RADIONUCLIDE DATA SHEET
Tritium – 3

H – 3 1 protons 2 neutrons

Radiation: **Decay mode:** Beta

Major Betas:

Max E (MeV)	Avg E (MeV)	# per 100 dis
0.0186	0.0057	100

Max. Beta Range in air 1 cm or 0.025 ft
Max. Beta Range in water 0.001 cm

Major Gammas:

E (MeV)	# per 100 dis
None	

Avg. gamma E = 0 MeV

Half – life: 12.3 years or 4.49E+03 days

Gamma constant: 0 mR/hr per 1 mCi at 30 cm

Radiological data:

Min. Ingestion ALI: 80000 μCi equals 5 rem TEDE (Whole Body)
Min. Inhalation ALI: 80000 μCi equals 5 rem TEDE (Whole Body)

Doses:

Skin Dose: Reported for 1 μCi over 10 cm^2 of skin
0 mrad/hr (gamma dose)
Point Source: 0 mrad/hr (beta dose)
Disk Source: 0 mrad/hr (beta dose)

Shielding data:

Max. range for beta:	Plastic	=	0.001 cm
	Aluminum	=	< 0.001 cm
Tenth Value Thickness for average gamma:	Concrete	=	0 cm
	Lead	=	0 cm

Detection Information: Usable Detectors listed with estimated efficiencies
(Use efficiencies listed on instrument when available)

Ludlum 3 with pancake probe at 1 cm:	0 %	**Liq. Scint. Counter:**	65 %
Ludlum 3 with NaI probe near surface:	0 %	**Gamma Counter:**	0 %

Action Quantities:

Bench top quantity must be less than	800000 μCi
Containers require labeling when greater than	1000 μCi
Rooms require posting when there is greater than	10000 μCi
Contamination lasting more than 24 hrs require NRC notification when greater than	400000 μCi

Updated – 08/02/2005