

ENCLOSURE 2-1

RECORDS OF SANITARY SEWAGE DISPOSAL (20.2003)

Radiation Disposal

Conversions: 1 gal = 3.7854 liters
1000 gal = 3,785.4 liters
= 3,785,400 mls
 $\approx 3.7854 \times 10^6 \text{ mls}$

Natick Labs Discharge
Approx. 1000 gal/day = 3,785,400 mls/day

NRC Allowable Disposal: ...

H^3 = 10 nci/ml effluent discharge

Therefore = 10 nci/ml \times 3,785,400 ml/day discharge
= 37,854,000 nci/day
= 37,854 uci/day
 $\approx 37.854 \text{ mli/day}$

C^{14} = .3 nci/ml effluent discharge

Therefore = .3 nci/ml \times 3,785,400 ml/day discharge
= 1,135,620 nci/day
= 1,135.62 uci/day
 $\approx 1.136 \text{ mli/day}$

Total Disposed in S-RPO Drain

1983 1984 1985 1986 1987 1988 1989 1990 1991

^3H	6.006mCi	302 μCi	14.1mCi	97.2 μCi	3.127mCi	265.38 μCi	24.784 μCi	17.02 μCi	430.68 μCi
^{14}C		161.5 μCi	3.77 μCi		246.7 μCi	13.08mCi	20.165 μCi		0.132 μCi
^{35}S	0.522 μCi	0.522 μCi	4.5×10^3 mCi 5.005 μCi						
^{125}I		2444 μCi		13.5 μCi	74.8 μCi	113.97 μCi	112.29 μCi	94.1 μCi	
^{60}Co		0.22 μCi							
^{60}Co ^{137}Cs ^{22}Na		0.127 μCi							
^{32}P							450 μCi	500 μCi	
^{45}Ca									50 μCi

Total Disposed in Sewage System

1992 1993 1994 1995 1996 1997 1998 1999 2000

³ H 1.13mCi 2986mCi 5.006mCi 10.048mCi 6mCi 3421mCi 19.2mCi

¹⁴ C 5.751mCi 7.0mCi 0.5μCi 2.059mCi 11.46mCi 0.114μCi 1μCi 120.45μCi

³⁵ S 1mCi

¹²⁵ I 257μCi 680μCi 1613μCi 60.9μCi 112μCi 555μCi 11μCi 468.4 427.24μCi

⁶⁰ Co

³² P 250μCi 210μCi 75mCi 2μCi

⁴⁵ Ca 25μCi 42μCi 41mCi 5.5mCi

⁵¹ Cr 4.184mCi

Total Disposed in Sewage System

	2001 μCi	2002 μCi
125 I	391.389	170.00 313.74
3 H	0.21	0.2552
14 C	0.21	0.1
69 Ni	0.0234 23.4 mCi	-
137 Cs	37.57	-
90 Sr	0.00447 4.47 mCi	-
241 Am	0.00457 4.57 mCi	-
60 Co	27.24	-
57 Co	0.0305 30.5 mCi	-