

**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

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

# Total Disposed in Sewage System

1992 1993 1994 1995 1996 1997 1998 1999 2000

<sup>3</sup> H 1.13mCi 2986mCi 5.006mCi 10.048mCi 6mCi 3421mCi 19.2mCi

<sup>14</sup> C 5.751mCi 7.0mCi 0.5μCi 2.059mCi 11.46mCi 0.114μCi 1μCi 120.45μCi

<sup>35</sup> S 1mCi

<sup>125</sup> I 257μCi 680μCi 1613μCi 60.9μCi 112μCi 555μCi 11μCi 468.4 427.24μCi

<sup>60</sup> Co

<sup>32</sup> P 250μCi 210μCi 75mCi 2μCi

<sup>45</sup> Ca 25μCi 42μCi 41mCi 5.5mCi

<sup>51</sup> 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	-