ENCLOSURE

Metropolitan Edison Company Three Mile Island Nuclear Station Unit 1 (TMI-1) Docket No. 50-289 Operating License No. DFR-50 Nonroutine 30-Day Environmental Report 75-03

Report on an Anomalous Measured Level of Radioactivity

Description of Measured Level

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A monthly composite of weekly grab samples of surface river water collected at a location about 0.5 miles downstream from the TMI-1 river discharge had a Co-60 concentration of 2.4 \pm 0.4 x 10⁻⁹ $\frac{\mu Ci}{ml}$ and an I-131 concentration of 3.2 \pm 0.6 x $\frac{\mu Ci}{ml}$ as reported to Met-Ed by its consultants on October 7, 1975. This value is greater than four times the Minimum Detectable Levels (MDL) for Co-60 and I-131 which are 5 x 10⁻¹⁰ $\frac{\mu Ci}{\mu Ci}$ and 7 x 10⁻¹⁰ $\frac{\mu Ci}{\mu Ci}$ respectively.

In the absence of any previous positive data these MDL values are referred to as the control station values. It is extremely difficult to estimate background levels of gamma emitting radionuclides in surface water. These difficulties come about since the sensitivity of gamma spectrographic analyses (the analytical method of choice) is such that results are, and have been, typically below the detection limit. As such this detection limit (MDL), is the only possible Control Station Value to use.

A strict reading of the TMI-1 Environmental Technical Specifications thus requires us to inform you of these measured levels.

Possible Cause

Discharges are made from the TMI-1 Liquid Waste Evaporator Condensate Tanks on an irregular schedule based on unit operating conditions. Weekly grab samples for the radiological environmental monitoring program are taken on a regular basis. It is believed that the grab samples which were composited to form this sample were taken during periods of abnormally low river water flow.

Analysis of Measured Level

It is believed that neither the health nor safety of the public was threatened by the occurrence represented by this sample in that:

- a. The level of Co-60 activity was less than 1/10,000th of the Maximum Permissible Concentration Level given in 10CFR20 for members of the public.
- b. The level of I-131 activity was about 1/100 th of the Maximum Permissible Concentration Level given in 10CFR20 for rembers of the public.
- c. Assuming (conservatively) the river water contained 46 pCi/l of I-131 for the 31 day month of August, any individual drinking 1.2 liters per day at the nearest downstream water source would have a total integrated thyroid dose due to the I-131 of 0.0032 mrem.

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d. The level of activity for these isotopes at the nearest downstream source of continuous public use was determined to be less than the MDL.

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- e. No Technical Specification Limits were exceeded.
- f. The event resulted from normal unit operations as described in the TMI-1 Final Safety Analysis Report.

Corrective Action

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The discharge of effluents from the Waste Evaporator Condensate Tank is a normal process associated with unit operations and is described in the Final Safety Analysis Report. Met-Ed will continue to sample in accordance with Environmental Technical Specifications, Table 3.

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