

50-320

Population Dose Estimates 3/28 - 4/6 from IRACT files

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SUMMARY OF POPULATION DOSE (Man-Rem) FOR TMI ACCIDENT  
3/28/79 - 4/6/79

<u>Period</u>	<u>0-10 Miles</u>	<u>10-15 Miles</u>	<u>Total</u>	<u>0 - 50 Miles Cumulative Sump</u>
3/28 - 4/1	906	870	1,776	1,776
4/1 - 4/2	25	12	36	1,813
4/2 - 4/3	123 (109)*	129 (133)*	252(242)*	2,065
4/3 - 4/4	36	34	70	2,135
4/4 - 4/5	24	24	48	2,183
4/5 - 4/6	41	39	80	2,263

\* Recal on April 6, 1979 by JB

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TMI ACCIDENT

Summary of Maximum Individual Dose (TLD Data)  
Location: 0.4 Miles East of Site

<u>Period (1979)</u>	<u>Dose (mrem)</u>	<u>Cumulative Total Dose (mrem)</u>
3/28-3/29	45	45
3/29-3/31	26	71
3/31-4/1	8. (8.2)*	79. (79.2)
4/1-4/2	0. (0.1)*	79. (79.3)
4/2-4/3	1 (0.54)*	80. (80.3)
4/3-4/4	0 (0.19)*	80. (80.3)
4/4-4/5	1.7(1.5)*	82. (81.53)
4/5-4/6	1.7(1.5)*	83. (83.03)

\*Stn EIA ("ES") mR reading less 0.19 mR day Bkgd.

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From: Lake Barrett on 4/9 as of noon on 4/8

### Dose Estimates

Total population (50-mile radius) dose through noon April 8, is estimated to be approximately 2400 man-rem based on survey results.

Incremental population dose from April 7- April 8

0-10 mile radius	23 man-rem
10-50 mile radius	21 man-rem

The estimated dose to hypothetical, maximally exposed individual continuously present at point approximately 0.5 miles NE of plant  $< 100$  millirem or ( $\sim 85$  millirem)

The dose from milk pathway (Iodine-131) to an infant's thyroid is approximately 1 to 2 millirem, assuming milk was drunk with iodine concentrations that have been reported, i.e., raw milk, not pasteurized or processed.

Doses from iodine inhalation (assuming at concentrations that have been reported) dose to infant thyroid -  $< 10$  mrem

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ESTIMATE OF COLLECTIVE DOSES TO POPULATION WITHIN 50 MILES

Date	4/3/79	3/28-4/3/79
	<u>Daily Incremental</u>	<u>Cumulative</u>
Whole body collective dose (man-rem)	250	2000
Average dose to individual (mrem)	0.125	1.0
Max. dose to individual at North Gate (mrem)	<7	<100

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B Murray  
Mile 9  
Job N 4/7/79

POPULATION AND INDIVIDUAL DOSES

The following is the estimated population and average individual dose out to 50 miles for March 28 to April 3. To include April 4 and April 5 add about 15%

<u>Radius</u> (miles)	<u>&lt; man-rem</u>	<u>Population</u>	<u>Average Ind. Dose</u> <u>Mrem</u>
0-1	29.3	658	45
1-2	77.1	2,017	38
2-3	<08.9	7,579	27
3-4	175.2	9,676	18
4-5	132.9	8,891	15
5-10	780.7	136,474	6

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0-5 miles - 622 mem-rem - average individual dose 21 mrem  
population 28,821

5-10 miles 780 mem rem - average ind dose 6 mrem  
population 136,474

0-10 1402 mrem-rem - average ind dose 8 mrem  
population 165,295

0-50 miles ~2,000 mem rem - average ind. dose 1 mrem  
population ~ 2,000,000.

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