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Dear Mr. DelGeorge:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - BYRON/BRAIDWOOD

We have reviewed your response to Item II.F.2 of NUREG-0737 which were submitted on June 7, 1982 and August 13, 1982. Enclosed is a request for additional information that we need to complete our review.

Please respond within 30 days of receipt of this letter.

Sincerely,

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B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing

Enclosure:
As Stated

cc w/enclosure: See next page

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REQUEST FOR ADDITIONAL INFORMATION

BYRON UNITS 1 AND 2, BRAIDWOOD UNITS 1 AND 2 INSTRUMENTATION FOR DETECTION OF INADEQUATE CORE COOLING

1. Describe the planned modifications to the HJTC probe and/or to the reactor vessel and components to accommodate the CE design in a Westinghouse plant.
2. Provide analysis, evaluation and test data to describe the performance of the HJTC system in your plant. Include the relationship of the shroud geometry to the hydraulic forces in the specific vessel locations for operation with main coolant pumps on or off and with or without voiding in the primary coolant system. In the later designed (System 80) CE plants it was necessary to split the shroud to avoid the effects of differential pressure across the upper support plate which could yield incorrect indication of collapsed water level. The potential for similar effects when installed in a Westinghouse designed reactor and vessel should be analyzed and evaluated. Expected indications during all phases of small break LOCA transients should be described.
3. Describe any additional testing programs for evaluation, qualification, and calibration for application to your plant. This should include discussion of the validity and applicability of the CE Phase III testing to the plant.
4. Describe the guidelines and precautions for use of the additional ICC instrumentation and analyses used to develop procedures.
5. Describe the operator instructions in emergency operating procedures for ICC and how these procedures will be modified when the final system is implemented.
6. Describe the spacing of the sensors in relation to the core alignment plate and the reactor vessel head. How would the decrease in resolution due to loss of a single sensor affect the ability of the system to detect approach to inadequate core cooling?
7. Describe the display measurement units in the SPDS.
8. Provide tables covering the evaluation of conformance of core exit thermocouples, the subcooling margin monitor, and the HJTC system with NUREG-0737: II.F.2, Attachment 1, and Appendix B, with suitable reference to conformance documentation.