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July 2, 1984

Mr. Harold R. Denton, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Dresden Station Units 2 and 3
Quad Cities Station Units 1 and 2
Post Accident Sampling System TMI,
Item II.B.3 Additional Information
NRC Docket Nos. 50-237, 50-249,
50-254, and 50-265

- References (a): D. B. Vassallo letter to D. L. Farrar dated April 16, 1984.
- (b): T. J. Dente letter to D. G. Eisenhut dated June 17, 1983-Generic Procedures for Estimating of Core Damage Using Post-Accident Sampling System.
- (c): T. J. Rausch letter to D. G. Eisenhut dated December 29, 1982.
- (d): D.M. Crutchfield letter to L. O. DelGeorge dated October 8, 1982.
- (e): E. D. Swartz letter to D. G. Eisenhut dated July 8, 1982.
- (f): S. A. Varga letter to L. O. DelGeorge dated April 11, 1982.

Dear Mr. Denton:

The purpose of this letter is to provide the information requested in Reference (a).

When responding to these items it is important to note that the Dresden and Quad Cities Stations have not committed to conform with Regulatory Guide 1.97 Rev. 2 as it applies to this TMI item. In Reference (d), not only is it stated by the NRC staff that the clarification sections within Reference (f) are intended to provide only staff guidelines and not requirements on how to meet the NUREG-0737 criteria, but also that Regulatory Guide 1.97 was put forth as a recommendation and not as a requirement.

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In Reference (a), the NRC staff has concluded that the backup sampling capabilities for post-accident sampling and analysis systems of Dresden and Quad cities stations meets Criterion 8, and as such there are no open concerns to resolve Criterion 8. With respect to Criterion 2, the NRC staff has found that the PASS complies with the intent of the criteria, i.e., in-line monitors are available for pH, conductivity, chloride, dissolved oxygen and hydrogen analyses.

The additional information requested for resolution of Criteria (2), (3), (7) and (10) is provided in the following paragraphs.

Criterion 2:

Provide a procedure to estimate the extent of core damage based on radionuclide concentrations and taking into consideration other physical parameters such as core temperature data and sample location.

Response:

The Dresden and Quad Cities Stations will be implementing the procedure noted in Reference (b). This procedure will be tailored to each site and fully implemented at the Dresden and Quad Cities Stations by April 1, 1985. An interim procedure has been provided to the stations for comments.

Criterion 3:

The PASS valves which are not accessible after an accident should be environmentally qualified for the conditions in which they are needed to operate.

Response:

The NRC expanded the NUREG-0737 Criterion 3 clarification item to include a request for verification that PASS valves which are not accessible after an accident are environmentally qualified for the conditions in which they must operate. PASS valves are not within the scope of 10 CFR 50.49 and are, therefore, exempt from the requirement for formal documentation of qualification. Nonetheless PASS valves have been procured to design specifications appropriate for the expected post-accident environmental conditions.

Criterion 7:

The analysis of primary coolant samples for boron is required for PWRs. Regulatory Guide 1.97 Rev. 2 specifies the need for primary coolant boron analysis capability at BWR plants.

Response:

The Dresden and Quad Cities Stations have yet committed to Regulatory Guide 1.97 Revision 2 for the Post Accident Sampling System. However, a procedure is under development which is designed to verify that sufficient boron is present to maintain the shutdown margin.

Criterion 10:

Accuracy, range, and sensitivity shall be adequate to provide pertinent data to the operator in order to describe radiological and chemical status of the reactor coolant systems.

The NRC finds that the Dresden and Quad Cities Station meets Criterion 10. The licensee should provide information on the following: All equipment and procedures which are used for post accident sampling and analysis should be calibrated or tested at a frequency which will ensure, to a high degree of reliability, that it will be available if required. Operators should receive initial and refresher training in post accident sampling, analysis and transport. A minimum frequency for the above efforts is considered to be every six months if indicated by testing.

Response:

To maintain a high degree of reliability of the equipment and instrumentation necessary for post-accident sampling, a schedule will be developed with the following frequency:

1. Instrumentation that requires calibrations to extract analytical results will be calibrated on semi-annual basis.
2. Instrumentation and equipment that is not used in determining an analytical results and the instrumentation that requires calibration to extract analytical results will be tested on a quarterly basis.

The schedule and implementation of the calibration and testing program will be made by February 1, 1985.

Training on the Post-Accident Sampling System (PASS) has been incorporated into the annual re-training program of Radiation Chemistry Technicians (RCT's). New RCT's will be trained on the PASS as a part of their initial training program.

H. R. Denton

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If these are any further questions concerning this submittal please contact this office.

One signed original and sixty (60) copies of this letter is provided for your use.

Very truly yours,



B. Rybak
Nuclear Licensing Administrator

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cc: R. Bevan - NRR
R. Gilbert - NRR
NRC Resident Inspector - Dresden
NRC Resident Inspector - Quad Cities

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