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February 17, 1984

Docket Nos. 50-348
50-364

Director, Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Mr. S. A. Varga

Joseph M. Farley Nuclear Plant - Units 1 and 2
NUREG-0737, Item II.B.3, Post-Accident Sampling System

Gentlemen:

Your letter of December 15, 1983 requested additional information regarding Alabama Power Company's position on two of the eleven NUREG-0737 Item II.B.3 criteria. Alabama Power Company provides the following in response to your questions.

1. NUREG-0737, Item II.B.3 Criterion (2)

The licensee shall have the capability to promptly obtain reactor coolant samples and containment atmosphere samples. The combined time allotted for sampling and analysis should be three hours or less from the time a decision is made to take a sample.

NRC Comment

The licensee should provide a procedure, consistent with our clarification of NUREG-0737, Item II.B.3, Post-Accident Sampling System, transmitted to the licensee on June 30, 1982 [sic], 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.

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APCo Response

Procedures which relate radionuclide concentrations to core damage are presently contained in existing Farley Nuclear Plant procedures which consider physical parameters such as core temperature and sample location. As stated in its April 1, 1983 letter to the NRC, Alabama Power Company is working with the Westinghouse Owners Group (WOG) to determine if an improved calculational method can be developed to assess the extent of core damage. This calculational method is scheduled to be issued in March 1984 and Alabama Power Company anticipates implementation within approximately six (6) months of receipt.

2. NUREG-0737, Item II.B.3 Criterion (10)

Provide information demonstrating applicability of the analytical procedures and instrumentation in the post-accident water chemistry and radiation environment and retraining of operators on a semiannual basis.

NRC Comment

The licensee should provide additional information consistent with the guidelines in our letter dated July 22, 1982, on the following: All equipment and procedures which are used for post-accident sampling and analysis should be calibrated or tested in the standard test matrix or in a similar environment, and 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.

APCo Response

The NRC standard test matrix enclosed will be utilized by Farley Nuclear Plant to perform testing of the post-accident sampling system equipment and procedures. This test matrix is sufficient to confirm that the existing equipment and procedures would provide satisfactory results during post-accident analysis. Testing in accordance with the standard test matrix will be performed initially after receipt of the WOG generic core damage assessment procedures referenced above in response to Criterion (2) and during subsequent operation as deemed necessary based on the initial test results.

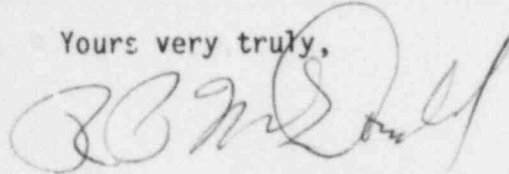
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In addition, it should be noted that calibration of equipment is performed on a periodic basis and the post-accident sampling system with exception of special handling equipment is used for routine sampling on a daily basis. The entire post-accident sampling system has been tested during annual emergency drills. In addition, training on the operation of the remote handling apparatus, sampling, analysis and transport is conducted annually in association with the emergency drills. This training is also an integral part of the annual formal requalification training for the chemistry and counting room technicians. Alabama Power Company believes that the daily utilization of the equipment and the annual training provides better confidence in the technician's capability than the current NRC recommendation of a six month training frequency.

If you have any questions, please advise.

Yours very truly,



 F. L. Clayton, Jr.

FLCJr/JAR:ddr-D36

Enclosure

cc: Mr. R. A. Thomas
Mr. G. F. Trowbridge
Mr. J. P. O'Reilly
Mr. E. A. Reeves
Mr. W. H. Bradford

Enclosure

Standard Test Matrix
for
Undiluted Reactor Coolant Samples in a
Post-Accident Environment

<u>Constituent</u>	<u>Nominal Concentration (ppm)</u>	<u>Added as (chemical salt)</u>
I-	40	Potassium Iodide
Cs+	250	Cesium Nitrate
Ba+2	10	Barium Nitrate
La+3	5	Lanthanum Chloride
Ce+4	5	Ammonium Cerium Nitrate
Cl-	10	
B	2000	Boric Acid
Li+	2	Lithium Hydroxide
NO ₃	150	
NH ₄ ⁺	5	
K+	20	
Gamma Radiation (Induced Field)	10 ⁴ Rad/gm of Reactor Coolant	Absorbed Dose*

*Note: Only the test matrix itself will be irradiated, not the testing equipment.