

Supplement to MIT Research Reactor Annual Report
to U.S. Nuclear Regulatory Commission, July 1, 1986 - June 30, 1987

Section H, Radioactive Effluents

Information regarding liquid effluent releases was not included in the above annual report to NRC because it was erroneously believed that Note 5 of Appendix B, 10 CFR 20, could be applied to discharges to the sanitary sewerage system pursuant to 10 CFR 20.303, thereby making it unnecessary to include them in the effluent report required by paragraph 7.13.5(h) of the MIT Reactor Technical Specifications. In accordance with the findings of USNRC Inspection No. 50-20/87-03, the required information is provided herewith.

Total gross beta activity in the liquid effluents (cooling tower blowdowns and waste storage tank discharges) amounted to 0.0002 Ci for FY1987. The total tritium was 0.096 Ci. The total effluent water volume was 6,221,000 liters, giving an average tritium concentration of $15.4\text{E-6 } \mu\text{Ci/ml}$.

The above liquid waste discharges are provided on a monthly basis in Table H-3 attached.

Table H-3

Liquid Waste DischargesFiscal Year 1987

	Total Gross Beta ($\times 10^{-6}\text{Ci}$)	Total Tritium ($\times 10^{-3}\text{Ci}$)	Volume of (1) Effluent Water ($\times 10^4\text{liters}$)	Tritium Concentration ($\times 10^{-6}\mu\text{Ci/ml}$)
July 1986	59.8	5.02	62.7	8.01
Aug.	NDA ⁽²⁾	7.63	89.3	8.55
Sept.	3.3	14.61	22.0	66.3
Oct.	NDA	3.78	63.0	6.0
Nov.	NDA	3.32	43.9	7.6
Dec.	11.	22.33	51.2	43.6
Jan. 1987	37.6	3.49	38.6	9.0
Feb.	38.4	4.01	49.3	8.1
Mar.	NDA	3.29	58.4	5.6
Apr.	23.	12.40	47.1	26.3
May	27.8	4.86	45.1	10.8
<u>June</u>	<u>6.8</u>	<u>11.34</u>	<u>51.5</u>	<u>22.0</u>
12 months	207.7	96.08	622.1	15.4

Notes:

- (1) Volume of effluent from cooling towers and waste tanks. Does not include other diluent from MIT estimated at 2.7 million gallons/day.
- (2) No Detectable Activity; less than $1.26 \times 10^{-6} \mu\text{Ci/ml}$ beta for each sample.



NUCLEAR REACTOR LABORATORY

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L. CLARK, JR.
Director of Reactor Operations

January 29, 1988

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Subject: Supplement to Annual Report, Docket No. 50-20, License R-37,
Technical Specification 7.13.5

Dear Sirs:

During U.S. Nuclear Regulatory Commission Inspection No. 50-20/87-03, it was noted by the inspector that some of the information required by MIT Research Reactor Technical Specification 7.13.5(h) had not been provided in the Annual Report to NRC.

As agreed at the time of the inspection, the required information has been summarized from the reactor's records and is forwarded herewith in the form of a Supplement to the Annual Report.

Sincerely,

Lincoln Clark, Jr.

Enclosure: As stated

cc: MITRSC
USNRC, Region I - Chief, Reactor Projects Section 1B
USNRC, Region I - Project Inspector
USNRC, Resident Inspector, Pilgrim Nuclear Station

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