

ENCLOSURE

Metropolitan Edison Company
Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Docket No. 50-289
Operating License No. DPR-50
Nonroutine 30-Day Environmental Report 74-01

Notification of an Anomalous
Measured Level of Radiation

1. Description of Occurrence:

An air particulate sample collected 2500 feet SSE of the Reactor Building for the period August 24-31, 1974, showed a beta concentration of 5.2×10^{-13} uCi/ml, which was 9.6 times the beta concentration for the control station. An immediate investigation was begun to determine the source of radionuclides that caused this increase.

2. Apparent Cause of Occurrence:

For the following reasons it is believed that the anomalous measured level of radiation under discussion resulted from a source other than TMI-1.

- a. Analyses indicate that if the measured radiation levels had resulted from thermal neutron fissioning of U-235 atoms, the fissions would have had to occur prior to the date of initial TMI-1 reactor criticality.
- b. Analyses also indicate that the measured radiation levels do correspond with those that would have been expected from the Chinese nuclear bomb detonation of June 17, 1974.
- c. Most of the measured beta activity was restricted to one quadrant of the filter paper, which is more indicative of a single stray hot particle vice a release from TMI-1.
- d. The high gross beta activity was restricted to only one sample station, which again is more indicative of a single stray hot particle vice a release from TMI-1.

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