

Date November 16, 1981

a.

Memorandum

NRC

To: Chairman, Medical Radioisotope Committee (691/115)

Subj: QUARTERLY REPORT OF RADIOISOTOPE INVENTORY ON NUCLEAR MEDICINE AND RESEARCH SERVICES LICENSE

1. Submitted herewith is the quarterly radioisctope inventory as of 9-30-81:

H-3 C-14	=	75.891 12.468		Ga-67 Sr-90	=	12.0 0.048
P-32	=	1.82		Tc-99m	-	150.0
S-35	-	8.60		Tr 112-	_	150.0
Ca-45	-	1 27		11-113m	=	1.4
Cr-51	-	1.2/		1-125	-	14.9
01-51		5.7	- A ²	I-131	=	0.25
Co-57	=	0.004		Ce-137		0.00005
N1-63		11 0		05-157	-	0.00045
		11.0		Th-228	=	< 1 gm

b. Sealed sources (mCi)

Labeled chemicals (mCi)

N	uclear Medicine	Cs-137	=	05.0
	-	Cs-137	=	0.203
		Co-57 Co-57 Co-57 Co-57	8 8 8	5.90 2.00 5.00 5.30
		Ra-226 Ra-226 Ra-226	8 11 2	0.020 0.017 0.001
Ne	phrology	1(115)-125		73.9 (stored B-500, GN-0072)
→ ca	rdiology	N1-63	=	8.0 (located in waste
Ne	uro-Epilepsy	N1-63	= 1	storage, B-346) 15.0
GR	ECC	N1-63	=	15.0

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Radiation The	erapy	Sr-90	-	1	19.8
		Sr-90	-	22.4	
		01 90		10.0	
		I-125	*	5.67	
Infectious Di	seases	Н-3		250 0 (located	
				storage	P-3/6)
Neuro-Pharmac	cology	Ni-63	=	50.0	D-340)
		Н-3		300.0	
Cerebral Circ	ulation	Ba-133	=	0.001	
		Cs-137	-	0.002	
		Eu-155	=	0.002	
	1.1			0.001	
Wastes					
Н-3		3/	97		A.S. 19
C-14	, =	54	80		
		0	.00		
P-32	=	0	016		
S-35	=	0.	31		
Ca-45		0	.002		
Cr-51		0.	.02		
Ga-67		2	14		
In-111		2.	10		
I-125		0.	003		
I-131		5.	007		
T1-201		0.	35		
Ra-226		0.	052		
ThO	=	100	em		
		100	0		

2. 181,800 LSC vials, containing 4.64 mCi H-3 and 900 uCi C-14 were disposed as deregulated waste, 7-1-81. 53,360 LSC vials containing 0.427 mCi H-3 and 0.513 mCi C-14 were disposed as deregulated waste, 11-4-81.

Respectfully submitted,

.W. William

L. W. WETTERAU Radiation Safety Officer Nuclear Medicine Ultrasound Service (691/115)

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RECEIPT .. RADIONUCLIDES - PACKAGE OPENING

Title 10-CFR-20.205 requires that procedures be established for safely opening packages of all radioactive materials. The procedure outlined below will be followed, without acception:

· I. ALL PACKAGES

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A. Packages of radionuclides will be delivered to the Radiopharmacy, 31dg 500, Rm 0072, or to Bldg 114, Rm 212, for inspection and logging in. They should be inspected and opened as soon as possible after receipt. Follow manufacturer's directions for opening, when provdied. Monitor every package to determine surface radiation level. Record in log. If radiation level exceeds 200 mr/hr, place in shielded location and notify RSO.

- B. Wear protective gloves and lab coats when opening packages.
- C. Observe for mechanical damage record condition in logbook.
- D. Determine if package is exempt from inspection requirements listed below. Verify contents and record. Note that in spite of any monitoring exemptions, the use of <u>due care</u> in opening all radioisotope shipments is mandatory, and that <u>packing material should be</u> monitored before disposal.

	Wipe testing not required if less than		Wipe testing not required if less than	
Radionuclide*	(mCi)	Radionuclide*	(aCi)	
Calcium-45	1	Mercury-197	100	
Calcium-47	100	Molybdenum-99 (cenerator)	20,000	
Carbon-14	10	Phosphorus-32	100	
Chromium-51	100	Potassium-42	100	
Cobalt-57+	1	Potassium-43+	100	
Cobalt-57+ (pill)	20,000	Radium-226 (sealed source)+	1	
Cobalt-60 (pill)	3,000	Rubidium-81	100	
Gallium-67+	100	Rubidium-86	100	
Gold-198	100	Selenium-75	1	
Sold-198 (seeds)	20,000	Sodium-24	100	
Hydrogen-3	10	Strontium-85	1	
Indium-111+	100	Strontium-87m	100	
Indium-113m	100	Sulfur-35	10	
Iodine-123+	100	Technetium-99m	100	
Iodine-125	10	Thallium-201+	100	
Iodine-131	100	Tin-113 (generator)	20,000	
Iodine-131 (pill)	3,000	Xenon-133		
Iron-59	1	(gas, pressure 14.7 psi)		
Crypton-85		Ytterbium-169	1	
(gas, pressure 14.	7 psi)	Zinc-65	1	

*In liquid form unless otherwise noted

+These radionuclides are not byproduct material & therefore NRC regulations do not apply.

ITEM 6

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We confirm that our radioisotope preparation area will be monitored daily with a suitable portable instrument to determine levels of surface contamination.