

F. L. CLAYTON, JR.  
Senior Vice President



July 11, 1979

Mr. A. Schwencer  
U. S. Nuclear Regulatory Commission  
Division of Operating Reactors  
Branch Number 1  
Washington, D.C. 20555

Dear Mr. Schwencer:

Revision 3 to NUREG 0472, Draft Radiological Effluent Technical Specifications for PWR's states that the following information should be included in an Offsite Dose Calculation Manual:

STS Section

1. 3.3.3.9 Procedure for calculating liquid effluent monitor alarm setpoints.
2. 3.3.3.10 Procedure for calculating gaseous effluent monitor alarm setpoints.
3. 4.11.1.1 Procedure for determination of site boundary concentrations for liquid effluents.
4. Table 4.11-1 Procedure for mixing liquid batches prior to release.
5. 4.11.1.2 Methodology for determination of offsite doses from liquid effluents.
6. 4.11.2.1 Methodology for determination of site boundary dose rates due to gaseous effluents.
7. 4.11.2.2 Methodology for determination of offsite doses from noble gases.
8. 4.11.2.3 Methodology for determination of offsite doses from radioiodines and particulates.
9. 4.12.1 Table and figures showing environmental monitoring sampling locations.

Only items 5, 7, and 8 are directly related to offsite dose calculations. Based on our discussion with your staff on June 6, 1979, these sections of the FNP ODCM submitted on April 16, 1979 were tentatively agreed upon. An attachment is enclosed to clarify the source of the constant 110 (rounded value) used in the gaseous dose equations.

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Items 1, 2, and 3 do not relate to the calculation of offsite doses. Liquid and gaseous effluent monitor setpoints are calculated for the isotopes of primary concern (Co-60 or I-131 for liquids and Xe-133 for gases). This is accomplished by assuming the highest expected effluent flow and lowest expected dilution or dispersion. The site boundary concentrations of liquid isotopes are derived by dividing the measured concentrations by the measured dilution factor. As none of these calculations are related to offsite dose calculations it is our position that their inclusion in the ODCM would be inappropriate.

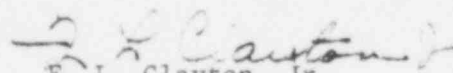
Item 5 pertains to operational sampling techniques. It is adequately covered by plant procedures and should therefore not be addressed in the ODCM.

Item 6 does not concern the calculation of exposure doses for assurance of compliance with 10CFR50, Appendix I. It concerns the calculation of release rates, in dose terms, to assure compliance with 10CFR20. Alabama Power Company has developed the first (and to the best of our knowledge, the only) dose based calculational software for the monitoring of releases. This software, which was developed at considerable expense, does not consider the ground plane or food pathways for dose rate calculations. While these pathways are excluded, a conservatism of 36% is included in the Plant Farley software as the infant respiration rate used for inhalation pathway calculations is 1900 m<sup>3</sup>/year vice the NRC staff's recommended number of 1400 m<sup>3</sup>/year. Also, the Farley Nuclear Plant computer utilizes real time meteorology in the dose rate calculation, thereby providing a major enhancement of the accuracy of our calculations.

As the incorporation of food and ground plane pathways into the software would require a major rewrite of our programs, Alabama Power Company is requesting NRC approval of this gaseous dose rate portion of the ODCM as it is written. The existing software for calculation of doses to the public includes all pathways recommended in NUREG-0133, Section 5.3. Thus, no error is introduced into the calculated doses. Also, any omissions in the calculations of dose rates are offset by the above mentioned conservatism.

Item 9 is acceptable to Alabama Power although it is unrelated to effluents. A table and three (3) figures are included in the attached copy of the revised ODCM.

Sincerely yours,

  
F. L. Clayton, Jr.

FLCJr/WMJ:bhj

Attachments