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July 25, 1984
EF2-69216

Director of Nuclear Reactor Regulation
Attention: Mr. B. J. Youngblood, Chief
Licensing Branch No. 1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Dear Mr. Youngblood:

Reference: (1) Fermi 2
NRC Docket No. 50-341

(2) NRC Letter to Detroit Edison, "Review of Fermi-2 ODCM" May 8, 1984

(3) Detroit Edison Letter To NRC, "Resubmittal of Draft Offsite Dose Calculation Manual", EF2-67213, February 6, 1984

Subject: Revised Offsite Dose Calculation Manual

Reference 2 provided several questions on the Fermi 2 Offsite Dose Calculation Manual (ODCM) which Detroit Edison provided via Reference 3. The subject ODCM has subsequently been revised to reflect the resolution to these questions and is provided as Attachment 2. Specific responses to the Reference 2 questions are provided in Attachment 1.

Should you have any additional questions, please contact Mr. Keener Earle (313) 586-4211.

Sincerely,

Wayne H. Jens

Enclosures

cc: P. M. Byron*
M. D. Lynch*
J. Nehemias*
USNRC, Document Control Desk,*
Washington, DC 20555

*With Attachments

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Attachment 1: Responses to NRC Concerns

	Subject	NRC Comment	Detroit Edison Response
1.	Liquid Radiation Monitor (Figure 1.4-1)	Detroit Edison has designated the monitor at the circulating water reservoir decant line as D11N402 (Table 3.3.7.11-1 of DECo's RETS), whereas it has been designated as D11-N042 in the ODCM. Indicate which one is correct.	Figure 1.4-1 was revised to identify N402 as the proper monitor.
2.	Gaseous Setpoint Calculation (Page 2.0-2)	DECo has not addressed the dose contribution from the finite elevated plume from, for example, the reactor building stack.	The "stack" of Regulatory Guide 1.109 must exceed 80 meters in height. Fermi 2 does not have any stack release points using this definition (i.e., height).
3.	Gaseous Effluent Dose Calculation (Page 2.0-6)	DECo has not considered the finite elevated plume in the gaseous dose and dose rate calculations.	Refer to Item 2 above.
4.	Dose to An Individual in Unrestricted Area (Page 2.0-8, Equation 10)	DECo has not included I-133 in the dose calculation.	Section 2.2.2.b (page 2.0-10) of the ODCM has been revised to reflect the inclusion of all radioiodines (not just I-131) in this dose calculation.
5.	Dose to An Individual in Unrestricted Area (Page 2.0-8)	DECo has not provided methodology and site-specific parameters for the derivation of R_i	The derivation of R_i (now identified as R_{aipj}) has been provided in Section 2.2.2.b.

	Subject	NRC Comment	Detroit Edison Response
6.	Dose Factors (Table 2.2-1)	DECo referenced NUREG-0133 as the source for the P values. However, NUREG-0133 specifies the infant, not child, as the critical receptor. Indicate how DECo will demonstrate that a child is a more critical receptor group.	Regulatory Guide 1.109 indicates that the product of the child's breathing rate and dose factor exceeds that of the infant and is, therefore, the critical receptor. This is also in accordance with the Bases discussion of Fermi 2 Technical Specification 3/4.11.2.1.
7.	Dose Factors (Table 2.2-2)	DECo has not considered the grass-cow-meat, vegetation ingestion, and grass-cow-milk pathways. DECo should provide justification why an infant is considered as the critical age group.	Section 2.2.2.d presents the methodology that would be used in assessing these pathway contributions should a subsequent land use census determine these analyses are required. The highest potential dose due to all applicable gaseous dose pathways at Fermi 2 is to the infant age group. Therefore, the infant age group is designated as the critical receptor for gaseous effluents.
8.	TLD Stations (Figure 3.0-3 and Table 3.0-2)	DECo has committed to 37 TLD locations (see Table 3.12.1-1 of RETS), whereas there are only 30 locations provided in the ODCM. DECo should explain this discrepancy.	Table 3.0-1 now reflects 37 locations where "direct radiation" measurements are taken via a TLD. Figures 3.0-1, 2 and 3 have similarly been revised to reflect the 37 TLD stations.
9.	Monthly Liquid Dose Projections	DECo has not provided the methodology and parameters for monthly dose projection in accordance with the commitment made in DECo's RETS Specification 4.11.1.3.1.	Section 1.2.3 provides the methodology for determining an individual monthly liquid dose projection.

	Subject	NRC Comment	Detroit Edison Response
10.	Monthly Gaseous Dose Projection	DECo has not provided the methodology and parameters for monthly dose projection in accordance with commitment made in DECo's RETS Specification 4.11.2.5.1.	Section 2.2.3 provides the methodology for determining an individual monthly gaseous dose projection.
11.	Total Dose	DECo has not addressed the methodology to calculate the total doses from uranium fuel cycles in accordance with RETS Specifications 4.11.4.1 and 4.11.4.2. Also, methodology is not provided for calculation of direct radiation exposure.	Section 4.0 provides the methodology for calculating the total dose from the uranium fuel cycle. This discussion encompasses the calculation of direct radiation exposure.
12.	Interlaboratory Comparison Program	DECo has not addressed the interlaboratory program in accordance with RETS Specification 4.12.3.	Section 3.2 has been added to address the Interlaboratory Comparison Program.