



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

JUL 11 1985



MEMORANDUM FOR: Dennis ~~McClintock~~, Assistant Director for Safety Assessment,  
Division of Licensing

FROM: R. Wayne Houston, Assistant Director for Reactor Safety,  
Division of Systems Integration

SUBJECT: RIVER BEND HYDROGEN IGNITER TECHNICAL SPECIFICATION

Enclosed is the latest proposed Technical Specification (TS) for the River Bend Hydrogen Ignition System. Regarding Surveillance Requirement 4.6.7.3.a, we requested Gulf States Utilities (GSU) to justify allowing up to three (3) igniter assemblies on each subsystem to be inoperable before action is taken to determine if the inoperable igniter assemblies are adjacent. Based on GSU's proposal, there is a potential of six (6) igniter assemblies becoming inoperable without determining where they are located. This is not consistent with the current proposed Limiting Condition for Operation 3.6.7.3.b.

GSU informed CSB on June 26, 1985, via a telecon, that the results of a simplified probability analysis assuming six, four, and two igniters to be inoperable show that the probability of two being adjacent is 11%, 8% and 2%, respectively.

We find the probability values associated with six and four inoperable igniters do not support continued operation without verification and therefore unacceptable. If there are two inoperable igniters and the locations are unknown, we feel there is reasonable assurance that they will not be adjacent. Therefore, we recommend that Surveillance Requirement 4.6.7.3.a.2 and the supporting basis section be changed as indicated in the attached marked up copy of the T.S. With the inclusion of this modification, we find the River Bend Igniter TS to be acceptable.

R. Wayne Houston, Assistant Director  
for Reactor Safety, DSI

Enclosure:  
As stated

cc: R. Bernero  
H. Thompson  
T. Novak  
D. Houston

CONTACT: A. Notafrancesco, CSB  
x29487

8507180382XA

DRAFT

CONTAINMENT SYSTEMS

CONTAINMENT AND DRYWELL HYDROGEN IGNITION SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.7.3 The containment and drywell hydrogen ignition system shall be operable consisting of:

- a. two independent containment and drywell hydrogen ignition subsystems <sup>each</sup> and consisting of ten circuits with no more than two igniter assemblies inoperable per circuit and no more than five igniter assemblies inoperable per subsystem, and
- b. no adjacent igniter assemblies inoperable.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2

ACTION:

- a. With one containment and drywell hydrogen ignition subsystem and/or circuit inoperable, restore the inoperable subsystem and/or circuit to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With any adjacent igniter assembly inoperable, restore all igniter assemblies adjacent to an inoperable igniter assembly to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.6.7.3 The containment and drywell hydrogen ignition system shall be demonstrated OPERABLE:

- a. At least once per 6 months by energizing all the igniter assemblies and performing ~~current~~ <sup>Voltage</sup> measurements of each circuit.
  - 1. If more than 3 igniter assemblies on either subsystem are determined to be inoperable, Surveillance Requirement 4.6.7.3.a shall be performed at least once per 92 days until this condition no longer exists.
  - 2. If more than ~~3~~ <sup>1</sup> igniter assemblies on each subsystem are determined to be inoperable, determine if the inoperable igniter assemblies are adjacent.
- b. At least once per 18 months by energizing each igniter assembly and verifying by current <sup>Voltage</sup> measurements sufficient ~~to develop~~ <sup>to develop</sup> 1700°F temperature for those igniter assemblies in inaccessible areas, ~~and~~ <sup>then</sup> verifying a surface temperature of at least 1700°F for each of the ~~remaining~~ <sup>accessible</sup> igniters. ~~IF entry to these inaccessible~~ <sup>temperature verification of igniter assemblies in those areas should be performed</sup> ~~temperature verification of igniter assemblies in those areas should be performed~~

RIVER BEND

## CONTAINMENT SYSTEMS

### BASES

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#### ATMOSPHERE CONTROL (Continued)

The operability of the containment and drywell hydrogen igniters ensures that hydrogen combustion can be accomplished in a controlled manner following a degraded core event that produces hydrogen concentrations in excess of LOCA conditions.

Adjacent igniters are considered to be igniters in different power divisions within approximately thirty-five feet of each other. Inaccessible areas are defined as areas which have high radiation levels during the entire refueling outage period. These areas are the heat exchanger, filter ~~and~~ demineralizer, backwash, and holding pump rooms of the RWCU system.

7/11/85 10:30 am telecon  
Benedict - Ridgely

1. John continues to refuse to look at draft material.
2. John ~~is~~ has given the PM a list of open items.
3. Two of these items affect TS:
  - a) Standby liquid Control System
    - 1) Base concentration curve
    - 2) Bases for that curve and numbers in the ~~TS~~ Surveillance.
  - b) Calling SSW pump inoperable when ~~HPCS~~ ~~is~~ HPCS/EDG is inoperable.
4. John is writing an RAI on the open items.

7/11/85 10:45 am

Al Notofrancesco provided me with a ~~signed~~ memo Houston to Cuntchfield that provides H<sub>2</sub> igniter TS and basis. He told me it's been signed by Houston.  
This closes the H<sub>2</sub> igniter item.

copy to Marty 11:00 am 7/11/85

Memo to File  
 From: RA Benedict  
 Subject: River Bend Technical Specification 3/4.1.5

As noted in 7/25/85 letter Novak to Cahill, re: Tech. Spec. certification, there appeared to be a discrepancy between SER section 7.4.2.3 and TS 3/4.1.5. (Item 3 of Enclosure 2 to 7/25/85 letter).

As a result of ~~the~~ discussions among Rick Kendall (ICSB), John Price (GSU), and me, the discrepancy has been resolved and there need be no change made to TS 3/4.1.5. The resolution is contingent upon GSU providing an acceptable letter that <sup>identifies and</sup> describes the River Bend procedure ~~that is~~ by which the interlock in question is effectively tested. Upon receipt of that letter, Rick Kendall will provide ~~a memo that accepts evaluation~~ ~~a memo that is in~~ a memo evaluation of the adequacy of the River Bend procedure ~~to provide~~ in providing for interlock ~~test~~ testing.

RA Benedict

cc: R. Kendall  
 Don Baxter (EG&G-Idaho)  
 M. Virgilio  
 S. Stern

Memo to File  
From: Benedict  
Subject: River Bend Technical Specifications # 3/4.8.4

As noted in 7/25/85 letter Novak to Cahill, re: Tech. Spec. certification, there appeared to be a discrepancy between ~~the~~ SER section 8.4.2 and TS 3/4.8.4 (Item 4 of Enclosure 2 to 7/25/85 letter).

As a result of a telecon 7/30/85 among Jim Lazevnick (~~PSB~~) (PSB), Don Baxter (EG&G-Idaho), and me, the discrepancy has been resolved and there need be no change made to TS 3/4.8.4. Instead, Jim Lazevnick will provide an input to SSER #3 that clarifies the PSB intent ~~in~~ which respect to the surveillance of penetration overcurrent protection.

R. Benedict

cc: J. Lazevnick  
Don Baxter (EG&G-Idaho)  
M. Virgilio  
S. Stern



Memo to File  
From: RA Benedict  
Subject: River Bend Technical Specifications 3/4.3.2 and 3/4.6.4

As noted in 7/25/85 letter Novak to Cahill, re: Tech. Spec. certification, GSU proposed to modify certain valve groupings (Item 2 of Enclosure 2 to 7/25/85 letter).

The CSB reviewer, F. Eltawila, has reviewed the proposed modifications and has found them to be acceptable. He will confirm that finding in writing. ~~The Technical Specifications will~~  
I will change the Technical Specifications appropriately. This item is resolved.

RA Benedict

cc: F. Eltawila  
M. Virgilio  
S. Stern



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

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ENCLOSURE

**DRAFT**

MEMORANDUM FOR: Those on Attached List

FROM: Dennis M. Crutchfield, Assistant Director  
for Safety Assessment  
Division of Licensing

Thomas M. Novak, Assistant Director  
for Licensing  
Division of Licensing

SUBJECT: FINAL DRAFT OF THE RIVER BEND UNIT 1 TECHNICAL  
SPECIFICATIONS.

The attached final draft technical specifications for River Bend Unit 1 (enclosure 1) are being forwarded to you at this time for review. We request that you review those sections which pertain to your particular area of responsibility and that the results of this review, identifying the sections reviewed, be forwarded to the Technical Specification Review Group (TSRG) by May 6, 1985. We are distributing these technical specifications at the NRR branch level, however, we request that the responses be consolidated, reviewed and returned at the Assistant Director level.

By issuing these technical specifications in the final draft form at this time without benefit of a formal proof and review period between the second draft and the final draft, we are making a significant deviation from our normal technical specification preparation process. This deviation is being made in the interest of expediting the review process so as not to unnecessarily delay the planned plant startup date of some time in June 1985. It is important to note, however, that even though we are skipping one of the steps in the preparation process we are not skipping any of the steps in our independent review and certification process to assure the safety adequacy of the technical specifications. These steps, such as, the NRC Regional review, the internal NRC technical branch reviews, the independent NRC consultant review, and the applicants certification of the correctness of the technical specifications will be performed as shown on the enclosed marked up schedule for River Bend (enclosure 2).

This is a very ambitious schedule we will be working to and will require the complete cooperation of all the parties involved. The schedule has been reviewed by both the NRC and applicant's management and has been established as the goal both organizations will be striving to achieve.

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In making judgements about the correctness or adequacy of these technical specifications for River Bend you should be guided by the principles of NRR Office Letter No. 38. Deviations from the (GE) STS should not be proposed or accepted by the staff or applicant unless they are:

- (1) necessary because of unique design features or unique organization characteristics, or
- (2) represent a significant improvement over the STS which should be included in the next revision to the STS and do not represent a change in generic requirements which must be reviewed prior to implementation by CRGR.

Deviations from the STS which have merit but are generic and require CRGR review should not be proposed at this time for River Bend. Instead they should be processed thru CRGR as a revision to the STS which can later be applied to River Bend at the licensee's request or as a backfit by the staff. Those generic changes involving an immediate safety concern should, however, not be delayed for CRGR review. Any such cases should be highlighted for expedited action by DL and other appropriate NRC Divisions.

Mr. Dean Houston, of TSRG will be available during the final review period to answer any questions which arise. He is located in Room 521, of the Phillips Building and his telephone number is 49-28933.

Even if you have no comments and are in agreement with the technical specifications content in your area of review, it is requested that a written response to that effect identifying those sections of the technical specifications reviewed be provided by the above specified date.

Dennis M. Crutchfield, Assistant Director  
for Safety Assessment  
Division of Licensing

Thomas M. Novak, Assistant Director  
for Licensing  
Division of Licensing

Enclosures:

1. River Bend Nuclear Power Plant, Unit 1  
Technical Specifications
2. River Bend marked up schedule

cc: w/o enclosure see next page.

Distribution  
for River Bend Unit 1  
Date: April 22, 1985

ATTACHED LIST

Al Schwencer, Chief Licensing Branch No. 2 , DL	Olan D. Parr, Chief Auxiliary Systems Branch, DSI
Gary Holahan, Chief Operating Reactors Assessment Branch, DL	William P. Gammill, Chief Meteorology and Effluent Treatment Branch, DSI
B. D. Liaw, Chief Materials Engineering Branch, DE	Lewis G. Hulman, Chief Accident Evaluation Branch, DSI
Victor Benaroya, Chief Chemical Engineering Branch, DE	Frank Congel, Chief Radiological Assessment Branch, DSI
Vincent Noonan, Chief Equipment Qualification Branch, DE	William Regan, Acting Chief Human Factors Engineering Branch, DHFS
Robert E. Jackson, Chief Geosciences Branch, DE	Dennis Ziemann, Chief Procedures & Systems Review Branch, DHFS
George Lear, Chief Structural & Geotechnical Engineering Branch, DE	Robert D. Martin Regional Administrator Region IV
Ronald L. Ballard, Chief Environmental & Hydrologic Engineering Branch, DE	John Jaudon Senior Resident Inspector Region IV
William H. Regan, Chief Site Analysis Branch, DE	Harold R. Booher, Chief License Qualifications Branch, DHFS
Brian W. Sheron, Chief Reactor Systems Branch, DSI	Frank C. Cherny, Acting Chief Mechanical Engineering Branch, DE
Faust Rusa, Chief Instrumentation & Control Systems Branch, DSI	G. Ted Ankrum, Chief Quality Assurance Branch, I&E
Walter R. Butler, Chief Containment Systems Branch, DSI	Steve Stern, Project Manager Licensing Branch No. 2, DL
M. I. Srinivasan, Chief Power Systems Branch, DSI	Applicant: (3)
Carl Berlinger, Chief Core Performance Branch, DSI	

**DRAFT**

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cc: w/o enclosure  
H. Denton  
H. Thompson  
T. Speis  
J. Knight  
R. Bernero  
W. Russell  
G. Lainas  
F. Schroeder  
F. Rowsome  
W. Johnston  
R. Houston  
L. Rubenstein  
D. Muller  
R. Bosniak  
D. Beckham