



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

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Dear *Herman*, DC.

MAY 13 1985

MEMORANDUM FOR: Dennis M. Crutchfield, Assistant Director
Division of Licensing

FROM: Robert Bosnak, Acting Assistant Director
for Components and Structures Engineering
Division of Engineering

SUBJECT: FINAL DRAFT OF THE RIVER BEND UNIT 1 TECHNICAL
SPECIFICATION

OK, no comments

As requested in your memo dated April 19, 1985, on above subject, we have reviewed the River Bend Technical Specification 3.3.7.2 on Seismic Instrumentation and 3.7.10 on Structural Settlement. We find these Technical Specifications, as written, are acceptable and no changes are required. A copy of these Technical Specifications is attached.

R. Bosnak
Robert Bosnak, Acting Assistant Director
for Components and Structures Engineering
Division of Engineering

Enclosure: As stated

- cc: J. Knight
- G. Lear
- L. Heller
- P. Kuc
- H. Poll
- J. Cher
- ~~R. Houston~~

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INSTRUMENTATION

SEISMIC MONITORING INSTRUMENTATION

FINAL DRAFT

LIMITING CONDITION FOR OPERATION

3.3.7.2 The seismic monitoring instrumentation shown in Table 3.3.7.2-1 shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

- a. With one or more of the above required seismic monitoring instruments inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to OPERABLE status.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.7.2.1 Each of the above required seismic monitoring instruments shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations at the Frequencies shown in Table 4.3.7.2-1.

4.3.7.2.2 Each of the above required seismic monitoring instruments actuated during a seismic event greater than or equal to 0.01g shall be restored to OPERABLE status within 24 hours and a CHANNEL CALIBRATION performed within 5 days following the seismic event. Data shall be retrieved from actuated instruments and analyzed to determine the magnitude of the vibratory ground motion. A Special Report shall be prepared and submitted to the Commission pursuant to Specification 6.9.2 within 10 days describing the magnitude, frequency spectrum and resultant effect upon unit features important to safety.

FINAL DRAFT

TABLE 3.3.7.2-1
SEISMIC MONITORING INSTRUMENTATION

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>MEASUREMENT RANGE</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Triaxial Time-History Accelerographs		
a. Reactor Bldg Mat EL 70'0"	0 ± 1.0 g	1
b. Reactor Bldg Ext Shield Wall EL 232'0"	0 ± 1.0 g	1
c. Reactor Bldg Drywell EL 151'0"	0 ± 1.0 g	1
d. Free Field - Grade Level	0 ± 1.0 g	1
2. Triaxial Peak Accelerographs		
a. Reactor Bldg SLCS Storage Tank	0 ± 10.0 g	1
b. Reactor Bldg - RHR Inj. Piping	0 ± 10.0 g	1
c. Aux. Bldg Service Water Piping	0 ± 10.0 g	1
3. Triaxial Seismic Switches		
a. Reactor Bldg Mat EL 70'0"	0.025 to 0.25 g	1(a)
4. Triaxial Response-Spectrum Recorders		
a. Reactor Bldg Mat EL 70'0"	0 ± 2 g	1(a)
b. Reactor Bldg Floor EL 141'0"	0 ± 2 g	1
c. Auxiliary Bldg Mat EL 70'0"	0 ± 2 g	1
d. Auxiliary Bldg Floor EL 141'0"	0 ± 2 g	1

(a) with reactor control room indication and annunciation.

TABLE 4.3.7.2-1

FINAL DRAFTSEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENTS AND SENSOR LOCATIONS</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>
1. Triaxial Time-History Accelerographs			
a. Reactor Bldg. Mat EL 70'0"	M	SA	R
b. Reactor Bldg. Exit Shield Wall EL 232'0"	M	SA	R
c. Reactor Bldg. Drywell EL 151'0"	M	SA	R
d. Free Field-Grade Level	M	SA	R
2. Triaxial Peak Accelerographs			
a. Reactor Bldg. SLCS Storage Tank	NA	NA	R
b. Reactor Bldg. - RHR Inj. Piping	NA	NA	R
c. Aux. Bldg. Service Water Piping	NA	NA	R
3. Triaxial Seismic Switches			
a. Reactor Bldg. Mat EL 70'0"	M(a)	SA	R
4. Triaxial Response-Spectrum Recorders			
a. Reactor Bldg. Mat EL 70'0'	M	SA	R
b. Reactor Bldg. Floor EL 141'0"	NA	SA	R
c. Auxiliary Bldg. Mat EL 70'0"	NA	NA	R
d. Auxiliary Bldg. Floor EL 141.0"	NA	NA	R

(a) Except seismic trigger.

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PLANT SYSTEMS

3/4.7.10 STRUCTURAL SETTLEMENT

FINAL DRAFT

LIMITING CONDITION FOR OPERATION

3.7.10 Structural settlement of the following structures shall be within the predicted values as shown in Table 3.7.10-1.

- a. Reactor Building
- b. Auxiliary Building
- c. Fuel Building
- d. Control Building
- e. Diesel Generator Building
- f. Standby Cooling Tower, Basin and Pump House

APPLICABILITY: At all times.

ACTION:

With the measured structural settlement of any of the above required structures outside of the predicted settlement, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days providing a record of the settlement measurements and the predicted settlement, an analysis to demonstrate the continued structural integrity of the affected structure(s) and plans to monitor the settlement of the affected structure(s) in the future.

SURVEILLANCE REQUIREMENTS

4.7.10 The structural settlement of the above required structures shall be demonstrated to be within the predicted settlement values:

- a. At least once per 92 days, using at least three markers per structure, until there is essentially no movement during those 92 days.
- b. At least once per 24 months, using at least one marker per structure for at least 10 years.
- c. Following any seismic event equal to or greater than an Operational Basis Earthquake (OBE), using at least three markers per structure.

OK
g.c.