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March 30, 1988

Mr. Richard J. Clark
Project Manager
Project Directorate I-2
Division of Reactor Project I/II
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: Request for Revision of the Limerick Generating Station, Units 1 and 2, Offsite Dose Calculation Manual

Dear Mr. Clark:

In your letter of November 23, 1987, you indicated that Revision 4 of the Limerick Generating Station, Units 1 and 2, Offsite Dose Calculation Manual (ODCM) was a basically sound document using documented and approved methods consistent with the methodology and guidelines in NUREG-0133. However, you requested that the discrepancies that still existed in the Revision 4 document be addressed and a revised ODCM be submitted by April 1, 1988.

The purpose of this letter is to transmit Revision 5 of the Limerick Generating Station, Units 1 and 2, Offsite Dose Calculation Manual in accordance with your request. This revision addresses all but three (3) of the thirty (30) discrepancies identified in the Technical Evaluation Report which was attached to the NRC Safety Evaluation for the review of Revision 4 of the ODCM. The discrepancies not addressed in Revision 5 of the ODCM are restated below followed by the Philadelphia Electric Company response.

NRC Discrepancy

Section II.B, the definition for F1 must be modified to read "....Defined as the ratio of the maximum undiluted liquid waste flow during release to the average dilution flow during the reporting period." The average dilution flow can be adjusted to 1000 ft3/sec sec as allowed in Section 4.3 of NUREG-0133 as long

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as the Schuylkill River can maintain the dilution flow during the reporting period. The adjustment is allowed for plants with cooling towers to consider the effects of near-field dilution in the receiving body of water. Without this adjustment the calculated doses could exceed the dose limits of the technical specifications for liquid radwaste releases.

Response

The dilution factors incorporated in Revision 4 and Revision 5 of the ODCM are based on river dye studies and include the effects of near field dilution. In Revision 5, the dilution factors are calculated monthly using the monthly average river flow. Both Revision 4 and Revision 5 calculate dilution from the Schuylkill River consistent with Section 4.3 of NUREG-0133 and no further adjustment for near field dilution is appropriate.

NRC Discrepancy

Section IV.B, it is not clear why the "Effluent contribution to dose" is included in the statement for determining dose from direct radiation which is used in demonstrating compliance with 40 CFR 190.

Response

The direct dose calculation for demonstrating compliance with 40 CFR 190 uses the results of field located Thermoluminescent Dosimeters (TLDs). These TLD results indicate the total dose received at the site. Therefore, in order to determine any potential contribution from direct shine exposure from the station only, ambient background radiation and the contribution from effluent releases must be subtracted from the TLD results. This methodology is in accordance with ANSI/ANS 6.6.1-1979 Section 7.

NRC Discrepancy

Simplified diagrams illustrating tne solid waste treatment systems are not included in the ODCM.

Response

Simplified diagrams of the solid waste treatment systems are not included in the Limerick ODCM because Limerick Generating Station has a Process Control Program (PCP) which addresses the aspects

of solid radwaste treatment. A simplified diagram of the solid radwaste system will be incorporated in the Process Control Program document. A revision to the Limerick PCP including the simplified diagram will be issued with the Semi-Annual Effluent Release Report, Report No. 8, in accordance with Limerick Technical Specifications.

If you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,

JW Gallagher

cc: Addressee
W. T. Russell, Administrator, Region I USNRC
T. J. Kenny, Senior Resident Site Inspector