

MAR 21 1972

Docket No. 50-289

ENVIRON, FILE (NEPA)

William H. Regan
Projects Branch #2
Division of Radiological and
Environmental Protection

SOURCE TERM FOR THREE MILE ISLAND NUCLEAR STATION

The enclosed 3 tables include the source term values for Three Mile Island Nuclear Station. One copy is for your file and the other is for your transmittal to the laboratory team leader assigned to this project.

Jacob Kastner

Jacob Kastner, Chief
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Enclosures:
TMI Tables 1, 2, 3 (2)

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DATE ▶	3/20/72	3/21/72			

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Table 1

ANTICIPATED ANNUAL RELEASE OF RADIOACTIVE NUCLIDES IN GASEOUS
EFFLUENT FROM THREE MILE ISLAND UNIT 1

Isotope	Containment Purge	Discharge Rate (Ci/year)		Auxiliary Building Leak	Total
		Gas Processing System	Steam Generator Leak		
Kr 85	10	825	5	5	840
Kr 87			3	3	6
Kr 88			9	9	18
Xe 131m	2	36	5	5	48
Xe 133	140	460	840	840	2,280
Xe 135			14	14	28
Xe 138			2	2	4
I 131	0.04		0.01	0.01	0.06

Table 2

ANTICIPATED ANNUAL RELEASE OF RADIOACTIVE NUCLIDES IN GASEOUS
EFFLUENT FROM THREE MILE ISLAND UNIT 2

Isotope	Containment Purge	Discharge Rate (Ci/year)		Auxiliary Building Leak	Total
		Gas Processing System	Steam Generator Leak		
Kr 85	11	900	5	5	920
Kr 87			3	3	6
Kr 88			10	10	20
Xe 131m	2	40	5	5	52
Xe 133	150	500	920	920	2,490
Xe 135			15	15	30
X 138			2	2	4
I 131	0.04		0.001	0.01	0.05

TABLE 3

ANTICIPATED ANNUAL RELEASE OF RADIOACTIVE MATERIAL
IN LIQUID EFFLUENTS FROM THREE MILE ISLAND NUCLEAR STATION

Nuclides	From Coolant and Miscellaneous Waste System, uCi Both Units	From Regeneration of Con- densate Demineralizers Unit 2, uCi
Rb 86	1,700	2,700
Sr 89	15,000	24,000
Sr 90	550	800
Y 90	580	900
Y 91	100,000	160,000
Zr 95	2,600	4,000
Nb 95	2,700	4,100
Mo 99	190,000	290,000
Tc 99m	180,000	270,000
Ra 103	1,800	2,800
Ru 106	530	800
Rh 103m	1,800	2,800
Rh 105	40	70
Rh 106	530	800
Te 125m	1,500	2,300
Te 127m	13,000	19,000
Te 127	13,000	19,000
Te 129m	120,000	180,000
Te 129	76,000	120,000
Te 131m	1,800	2,700
Te 131	320	490
Te 132	250,000	380,000
I 131	6,500,000	9,900,000
I 132	260,000	390,000
I 133	49,000	75,000
Cs 134	750,000	1,200,000
Cs 136	260,000	390,000
Cs 137	630,000	960,000
Ba 137m	590,000	900,000
Ba 140	14,000	21,000
La 140	15,000	23,000
Ce 141	2,700	4,100
Ce 143	50	70
Ce 144	1,700	2,600
Pr 143	1,900	3,000
Pr 144	1,700	2,600
Nd 147	700	1,100
Pm 147	190	300
Total	~ 10 Ci/yr	~ 15 Ci/yr

H³ - 2000 Ci/yr both units