealed.

C. Lambert next discussed the design of River Bend with respect SRV/LOCA hydrodynamic loads. He mentioned that for the SRVs loads, River Bend complies with the criteria given in NUREG-0802. For the LOCA hydrodynamic loads, he noted that GSU/SWEC had recently adopted the criteria given in draft NUREG-0978 with one exception. The exception to the NUREG criteria is the use of River Bend specific criteria in the area of reverse vent clearing following a LOCA. GSU/SWEC contend with the Staff that the hydrodynamic forces on the suppression pool structures as a result of reverse vent clearing will be negligible because drywell depressurization is slow. The Staff disagrees with the depressurization being slow and has requested GSU to assess the dynamic loads associated with reverse vent clearing per the criteria given in NUREG-0978.

L. England next provided the status of River Bend with respect to the Humphrey's issues.

The Humphreys issues have been evaluated by GSU and 57 out of the total 66 issues have been completely resolved either through the Mark III Owners Group activities or plant specifically by GSU. The remaining 9 issues are on a path toward resolution in the near future. Two issues of the remaining 9 issues have been identified by the NRC Staff as both warranting further review. The two issues are (1) the effects of structural encroachments over the suppression pool on pool swell loads and impact loads, and (2) the response of the RHR system in the steam condensing mode and nearby structures located in the suppression pool to the steam condensation phenomena. On the second issue, the applicant along with other members of the Owners Group have committed not to use the RHR system in the steam condensation mode pending further analyses on GE and the Owners Group part.

To close the issue of encroachment effects on pool swell, the applicant pointed out to the Subcommittee that they expect to resolve the encroachment issue with the results of testing currently be performed by the Mark III Owners Group (The Mark III Encroachment 1/10th Froude Scaled Bubble Pressure Equalization Tests) which will demonstrate the degree of conservatism in the Mark III Owners Group analyses. Preliminary results of the encroachment testing were shown to the Subcommittee which indicate that the GESSAR II definition of the loads bound the Mark III analyses. In light of this the Owners Group believe that encroached pool swell is not an issue for River Bend or for any Mark III. The results of the encroachment testing are to be submitted to the NRC Staff for review by the end of July 1984. T. Theofanous requested that the results as applicable to River Bend be provided to the Subcommittee for consideration in a timely manner.

E. Zoch next described the features of River Bend's hydrogen control system. He mentioned that a distributed igniter system with back up containment purging will be used to control hydrogen from a degraded core accident. There are 104 igniters distributed within the containment and drywell of River Bend Station. The igniters will be powered off the AC Class IE emergency power systems and will be

initiated manually per the emergency procedures currently being developed under the auspices of the Hydrogen Control Owners Group. The igniter system for River Bend is based on the Grand Gulf arrangement.

After describing the features of the hydrogen control system for River Bend, E. Zoch outlined the elements of GSU's program to resolve the issue of hydrogen control from a degraded core accident. GSU believes that they have a program in place that will ensure hydrogen control is not a problem for River Bend. He mentioned that GSU has been an active participant in the HCOG program and they have structured parts of the HCOG testing program and analyses to address the unique features of River Bend's design (e.g., unit coolers in lieu of sprays and no containment or drywell vaccum breakers to relieve containment underpressurization).

GSU has recently completed an ultimate pressure capacity study of River Bend containment at the request of the NRC Staff. The final results of the study are to be submitted to the Staff by the end of June 1984. The ultimate and design capacities were recited as follows:

	Ultimate	Design
Positive Static Pressure Capacities		
Steel Containment	56 psig	15 psid
Drywell	80 psig	25 psid
Negative Static Pressure Capacities		
Steel Containment	4.8 psig	0.6 psid
Drywell	-	20 psid

GSU has also recently completed their CLASIX-3 River Bend-Specific analysis. The results of CLASIX-3 analysis which provide the resulting pressures and temperatures from a postulated hydrogen burn will be submitted to the NRC Staff in the June-July 1984 time frame. E. Zoch mentioned that the preliminary results show the worst case hydrogen over pressure in the containment to be between 15 to 18 psig. For a situation where a 75% metal-water reaction hydrogen release is burned off and then cooled to ambient conditions, the analyses show a maximum calculated under pressure in the containment to be 3.3 psi. In view of these results, GSU feels that containment integrity will be assured for both the over pressure and under pressure events of a postulated hydrogen burn.

D. Okrent asked what were uncertainties in the ultimate capacities numbers recited by E. Zoch. M. Shah, SWEC, pointed out to D. Okrent that the numbers recited were lower bound estimates, because the ultimate capacities analyses were based on the specified material end strength, and post buckling strength was not accounted for in the analyses. D. Okrent asked what factors would potentially make the capacities lower than predicted. M. Shah mentioned that four factors would influence the ultimate capacity estimates, namely; (1) the modeling approximations, (2) reaction tolerances, (3) the strength properties of the material used, and (4) the welding processes. He noted that each of these factors had been addressed by SWEC in the analyses with the exception of flaws in the materials used in the construction of the containment.

D. Okrent asked the NRC Staff for their position on the likelihood of a total loss of AC power coincident with a large hydrogen release from a degraded core. The Staff replied that they would provide their response at the full Committee discussions.

In regards to equipment surviability during a hydrogen burn GSU plans to use the results of the HCOG quarter scale test program along with the CLASIX-3 analyses to develop the qualification requirements for

essential equipment in the containment which would be exposed to a postulated hydrogen burn environment. This work is expected to be completed by the end of 1984.

D. Okrent asked how would the thermal environment for River Bend, during a postulated hydrogen burn, differ from a similar event in a Mark III employing containment sprays. E. Zoch responded that there would be some minor differences in the thermal environments. In particular, the wetwell temperatures would probably be slightly higher.

T. Novak asked GSU to comment on how the performance of the River Bend igniter system might vary if the containment had sprays. No specific response to this question was given.

Offsite and Onsite AC/DC Power Systems -
J. Propson, P. Bourne, and J. Hamilton

J. Propson began the discussions on the River Bend electrical power systems with a brief description of the onsite AC/DC power distribution system. River Bend uses three divisions of Class 1 E electrical distribution. Two of these divisions are supplied with emergency AC power via Transamerica Delaval Incorporated DS R-48 standby diesel generators. The third division is reserved for the High Pressure Core Spray function and utilizes a Stewart and Stevenson diesel generator as its source of standby emergency AC power.

In answer to J. Ebersole, J. Proposon mentioned that the prefered source of AC power does not depend on the output of the unit turbine generator, rather AC power for the critical loads are run from the offsite source with backup provided by the standby diesel generators.

P. Bourne next described the transmission systems reliability for Gulf States Utilities and the Cajun Electric Power Cooperative. GSU and CECO are members of Southwest Power Pool. The reliability of

the 500Kv transmission system for the Southwest Power Pool is approximately one outage for one hundred miles per year. The average grid outage for existing plants in the GSU and CECO system is one event per 21.5 years. The longest outage for any plant in the GSU and CECO system was of 12 hours duration.

J. Propson next discussed the D.C. power supply system for River Bend. He mentioned that the River Bend design has incorporated all the recommendations made in NUREG-0666 concerning the adequacy of D.C. Power supplies. GSU and SWEC in evaluating the conformance of the River Bend D.C. systems design with NUREG-0666, performed a Failure Mode Effects Analysis on individual safety systems. The FMEA evaluated the effects of the loss of offsite power and LOCA on individual systems reviewed. The FMEA was submitted as a part of the River Bend FSAR. From the FMEA analysis, GSU/SWEC found the station batteries able to be maintained at an operable level for 15 hours during a loss of all A.C. power. In a LOCA, the batteries are able to be maintained at an operable level for 4 hours.

J. Propson concluded his presentations with a synopsis of the Station Blackout analysis on River Bend performed by SWEC. The conditions existing in the containment were estimated for a Station Blackout of 12 hours duration. The analysis assumed the loss of all AC power, reactor scram at the time of loss of AC power, no ECCS except for RCIC, SRVs maintain reactor pressure, and no active heat removal. The drywell pressure, containment pressure and drywell temperature are all estimated at the end of the 12 hour blackout to be less than design quantities. The containment temperature exceeds design by 8°F. The suppression pool temperature at 12 hours is approximately 32°F below saturation temperature.

D. Okrent asked whether the Station Blackout analysis identified any areas like the control room or switchgear rooms where high temperatures

are reached so that the operability of essential equipment is threaten. J. Propson mentioned that the portions of the analysis considering environmental temperatures was not complete. Upon completion of the study, GSU and SWEC will address the temperature problem through their equipment qualification program.

J. Ebersole asked whether the analysis considered the implications of a stuck open SRV during the blackout. He noted that given a stuck open SRV, steam pressure for the RCIC turbine will not be available. It was replied that a stuck SRV was not considered in the analysis; however, given such a situation, the HPCS which has its own dedicated diesel generator can provide makeup to the primary system. J. Ebersole noted that the Station Blackout analysis was said to assume the loss of all ECCS function except for RCIC. He asked the Staff to find out whether it is common in Station Blackout analysis to consider the diesel generator for the HPCS as part of the AC power system. Later in the meeting, J. Ebersole asked what was degree of independence of the HPCS diesel generators from the other two AC diesel generators. It was replied that the cooling water source for the HPCS diesel generator (the division III diesel generator) is derived from the divisions I and II service water pumps. These service water pumps receive their source standby of power from divisions I and II diesel generators. This configuration is unique to River Bend.

J. Hamilton concluded the electrical systems discussions with a presentation of the River Bend Transamerica Delaval Incorporated standby diesel generator qualification program. He indicated that the objective of the program is to evaluate the TDI diesel engines at River Bend and determine what is necessary to assure reliable power. GSU is a member of the TDI Owners Group and has assimilated the results of the Owner's Group work into a River Bend specific qualification program. GSU believes that their intensive diesel qualification program will ensure that all the current and potential flaws in the River Bend TDI diesel generators are worked out by the fuel load date.

Decay Heat Removal Systems - D. Lorfing

D. Lorfing next provided a discussion on the decay heat removal systems, dividing his discussions into two areas - systems for transferring decay heat to the ultimate heat sink and systems providing make up water to the reactor vessel. In describing the systems for transferring decay heat to the UHS he went in some detail about the various modes of operation for the RHR systems - shutdown cooling, steam condensing and suppression pool cooling. Referring to the modes of RHR operation, D. Okrent asked if these modes offered the potential for water hammer. R. McMoreland, SWEC, responded that the potential for water hammer had been analyzed and the results of the water hammer analysis were evaluated in accordance with the ASME code.

D. Lorfing following his description of the various modes of RHR operation, summarized the systems for providing make up water to the reactor vessel. He outlined the paths for make up via condenser and feedwater system, HPCS, RCIC, LPCS and LPCI. The Subcommittee inquired how feed water is controlled following a turbine trip. R. McMoreland, SWEC, noted that the River Bend feedwater system employs three 33.3 percent capacity feed pumps each with its own dedicated bypass line to the condenser. Flow to the reactor vessel is regulated by valve control in a low power level situation and not by pump speed.

Instrumentation to Follow the Course of a Severe Accident - P. Porter

P. Porter next described the method by which GSU has developed a River Bend specific listing of accident monitoring variables. Three sources of information were used to develop the River Bend variable list. One source was the variable list given in Revision 3 of Regulatory Guide 1.97. This list was merged with two variable lists generated by: (1) a review of the River Bend emergency operating procedures and (2) by a review of BWR operator action event tree analysis (NUREG/CR-2100). A total of 68 parameters were identified.

Organization and Management - W. Cahill, Sr. Vice President, RBNG; J. Deddens, Vice President, RBNG; P. Freehill, Assistant Plant Manager for Operations; P. Graham, Manager, Technical Staff; T. Crouse, Manager QA; J. Booker, Manager of Engineering, Licensing & Nuclear Fuels.

River Bend is the first and only nuclear project of Gulf States Utilities. In view of this, W. Cahill mentioned that the River Bend project has attracted special attention and consideration from GSU. He mentioned that unique to GSU is a Board Committee on Nuclear Safety formed at the corporate executive level in the GSU organization. Reporting to this Committee is an Advisory Committee comprised of 3 university professors. The Advisory and the Board Committees have been in existance for four years and have made several recommendations pertaining to experience level of the River Bend Nuclear Group Staff and deficiencies in GSU's training program. Another independent engineering review group reporting at a high level within the GSU organization is the Nuclear Safety Review Committee which reports to W. Cahill. Reporting at the operations organization level is a Facility Review Committee which advises the Plant Manager on matters of reactor safety. The FRC is the responsible organization for reviewing potential unreviewed safety questions, reviewing the emergency plan, security plan, radiation protection and post accident sampling programs, and for reviewing safety related modifications and abnormal operating events.

J. Deddens in response to the Subcommittee's inquiries, mentioned that the part of the River Bend Nuclear Group responsible for the day-to-day familiarity with the River Bend design resides in the Engineering, Nuclear Fuels and Licensing Department headed by J. Booker. This group provides both onsite and offsite engineering services for River Bend, although a majority of the engineering services will reside at the corporate headquarters in Beaumont, Texas. This group, J. Deddens pointed out was responsible for supplementing SWEC's design review of the River Bend design for systems interactions. The level of staffing

for this group is at 37 with approximately 33 positions remaining to be filled.

The Subcommittee expressed concern about the in-house engineering expertise on the River Bend plant design. GSU in response to their concern mentioned that although they do not currently have a sufficient buildup of in-house engineering expertise, they plan to utilize the startup testing program and the GSU-SWEC-GE interface to build up their expertise by the time the plant goes into operation.

Operations Staff Training and Selection Program - W. Odell

W. Odell outlined the training program for the operations staff at River Bend. He focused his presentation on the control room operator selection and training program. GSU has contracted General Physics Corporation to provide the initial training of its operators. They also have contracted NUS to provide the initial training for technical personnel in such areas of radiation protection and chemistry.

Candidates for the operator training program must have the equivalent of a high school education. The selection process involves: (1) geographical preferences, (2) aptitude tests which consists of learning ability, verbal reasoning and mechanical aptitude tests, (3) psychological test, and (4) a medical examination.

Cold licensing operator training consist of the following: a fundamental technical course of 17 weeks duration, systems training for 12 weeks, simulator training for 12 weeks, observation training for 4 weeks, and review and audit of technical specifications and procedures for 6 weeks. Additional training is provided in the areas of general employee training, mitigating core damage, emergency response and fire protection.

Emphasis is placed on simulator training at GSU. GSU employs a plant specific simulator developed by Singer-Link. The break down of

training on the simulator is 70% of the time spent on normal operations and 30% in abnormal operations.

W. Odell mentioned that GSU utilizes two approaches in training their operators for abnormal or accident conditions. The first approach is preventative training which ensures the operators knows why a particular system was designed the way it was and how it operates. This approach utilizes the simulator to show how various systems can be used to prevent one from entering into situations leading into severe abnormal conditions. The second approach is the core mitigating damage course taught to the operators by the General Physics Corporation. The course covers such areas as emergency response, core cooling mechanics potentially damaging operations, recognizing core damage, and radiation hazards. The course does not address post-core damage situations.

Emergency Operating Procedure - C. Bogolin

GSU has been an active participant of the BWR Owners Group and has developed River Bend's emergency procesures based on Revision 3 of the BWROG Symptom based emergency procedure guidelines. GSU is currently in the process of validating and verifying their emergency procedures against the Generic EPG's and the River Bend design basis. The verification and validating of the procedures will be completed by the end of 1984.

Discussion with GSU Operators - R. Howell, A. Melancon, J. McGhee, E. Trask.

During this part of the meeting discussions, GSU operators responded to questions posed by the Subcommittee. J. Ebersole opened the discussion by asking the operators what they felt was the most critical accident situation in which they might be required to mitigate by their actions. R. Howell responded that a control room fire in which no automatic actions occur would be the most critical accident situation. He

mentioned that the operators at the time of the meeting had not been trained in remote shutdown operations. E. Trask mentioned that on the basis of simulator training, the most critical accident situation would be ATWS.

D. Okrent asked the operators if they could think of any way in which they may lose much of the instrumentation in the control room. R. Howell replied that a loss of offsite power with a loss of power to the existing reactor protection bus would cause one to lose a significant portion of the instrumentation in the control room. D. Okrent asked what would the operators do if there was a major loss of instrumentation in the control room. R. Howell replied that if all instrumentation was lost, he would assume the worst condition and take appropriate actions to safet shutdown the reactor. D. Okrent asked whether they knew how the instrumentation fails when it loses power. R. Howell replied that he believed that most of the instrumentation fails down scale, but was not quite sure how all the instrumentation fails.

J. Ebersole asked the operators whether they had any expedient to cope with the following situation: (1) reactor is shutdown, (2) loss of all AC power, (3) containment cooling is lost but the reactor core is still being cooled and pressure is building up in the containment. The operators were unable to answer this specific question, but discussed how containment cooling would be provided in the event of the loss of offsite power and failure of only one emergency diesel generator. J. Ebersole, to conclude the operator Subcommittee discussions, suggested that GSU examined the work being performed at Limerick to remove heat out of the containment in the event of a loss of containment cooling.

Consideration of PRA and Systems Interaction Studies - J. Glazar

J. Glazar mentioned tht GSU has a positive attitude towards PRA and systems interaction analy[illegible] He mentioned that systems interaction

were rigorously addressed during the design process of River Bend. He noted that the Failure Modes and Effects Analysis performed on individual safety related instrument, control and electrical distribution systems used systems interaction techniques, albeit, the FMEA was performed on a intra systems level rather than at an inter systems level.

In support of the River Bend Environmental Operating Report, GSU has performed a "mini" PRA for River Bend. J. Glazar noted that the "mini" PRA is built on the Grand Gulf RSSMAP study. The accident sequences used in the River PRA were taken from the Grand Gulf RSSMAP as were the fault trees. He mentioned that the probabilities of core melt and containment failure were adjusted to take into the account the design differences between the River Bend and the Grand Gulf design. This adjustment was done by performing a qualitative evaluation to assess the impact of the design differences on Grand Gulf RSSMAP data. The impact on the overall core melt and release probabilities was found to be neglible, thus, GSU used the Grand Gulf RSSMAP source terms and containment failure probabilities. Site specific data was used to perform the consequence analysis.

GSU plans to update their "mini" PRA by making it more River Bend specific. The existing event trees will be expanded to include ATWS sequences. The fault trees will be upgraded to include River Bend specific data on offsite power recovery frequencies. D. Okrent asked if GSU as a part of their future PRA work intend to include consideration of external events. J. Glazar replied that they do not plan to include external events given that River Bend is designed against Appendix R and River Bend is located in a relatively a seismic region. D. Okrent mentioned that it may be worthwhile for GSU to consider external events in their future PRA work given that River Bend employs a cable configuration (vertical cable chases) which is different from most other plants.

NRC Staff's Presentation on the Use of Existing PRA Information in the Licensing Review of River Bend - T. Novak

T. Novak provided a response to D. Okrent's concerns raised at the ACRS review of Shearon Harris on the NRC Staff's use of information from existing PRAs in the licensing review River Bend. He responded to D. Okrent by mentioning that there was indeed consideration of information from PRAs used in the licensing review of River Bend. Namely, information from existing PRAs help to identify the importance of the seismic qualification of the plant communication and lighting systems power supplies which are open issues for River Bend. He also mentioned that the Executive Directors Office has directed RES and NRR in their review of PRAs to make a timely effort to transfer information from PRAs into the licensing review of NTOLs.

At the meeting, it was agreed by the NRC Staff and GSU, for GSU to perform a limited PRA on the River Bend Mark III containment system, taking into account the unique features of the River Bend design. A final decision on whether the limited PRA will be performed is expected to be made by the end of June 1984.

Oral Statements from Members of the Public - D. Madden, self; C. Wilcox, West Feliciana Parish; W. Hall, West Feliciana Parish, J. D. McNeill, Attorney General's Office of Louisiana

D. Madden voiced his distrust of both GSU and the NRC to ensure the safe operation of River Bend. He mentioned that even if River Bend was designed to be 100 percent safe, he could not trust his life to the operators who run the plant.

W. Hall and C. Wilcox lauded River Bend's positive impact on the economy of West Feliciana Parish.

J. David McNeill, Assistant Attorney General for the State of Louisiana, voiced his complaints on the conduct of the site tour, the meeting room

arrangements and the availability of the NRC Staff's SER prior to the Subcommittee meeting. In view of the circumstances surrounding the conduct of the meeting, he requested that another Subcommittee be held in the Baton Rouge - St. Francisville area.

Seismic Design of Plant - C. Lambert and J. Kimball, NRC/NRR/GSB

C. Lambert outlined how the seismic design basis for River Bend was arrived at. The River Bend site is located in the Gulf Coastal Plain Tectonic Province which is basically divided into three distinct zones of seismicity, the Mississippi Embayment Zone, the Quachita Basin, and the Gulf Coastal Basin. The River Bend site is located in the Gulf Coastal Basin. The maximum historical earthquake associated with the Gulf Coastal Basin was the 1930 Donaldsonville earthquake (50 miles from the site) with an epicentral intensity of VI. The maximum historical earthquake associated with the Gulf Coastal Plain Tectonic Province is the 1811-1812 New Madrid earthquake with an epicentral intensity of XI to XII (located at it nearest approach to River Bend of 310 miles). Both of these earthquakes were used to arrive at the design basis event for River Bend. Since the Donaldsonville earthquake is in the same tectonic zone as the River Bend site, the earthquake was postulated to occur at River Bend with an intensity of VI. The peak ground acceleration associated with the postulated Donaldsonville earthquake was determined to be 0.07g. In context to the New Madrid earthquake, its intensity at the River Bend site was postulated to be VI and in accordance with 10 CFR 100 Appendix A, the peak ground acceleration associated with th New Madrid event at the site was determined to be 0.10g. This was used for the SSE and in developing the OBE. The seismic response spectrum for River Bend has been anchored at 0.10g in accordance with Regulatory Guide 1.60.

C. Lambert mentioned that River Bend is one of the ten sites selected for EPRI's seismic hazards assessment program. He noted that it is also one of sites currently under LLNL's seismic hazard evaluation program.

In conclusion of his presentation, C. Lambert stated that seismic margins have been accounted for in the design basis for River Bend, because the peak ground acceleration was computed to be 0.07g but following the requirements of 10 CFR 100 Appendix A, 0.1g was used as the design basis.

J. Kimball, (NRC/NRR), next presented the preliminary results of Lawrence Livermore's Seismic Hazard Characterization for River Bend. He noted that the River Bend site is one of the first ten sites to be evaluated under the NRC sponsored program and that the final results for the first ten sites will be available in October 1984. He mentioned that LLNL ran approximately 2200 separate hazard calculations for each site evaluated and generated a set of constant percentile hazard curves for each site evaluated. He presented to the Subcommittee viewgraphs showing the constant percentile hazard curves for the River Bend site, and made note that for the 50th percentile curves, the annual frequency of exceeding the SSE acceleration is 4.5×10^{-5}. The return period associated with thi frequency is one event in 2222 years. Noting that the return period of the SSE acceleration ranges from one event in 555 years to one event in 10417 years between the 15th percentile and 85th percentiles, J. Kimball remarked that the uncertainty in the hazard assessment for River Bend tended to be maller relative to those of the other nine siles evaluated. Of the ten sites evaluated, River Bend's seismic hazard is the second lowest with the LaCrosse site possessing the lowest hazard. He stated that the results of LLNL's analysis seem to confirm that the River Bend site is located in an aseismic region.

M. Trifunac has a number of questions related to the 20 ft section of concrete located in the lower portion of the annulus between the shield building and the steel containment vessel. He asked whether the concrete fill altered the seismic response of the steel containment vessel and structures inside the containment to a large degree. M. Shah, SWEC, replied that it did not. M Trifunac asked if there

were any problems with large moments in the steel vessel associated with temperature gradients, since metal elements are used to anchor the concrete fill to the steel vessel. M. Shah, SWEC, replied that there were no problems associated with this.

ATWS Mitigation Features - L. England

L. England listed features currently in the River Bend design for ATWS mitigation. The features were (1) recirculation pump trip on ATWS signal, (2) a modified scram discharge volume providing independent vent and exhaust valves, and (3) MSIV trip at reactor vessel level 1. He mentioned that the design changes (ARI, 86gpm SLCS, and increased scram reliability) that will be required pending the ATWS final rule will not be incorporated into River Bend until after the first refueling outage.

Control Room Design Review and Safety Parameter Display System -
D. Chase and P. Porter

D. Chase provided the status of the Control Room design review for River Bend. He noted that the BWR OG had reviewed the River Bend control room design in August 1981 and found that good human factors principles were used in the River Bend design. He noted that GSU has a design review program in place that will confirm that good human factors principles were used in the River Bend design. The results of the ongoing design review will be published in October 1984. J. Ebersole asked if there was any consideration given in the reviews of the control room design to grouping the indications and controls for systems required for long term shutdown heat removal as a set of critical systems, as is done with the reactivity control systems (Reactor Protection System) and the LOCA mitigation systems (Engineered Safeguards Features system). D. Chase replied that it has not been contemplated.

J. Ebersole asked if there were any substantial changes being contemplated for the control room as a result of the design review. D. Chase replied that the emergency lighting in the control room is an area that will require further review.

P. Porter provided a brief description of the safety parameter display system for River Bend. The SPDS will monitor around 1400 individual signals. A SPDS display is provided in the control room, the technical support center located in the third floor of the service building and the emergency operations facilities located at the onsite training center.

Remote Shutdown Capability - P. Porter and D. Sharp

P. Porter mentioned that the original design of River Bend had provisions for only one remote shutdown panel. At the request of the NRC Staff another panel was installed in order to satisfy single failure criteria. The panels are located in a security controlled area and two

independent trains of HVAC supply ventillation to the panels. P. Porter pointed out to the Subcommittee that the River Bend plant will meet Appendix R requirements.

J. Ebersole noted that from his tour of the plant, he found the remote shutdown panels to be located in a highly congested area. He noted that the remote shutdown panels were located in areas which he could not discern as distinct and independent volumetric spaces, in the context of fire and hot gases. D. Sharp mentioned that the remote panels are serviced by two air handling units. The air handling units are powered from division I and II buses and are located in separate fire areas. J. Ebersole asked if isolation of the duct work for the remote panels is dependent on dampers function. D. Sharp replied that it was and that fusible link dampers were used to isolate the ventillation for the panels in the event of fire. He added that the fire dampers had been proven to be somewhat reliable in many applications outside of the nuclear industry.

Equipment Qualification Program - L. Schell

L. Schell next described the environmental and seismic/dynamic loads equipment qualification program for River Bend. With respect to the environmental qualification of equipment, GSU is committed to the methodology given in IEEE 323-1974 and to NUREG-0588. For the seismic qualification, GSU is committed to the methodology given in IEEE 323-1975. For NSSS and BOP equipment GSU had included the qualification of equipment for hydrodynamic loads. Equipment qualification is currently an outstanding issue for River Bend. GSU had submitted to the NRC Staff in May 1984 their Equipment Qualification Document. GSU plans to submit a master equipment qualification list for review by July 1984 and be ready for the NRC Equipment Qualification audit by October 1984. All essential equipment is to be qualified by March 1985.

In context to equipment located in areas that GSU has identified as mild environments, J. Ebersole asked what measures does GSU take to ensure that condensation shorting of electrical equipment will not occur as a result of an impulse line or other lines containing high to moderate vapor pressure rupturing and producing a "Turkish bath" environment in the so-called mild environment. L. Schell replied that any areas subject to higher humidity other than what would be expected under normal conditions would not be classified as a mild environment. On the subject of the use of terminal blocks in harsh environment, L. Schell mentioned that terminal blocks are not used in the containment, and the use of the blocks are minimized to the extent practical in other parts of the plant.

In response to the Subcommittee's inquiry, L. Schell mentioned that the RHR pump seals are qualified for a radiation dose of 4×10^7 rads. He noted that for a post-accident environment of 180 days, the seals receive an exposure of 1.75×10^7 rads, therefore, GSU feels that a large margin exist in the RHR materials for an accident environment.

Emergency Planning - J. Cadwallader

J. Cadwallader concluded the meeting's presentation with an overview of the emergency planning for River Bend. The 10 mile Emergency Planning Zone encompasses five local parishes in Louisiana and three municipalities. The total population of the 10 mile zone is 36,000. For the 50 mile EPZ ingestion pathway zone, 18 Louisiana Parishes and 4 Mississippi Counties are involved.

Both the onsite and offsite emergency plans conform with the guidance given in NUREG-0654 Revision 1.

GSU is currently in the process of developing a public emergency notification system. The system will be composed of high power electronic sirens and the existing State of Louisiana Emergency Broadcast System.

The NRC/FEMA review exercises for River Bend are scheduled for January 1985, at which time the public notification system will be in operation.

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NOTE: ADDITIONAL MEETING DETAILS CAN BE OBTAINED FROM A TRANSCRIPT OF THIS MEETING AVAILABLE IN THE NRC PUBLIC DOCUMENT ROOM, 1717 H STREET, N.W., WASHINGTON, D.C. OR CAN BE PUCHASED FROM TAYLOE ASSOCIATES, 1625 I STREET, N. W., SUITE 1004, WASHINGTON, D.C. 20006, (202) 293-3950.

Attach. 1

6/4/84

- TENTATIVE AGENDA -

FOR THE ACRS SUBCOMMITTEE MEETING ON

RIVER BEND STATION UNIT 1

June 7, 1984	Speaker	Estimated Time	Approximate Time
1. Executive Session	Okrent	10 Min.	1:00 - 1:10 pm
2. Report by the NRC Staff			
A. Status of Review	Weinkam	10 Min.	1:10 - 1:20 pm
B. Comparison of River Bend with other similar BWR's reviewed by NRC Staff	Weinkam	5 Min.	1:20 - 1:25 pm
C. Summary of Principal Review Issues	Weinkam	50 Min.	1:25 - 2:15 pm
a. Open issues and likely resolution			
b. Confirmatory issue and likely resolution			
c. Licensing conditions			
D. I&E Report on Significant Plant Experience		30 Min.	2:15 - 2:45 pm
a. Non-conformances and non-compliances	Jaudon		
b. Assessment of Licensee performance	Jaudon		
c. Integrated Design Inspection of River Bend	Allison		
E. Applicants response to NRC Staff Report	Booker	15 Min.	2:45 - 3:00 pm
***** BREAK *****		15 Min.	3:00 - 3:15 pm
3. Applicant Presentation			
A. Introduction	Cahill	10 Min.	3:15 - 3:25 pm
a. Overview of plant and site			
b. Construction and start-up schedule and status			

B. Discussion of Selected Plant Systems			
a. Containment Systems ✓		45 Min.	3:25 - 4:10 pm
- Description of River Bend Containment Features versus those of other Mark III's	Lorfing		
- Mark III Containment Issues: Status and Resolution	Lambert England		
b. Hydrogen Control ✓	Zoch	45 Min.	4:10 - 4:55 pm
- Description of Hydrogen Control System for River Bend			
- Proposed Resolution of the Hydrogen Control issue			
c. Offsite and Onsite AC/DC Power systems description and reliability assessment ✓		45 Min.	4:55 - 5:40 pm
- Station Electrical Distribution System	Proposon		
- Grid Reliability	Bourne		
- Station Blackout and compliance with NUREG-0666 "Adequacy of D.C. Power Supplies"	Proposon		
- Transamerica Delaval Diesel Generator Reliability Issues	Hamilton		
***** BREAK ***** ✓		10 Min.	5:40 - 5:50 pm
d. Decay Heat Removal Sys	Lorfing	15 Min.	5:50 - 6:05 pm
- Description of Systems an Operational Analysis and Effectiveness Under Degraded plant conditions			
e. Instrumentation to follow the course of a Severe Accident	Porter	15 Min.	6:05 - 6:20 pm

- Conformance with Reg. Guide 1.97			
f. ATWS Mitigation Features	England	5 Min.	6:20 - 6:25 pm
- Description of features			
- Compliance and Schedule with proposed ATWS rule.			
C. Applicant's consideration of PRA's and system interaction studies	Glazar	15 Min.	6:25 - 6:40 pm
Use of existing PRA's in the development of procedures and in the design of River Bend			
b. Severe Accident Risk Assessment for River Bend			
c. Plans for future performance of PRA's			
d. System interaction studies performed on River Bend			
D. Discussion with NRC Staff on the use of PRA information from existing PRAs in the licensing review of River Bend.	Novak	20 Min.	6:40 - 7:00 pm

********** END OF FIRST DAY **********

Reconvene 8:30 am

3. Applicant Presentation (Cont'd)

E. Organization and Management and Operations Staff		95 Min.	8:30 -10:05 pm
a. Corporate organization	Cahill		
b. Corporate and management experience levels	Cahill		
c. Plans for independent audit of constructed plant with desig	Cahill		

d. River Bend Nuclear Org.	Deddens		
e. Level of Staffing for management organization and operations staff	Deddens		
- Description of plant staff operations, maintenance and radiation protection groups including status of staffing experience levels and commercial nuclear operating experience	Freehill		
f. Plant safety review committees	Freehill		
g. Feedback of industry experience to operations staff	Graham		
- Description of plant technical staff and administration			
h. QA/QC organization and program	Crouse		
i. Engineering organizations	Booker		
j. Interface with GE, SWEC and Industry support groups	Booker		
k. Participation in industry groups	Booker		
***** BREAK *****		10 Min.	10:05 - 10:15 am
F. Training Programs		45 Min.	10:15 - 11:00 am
a. Selection and training of operators and maintenance personnel	Odell		
b. Training for serious accidents	Odell		
c. Use of simulator in training program	Odell		
d. Schedule for writing and implementating emergency operating procedures	Bogolin		

G.	Questions and Answer session with Control Room Operators	✓ GSU Operators	45 Min.	11:00 - 11:45 am
H.	Control Room	✓	30 Min.	11:45 - 12:15 pm
	a. Status of control room design review	Chase		
	b. Description of safety parameter display system	Porter		
	c. Description of remote shutdown capability	Porter		
	- Applicants position on GDC 19 and adequacy of their system in relation to GDC 19	Porter		
	- Capability to withstand single random failure in the instrumentation and controls from the remote panel or in the remote shutdown system	Porter		
***** BREAK *****			10 Min.	12:15 - 12:25 pm
I.	Environmental Qualification Program for River Bend	Schell ✓	20 Min.	12:25 - 12:45 pm
J.	Seismic design of plant equipment	✓	30 Min.	12:45 - 1:15 pm
	a. Applicant presentation on the site specific spectrum analysis for River Bend	Lambert		
	b. NRC Staff presentation on LLNL seismic reevaluation of River Bend	Kimball		
K.	Discussion of emergency planning	Cadwallader	30 Min.	1:15 - 1:45 pm
4.	Oral Statement from Members of the Public	Public	30 Min.	1:45 - 2:15 pm
5.	Comments by the ACRS Subcommittee and plans for future agenda		15 Min.	2:15 - 2:30 pm
Adjourn.				2:30 pm

TIME ~~8:30 AM~~ 1:00 PM

MEETING ROOM Prince Charles

DATE ~~6-7-84~~ 6-8-84

Attachment 2

7-8 ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

River Bend

ATTENDEES PLEASE SIGN BELOW

	(PLEASE PRINT) NAME	~~BADGE NO.~~	AFFILIATION
1	A. Thadani		NRC/NRR/DL
2	T. M. Novak		NRC/NRR/DL
3	E. J. Weinkam III		NRC/NRR/OL
4	J. P. Jaudon		NRC, RIV
5	O. Allison		IE, NRC
6	F. Eltawila		NRC/NRR
7	Rick Kendall		NRC/NRR/ICSB
8	D. D. Chamberlain		NRC, SRI
9	R. E. Farrell		NRC, SRI
10	J. F. Quirk		GE.
11	[illegible]		NUTECH
12	W. K. Hughey		Miss. Power & Light
13	[illegible]		GSU
14	R L Spence		SWEC
15	T C Crowe		GSU
16	B. K. Thibodeaux		GSU
17	R. B. Stafford		GSU
18	M. Anne Plettinger		None
19	[illegible]		Dep. Energy & Natural (NH)
20	Rick Walker		LA Nuclear Energy Division

TIME 8:30 a.m.

MEETING ROOM Prince Charles

DATE 6-8-84

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

River Bend

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ATTENDEES PLEASE SIGN BELOW

	(PLEASE PRINT) NAME	~~BADGE NO.~~	AFFILIATION
1	R.E. BUSCH		NORTHEAST UTILITIES
2	[illegible]		NORTHEAST UTILITIES
3	J.D. CROCKETT		NORTHEAST UTILITIES
4	D. HALL		DUQUESNE LIGHT
5	K. A. TROXLER		DUQUESNE LIGHT
6	E.F. KURTZ		DUQUESNE LIGHT
7	L.J. King		Gulf States Utilities
8	P.E. [illegible]		Gulf States Utilities
9	M.W. HENKEL		GULF STATES UTILITIES
10	M.J. Hazzan		Stone & Webster
11	J.M. GLAZAR		GULF STATES UTILITIES
12	J.G. Morris		Gulf States Utilities
13	D.O. Nordquist		Northeast Utilities
14	E.J. MROCZKA		Northeast Utilities
15	R.J. HERBERT		NORTHEAST UTILITIES
16	R IV HELMICK		GULF STATES UTILITIES
17	G.S. YOUNG, JR.		Gulf States Utilities
18	J H CULLESS		Gulf States Utilities
19	B.G. SCHULTZ		STONE & WEBSTER
20	W C DROTLEFF		STONE & WEBSTER

TIME 1:00 P.M.

MEETING ROOM Prince Charles

DATE 6-7-84

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

River Bend

ATTENDEES PLEASE SIGN BELOW

	(PLEASE PRINT) NAME	BADGE NO.	AFFILIATION
1	J.G. Weigand		GSU
2	W. J. CAHILL		GSU
3	J. E. BECKER		GSU
4	W. J. REED		GSU
5	J. C. DEDDENS		GSU
6	L. N. ERICAIL		GSU
7	LH Dietrich		SWEC
8	W.G CULP		SWEC
9	JA KIRKEBO		SWEC
10	PH PORTER		GSU
11	R MCMORLAND		SWEC
12	T S SZABO		SWEC
13	P. K. GUHA		SWEC
14	JH GELSTON		SWEC
15	C.P. Bogolin		GSU
16	W. F. [illegible]		CFS
17	M.A. Morris		GSU
18	E R Grant		GSU
19	E J Zoch		GSU
20	R W. Evans		Ebasco Services

TIME 1:00 P.M. MEETING ROOM Prince Charles

DATE 6-7-84

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

River Bend

ATTENDEES PLEASE SIGN BELOW

	(PLEASE PRINT) NAME	BADGE NO.	AFFILIATION
1	Barin Kumar		GSU
2	John G. Propson		GSU
3	William Raughley		SWEC
4	Robert W. Bishop		Northeast Utilities
5	Edward Goodwin		SWEC
6	William A. Eberly		SWEC
7	Venkata Josyula		SWEC
8	L.B Macy		GE
9	M.R. Masucci		SWEC
10	M.J. Shah		SWEC
11	K.S. Jabeja		SWEC
12	C.D. Hinnet		GSU
13	[illegible]		[illegible]
14	R.D. Ruby		GSU
15	H.D. Powell		GE
16	P.J. Kinder		GE
17	J.E. Maxwell		GE
18	J.D. Knight		GE
19	W.C. Tolbert		Cajun Electric Coop.
20	L.P. Bourne		GSU

TIME 1:00 P.M. MEETING ROOM Prince Charles

DATE 6-7-84

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

River Bend

ATTENDEES PLEASE SIGN BELOW

	(PLEASE PRINT) NAME	BADGE NO.	AFFILIATION
1	JOHN PRICE		GSU
2	JOHN HAMILTON		GSU
3	JAMES KASIK		GE
4	RUIXIN WANG		GE
5	L. (Larry) Schell		GSU
6	John G CADWALLADER		GSU
7	Donna Fancher		GSU
8	JAMES McGHEE		GSU
9	Randy Hood-II		GSU
10	BRUCE HUGHEN		GSU
11	MAX CASSADA		GSU
12	AUGUST MELANCON		GSU
13	Jack Keenan		Northeast Utilities
14	Bob CRAD		GSU
15	Charles L. Nash		GSU
16	Wilson C. McArthur		KLM Engineering
17	EDWARD N TRASK		GSU
18	W. I. CLIFFORD		STONE & WEBSTER
19	WILLIAM L. BENEDETTO		GSU
20	E. Linn Draper Jr		GSU

TIME 1:00 P.M.

MEETING ROOM Prince Charles

DATE 6-7-84

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

River Bend

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TIME ~~8:30 a.m.~~ 1:00 PM

MEETING ROOM Prince Charles

DATE ~~6-8-84~~ 6-7-84

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

RIVER BEND

ATTENDEES PLEASE SIGN BELOW

(PLEASE PRINT) NAME	~~BADGE~~ NO.	AFFILIATION
1 P. Capello - Baudzes		Northeast Utilities - Licensing
2 WALTER F ENDRESIN		SWEC LICENSING
3 Richard Werner		Northeast Utilities
4 William H. Odell		Gulf States Utilities
5 JAMES A. WRIGHT		GULF STATES UTILITIES
6 David L Sharp		Gulf States Utilities
7 P E FREEHILL		G S U
8 J. David McNeill III		LA Attorney General's Office
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TIME 8:30 a.m.

MEETING ROOM Prince Charles

DATE 6-8-84

ADVISORY COMMITTEE ON REACTOR SAFEGUARDS

MEETING

River Bend

ATTENDEES PLEASE SIGN BELOW

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Attachment 3

STATEMENT TO THE NUCLEARY RFGULATORY COMMISSION ON THE LACK OF SAFETY AT THE RIVER BEND NUCLEAR FACILITY, June 7, 1984

My name is David Madden. I make my living writing books.

It is the duty of each American citizen to inform himself on the vital issues facing his country. The question of the safety of nuclear energy plants is a major issue. On this question, I have fulfilled my duty: my sources inform me of the dangers nuclear energy plants pose. I have concluded that they (specifically, River Bend) can never be safe.

My reasoning is as follows: Even if it were possible for the finest scientists on this planet to design a 100 per cent safe plant, all the information to which I have had access since GSU started this project convinces me that GSU administrators are, financially and technologically, incompetent and irresponsible, and I do not, therefor, trust GSU to run even a 100 per cent safe plant safely. But the most pertinent question is this: Can I trust the salaried worker who will run River Bend plant on a daily basis to be free of human error? My answer, as an informed citizen, is no.

Once an American citizen has fulfilled his duty to inform himself, he entails another duty, to himself and to his fellow citizens--the duty to act.

The only action I can legally take is to write and speak on every possible occasion against River Bend as a potential crime against humanity, motivated solely by greed, for no one has demonstrated a compelling necessity for putting the lives of nearly a million people in jeopardy just so stockholders, safely beyond the zone of danger, can make a profit.

I have also exercised, since June 1981, my Constitutional right to defend my life by refusing to make installment payments toward my own destruction: I have withheld from GSU that portion of my monthly electric bill that goes to help build River Bend.

And today, I come to exercise my right to freedom of expression under the Constitution to tell the Nuclear Regulatory Commission that I recognize its legal right but reject its moral right to convene to consider whether a government protected monopoly may endanger the lives of defenseless citizens for private profit.

I do not come here to beg you to protect my life. As an American, I am free to move away from danger and I will do so the day River Bend becomes a monstrous reality. I have come here to today to fulfill my duty as an informed citizen--to assert in a public forum that I, and thousands like me, do not now trust GSU and certainly cannot trust it in any emergency of its own making, nor, on the evidence, can I trust the NRC to protect me from GSU, and to assert that River Bend can never be safe from human error for all the many reasons you all know as well as I do.

Sincerely,

David Madden

David Madden

DAVID MADDEN
614 PARK BLVD
BATON ROUGE, LA 70806
(504) 344-7630

[redacted] say "I don't know" to a life or death question-- I do not trust with my life.

I will not be among the victims of this calculated risk, because the day before River Bend becomes a monstrous reality I, like any sane, intelligent person, will move far beyond its reach.

I doubt that it will unsettle the atmosphere of scientific detachment that dominates this hearing, if I raise, with some emotion, a single moral issue.

If the GSU scientists and the NPC scientists conclude that they are willing to risk the lives of thousands of people so that a few GSU shareholders can add to their income and if they prove to be right for the next 50 years that accidents are extremely unlikely, the only damage done will be that millions of people will be forced to pay for GSU's mistakes in the realm of high finance. And if those consumers are willing to submit to that kind of tyranny, perhaps they deserve the severe financial burden they will bear.

But if GSU and the NPC are wrong, if the "I don't knows" I've heard here echo with deadly irony one day in the future, thousands of people may die as a direct result of your authority to risk their lives on behalf of profiteers whose financial incompetence and tebhnological inepittude are a matter of public record. To risk their lives without their consent may be legal but it is clearly IMMORAL if they pay for your mistakes with their lives, the question of immorality will be of such magnitude no one of your will be able to comprehend, but less accept responsibility for it. Where you see comfortable facts and figures and a risk, I see --emotional creature that I am--dead or contaminated bodies. I challenge you to put facts and figures aside for a moment and imagine, then meditate on rotting bodies as evidence of human error. I ask you to consider guilt. I ask you to consider punishment. If the time ever comes, I promise you I will remind you of these basic considerati

Delivered rally

STATEMENT TO THE NUCLEAR REGULATORY COMMISSION ON THE LACK OF SAFETY AT THE RIVER BEND NUCLEAR FACILITY, June 8, 1984

My name is David Madden, I make my living writing books.

I have listened to much calm, unemotional talk here about facts and figures, and to questions that request clarification and interpretations, and I have heard all too many "I don't know" answers. I look at the 25 or so enormous volumes of data in the back of the room, and having heard specialists report to you, I get the nervous feeling that no one of you commands a vision of the whole.

I can well imagine your sense of comfort in noting that only one private citizen has asked to speak to you. You can maintain your fantasies of facts and figures with interruption. Human nature being unfortunately what it is, I can imagine your taking silence for consent.

But I am here today to tell you without euphemism that you absolutely do not have my consent even to convene to consider risking thousands of lives. I am one person at least who considers this hearing to be morally rotten.

One person at least should tell you, GSU, in this public place, that I do not trust you, One person at least should tell you NRC that I do not trust you to protect me from GSU.

I fear GSU, I fear the NRC, but there is one man I fear more than any other and that is the man who is responsible for the crucial valve or button, the man who controls the monster once you scientists have walked away, leaving the lives

Attachment 4

Summary minutes: Mrs. Mary Poast at the above address.

Purpose of advisory committee meeting: To provide advice, recommendations, and counsel on major goals and policies pertaining to Engineering programs and activities.

Summarized agenda: Discussions on the FY 1984 Budget Initiatives on Advanced Computing, Biotechnology, Manufacturing Engineering, and Construction Engineering and Building Research; FY 1985 Engineering Budget Status; Engineering Research Centers; and Reports from Division Committee Chairmen.

Dated: May 9, 1984.

M. Rebecca Winkler,

Committee Management Coordinator.

[FR Doc. 84-12934 Filed 5-11-84; 8:45 am]

BILLING CODE 7555-01-M

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards; Subcommittee on River Bend Station Unit 1; Meeting

The ACRS Subcommittee on River Bend Station Unit 1 will hold a meeting on June 7 and 8, 1984, at the Oak Manor Motor Hotel, 8181 Airline Highway, Baton Rouge, LA. The Subcommittee will discuss the application of Gulf State Utilities Company for license to operate River Bend Station Unit 1.

In accordance with the procedures outlined in the Federal Register on September 28, 1983 (48 FR 44291), oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Subcommittee, its consultants, and Staff. Persons desiring to make oral statements should notify the Cognizant Federal Employee as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The entire meeting will be open to public attendance.

The agenda for subject meeting shall be as follows:

Thursday, June 7, 1984—1:00 p.m. until the conclusion of business Friday, June 8, 1984—8:30 a.m. until the conclusion of business

During the initial portion of the meeting, the Subcommittee, along with any of its consultants who may be present, may exchange preliminary views regarding matters to be considered during the balance of the meeting.

The Subcommittee will then hear presentations by and hold discussions with representatives of the Gulf States Utilities Company, NRC Staff, their consultants, and other interested persons regarding this review.

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor can be obtained by a prepared telephone call to the cognizant Designated Federal Official, Mr. Gary Quittschreiber (telephone 202/634-3267) between 8:15 a.m. and 5:00 p.m., EDT.

Dated: May 9, 1984.

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 84-12921 Filed 5-11-84; 8:45 am]

BILLING CODE 7590-01-M

Advisory Committee on Reactor Safeguards; Subcommittee on Class-9 Accidents; Meeting

The ACRS Subcommittee on Class-9 Accidents will hold a meeting on May 31, 1984, Room 1046, at 1717 H Street, NW, Washington, D.C.

In accordance with the procedures outlined in the Federal Register on September 28, 1983 (48 FR 44291), oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Subcommittee, its consultants, and staff. Persons desiring to make oral statements should notify the Designated Federal Employee as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The entire meeting will be open to public attendance.

The agenda for subject meeting shall be as follows:

Thursday, May 31, 1984—8:30 a.m. until 3:00 p.m.

The Subcommittee will discuss the latest revision of NUREG-1070, "NRC Policy on Future Reactor Designs: Decision on Severe Accident Issues in Nuclear Power Plant Regulation."

During the initial portion of the meeting, the Subcommittee, along with any of its consultants who may be present, will exchange preliminary views regarding matters to be considered during the balance of the meeting.

The Subcommittee will then hear presentations by and hold discussions with representatives of the NRC Staff, its consultants, and other interested persons regarding this review.

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefore can be obtained by a prepaid telephone call to the cognizant Designated Federal Employee, Mr. Alan B. Wang (telephone 202/634-3267) between 8:15 a.m. and 5:00 p.m., EDT.

Dated: May 9, 1984.

John C. Hoyle,

Advisory Committee Management Officer.

[FR Doc. 84-12922 Filed 5-11-84; 8:45 am]

BILLING CODE 7590-01-M

Advisory Committee on Reactor Safeguards; Subcommittee on Committee Activities; Meeting

The ACRS Subcommittee on Committee Activities will hold a meeting on May 30, 1984, Room 1046, 1717 H Street, NW, Washington, D.C.

In accordance with the procedures outlined in the Federal Register on September 28, 1983 (48 FR 44291), oral or written statements may be presented by members of the public, recordings will be permitted only during those portions of the meeting when a transcript is being kept, and questions may be asked only by members of the Subcommittee and its Staff. Persons desiring to make oral statements should notify the cognizant Designated Federal Employee as far in advance as practicable so that appropriate arrangements can be made to allow the necessary time during the meeting for such statements.

The entire meeting will be open to public attendance.

The agenda for subject meeting will be as follows:

Wednesday, May 30, 1984—8:30 a.m. until the conclusion of business.

The Subcommittee members will exchange views regarding the future scope and direction of Committee activities.

Further information regarding topics to be discussed, whether the meeting has been cancelled or rescheduled, the Chairman's ruling on requests for the opportunity to present oral statements and the time allotted therefor can be obtained by a prepaid telephone call to the cognizant Designated Federal Employee, Mr. Morton W. Libarkin (telephone 202/634-3265) between 8:15 a.m. and 5:00 p.m., EDT.