

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number

SNM-463

Docket or Reference Number

070-00510

OFFICIAL RECORD COPY

Amendment No. 15

Department of Transportation
U.S. Coast Guard Academy (ds)
15 Mohegan Avenue
New London, Connecticut 06320

In accordance with the letter dated January 14, 1997, License Number SNM-463 is hereby terminated.



For the U.S. Nuclear Regulatory Commission
Original Signed By:

John D. Kinneman

Date FEB - 7 1997

By

Nuclear Materials Safety Branch
Region I
King of Prussia, Pennsylvania 19406



FEB - 7 1997

W. R. Gronlund, Captain
Head, Department of Science
U. S. Coast Guard Academy
Department of Transportation
15 Mohegan Avenue
New London, CT 06320

Dear Capt. Gronlund:

Please find enclosed Amendment No. 15 terminating License No. SNM-463 as requested by your letter dated January 14, 1997. Room 226 of Smith Hall of U.S. Coast Guard Academy where the licensed material was being stored, may be released for unrestricted use.

Your cooperation with us is appreciated.

Sincerely,

Original Signed By:

John D. Kinneman, Chief
Nuclear Materials Safety Branch 2
Division of Nuclear Materials Safety

License No. SNM-463
Docket No. 070-00510
Control No. 124114

Enclosure:
Amendment No. 15

DOCUMENT NAME: R:\WPS\MISC\LSNM-463.T

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OFFICE	DNMS/RI	<input checked="" type="checkbox"/> N	DNMS/RI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAME	SLodhi		J Kinneman				
DATE	01/29/97		01/30/97		01/ /97		01/ /97

OFFICIAL RECORD COPY ML 10



January 14, 1997

070-00510

U. S. Nuclear Regulatory Commission Region I
Nuclear Materials Safety Section B
475 Allendale Road
King of Prussia, PA 19406

Dear Sir or Madam,

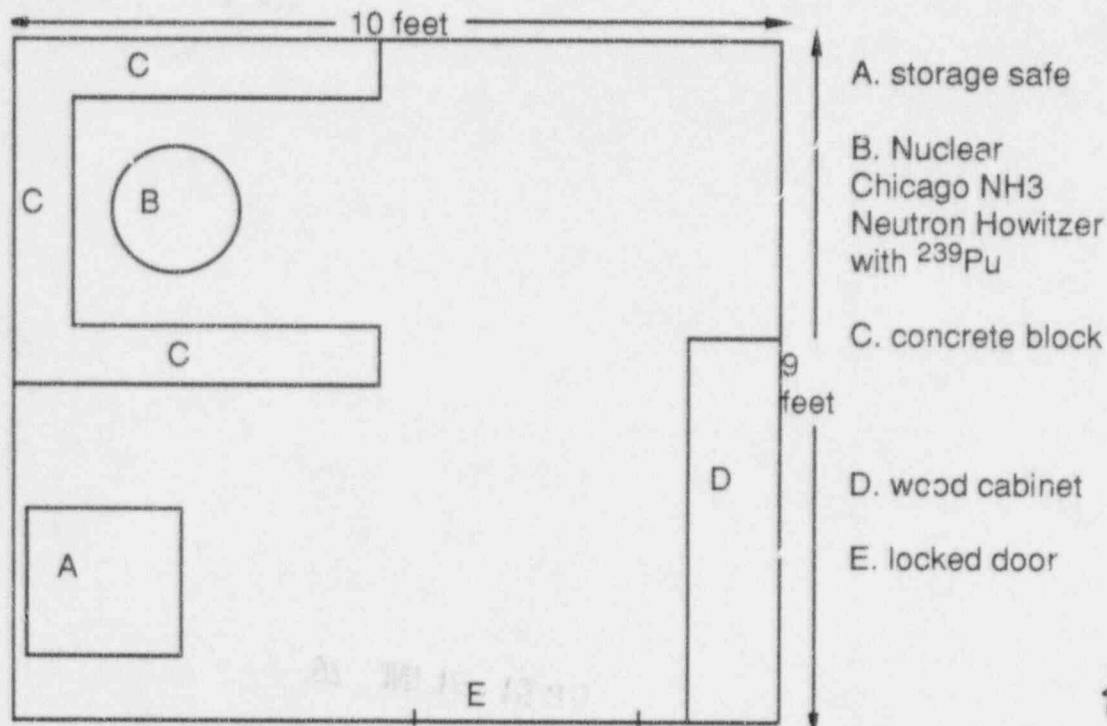
The U.S. Coast Guard Academy requests Specific Nuclear
Material License No. SNM-463, Docket. No. 7000510, be
terminated.

Our source inventory was as follows:

Plutonium 239	Encapsulated as	80 grams.
	Pu-Be neutron sources	
M1180		2 Ci
M1183		1 Ci
M118		1 Ci
M 113		1 Ci

All material listed above have been transferred to the
University of Connecticut under their license SNM 1889.

The material was stored in room 226 of Smith Hall. A sketch
of the room is given below.



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OFFICIAL RECORD COPY

ML 10

JAN 16 1997

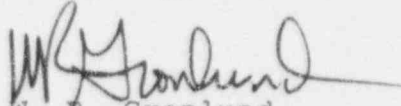
The transfer was conducted by Edward Wilds, the UCONN Radiation Safety Officer, and Robert J. Fuller, the CG Radiation Safety Officer. The sources were wipe tested to insure there was no surface contamination, placed in a DOT approved container with proper labeling, and transported to the University of Connecticut. The University of Connecticut has personnel and vehicles licensed for the transportation of the materials.

All personnel involved wore appropriate radiation monitoring devices. Exposure was kept to the minimum possible and did not exceed the usual exposure resulting from wipe testing.

Following transfer Smith Room 226 was surveyed for any possible fixed or removable contamination by alpha, beta, and gamma sources in accordance with CFR 30.36. The University of Connecticut Radiation Safety Personnel assisted us in this effort. The enclosed survey reflects no contamination and documents the ability to detect at a level of 20 disintegrations per minute of alpha emitting nuclide.

If any additional information is needed please contact CDR Robert J. Fuller at (860)-444-8641.

Sincerely,



W. R. Gronlund
Captain, U.S. Coast Guard
Head, Department of Science
U. S. Coast Guard Academy

Encl: (1) Certificate of Disposition of Material NRC 314
(2 copies)
(2) Documentation of wipe test of room 226.

CERTIFICATE OF DISPOSITION OF MATERIALS

INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED -- PRINT OR TYPE
SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 30 MINUTES. THIS MANDATORY SUBMITTAL IS USED BY NRC AS PART OF THE BASIS FOR ITS DETERMINATION THAT THE FACILITY HAS BEEN CLEARED OF RADIOACTIVE MATERIAL BEFORE THE FACILITY IS RELEASED FOR UNRESTRICTED USE. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (INBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0028), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE NAME AND ADDRESS

DEPARTMENT OF TRANSPORTATION
U. S. COAST GUARD ACADEMY (ds)
15 MOHEGAN AVE.
NEW LONDON, CT 06320

LICENSE NUMBER

SNM - 463

LICENSE EXPIRATION DATE

MAY 31, 2005

A. MATERIALS DATA (Check one and complete as necessary)

THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT:
(Check and/or complete the appropriate item(s) below.)

- ☐ 1. NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE.
- OR
- ☒ 2. ALL ACTIVITIES AUTHORIZED BY THE LICENSE HAVE CEASED AND ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. (If additional space is needed, use the reverse side or provide attachments.)

Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the disposition of low-level radioactive waste, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable. Subject material was transferred to the University of Connecticut.

No radioactive waste was generated

For transfers, specify the date of the transfer, the name of the licensed recipient, and the recipient's NRC license number or Agreement State name and license number.

The material was transferred on July 31, 1995. University of Connecticut personnel handled the transfer and receipt under NRC license SNM 1889.

If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the specific disposal procedures (e.g., decay in storage).

No disposal necessary

B. OTHER DATA

- ☒ 1. OUR LICENSE HAS NOT YET EXPIRED; PLEASE TERMINATE IT.
2. A RADIATION SURVEY WAS CONDUCTED BY THE LICENSEE TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE. (Check one)

☐ NO (Attach explanation)

☒ YES, THE RESULTS (Check one)

☒ ARE ATTACHED, or

☐ WERE FORWARDED TO NRC ON (Date)

3. THE PERSON TO BE CONTACTED
REGARDING THE INFORMATION
PROVIDED ON THIS FORM

NAME

ROBERT J. FULLER

TELEPHONE NUMBER

(Include Area Code)

(860) 444-8641

4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO

CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE

Robert J. Fuller, RSO

SIGNATURE

Robert J. Fuller

DATE

15 Jan 97

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTIONS.

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

THE UNIVERSITY OF CONNECTICUT
ENVIRONMENTAL HEALTH & SAFETY
RADIATION SAFETY DIVISION
189 AUDITORIUM ROAD, U-97
STORRS, CT 06269
(860) 486-3613 OR (860) 486-5399
FAX: (860) 486-1106

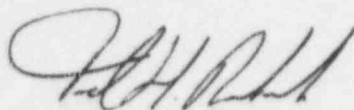
May 6, 1996

Robert J. Fuller CMDR, USCG
United States Coast Guard Academy
Department of Science
Smith Hall
New London, CT 06320

Dear Commander Fuller:

Enclosed are the results of the contamination survey of Smith Hall Room 226 completed 26 March 1996. Also enclosed is documentation demonstrating our ability to detect 20 disintegrations per minute of an alpha emitting nuclide. I hope this information will be of assistance in your decommissioning effort. If any questions arise please do not hesitate to contact myself or Ed Wilds.

Sincerely,



Tod H. Richards
Radiation Safety Specialist

Enclosures (6)

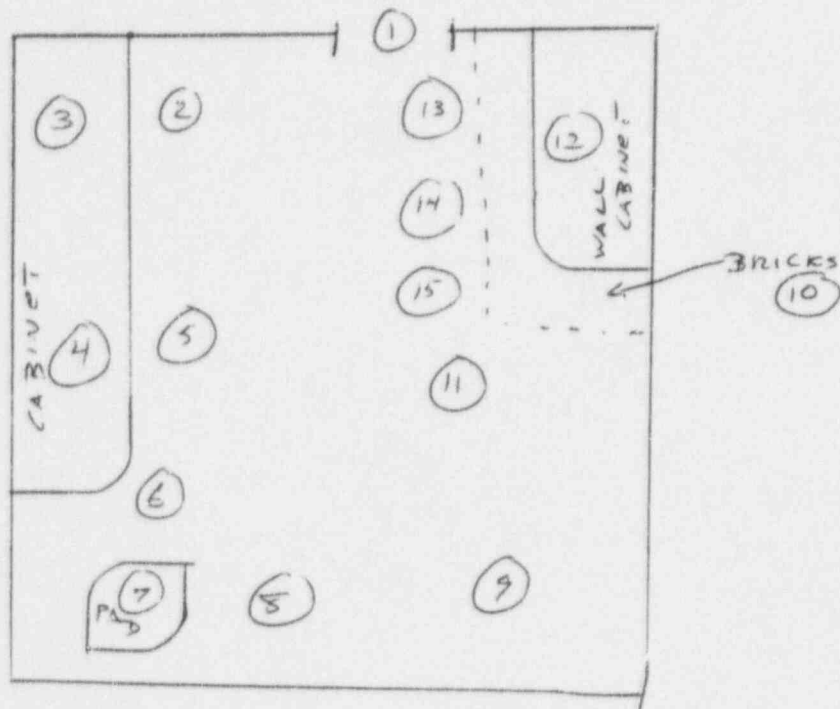
Cc: Edward Wilds Jr.

USCG Academy

Building Smith

Room 226

Date 3/26/96



USEM 7 10:00 C.B. WIPES RESET TIME: 10.00 THU 02 MAY 1996 14:51
 SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR:N RS232:N
 H4: 2 ADD:Y DCF:N RCM:N

LSR-TIME: 10.00 INT: 10.00

CHANNEL 1-LL: 0 UL: 400 2SIGMA: 0.20 BKG SUB: 14.01 BKG 2SIG: 1.79 LSR: 12
 CHANNEL 2-LL: 400 UL: 670 2SIGMA: 0.20 BKG SUB: 18.73 BKG 2SIG: 1.75 LSR: 12
 CHANNEL 3-LL: 670 UL: 1000 2SIGMA: 0.20 BKG SUB: 13.66 BKG 2SIG: 1.70 LSR: 12

DUAL RATE DPM SET UP ON THU 18 JAN 1990 10:31

UNKNOWN ID: H3 AND C14 SAMPLES UNKNOWN REPLICATES: 1

UNKNOWN NORM FACTOR ISO1:0 1.00000 ISO2:0 1.00000

UNKNOWN UNITS ISO1:DPM ISO2:DPM

CALCULATE COEFF:IN HALF LIFE(DAYS) ISO1:N ISO2:N

BENCHMARK COEFF ISO1, CH1 A: 4.154366 B: -0.0020919 C: -0.0000128 D: -0.0000000241
 ISO1, CH2 A: -0.0078476 B: -0.0035243 C: 0.00003372 D: -0.0000000756
 ISO2, CH1 A: 3.656112 B: -0.0192957 C: 0.00012173 D: -0.0000002462
 ISO2, CH2 A: 3.141091 B: -0.0200114 C: 0.00012186 D: 0.0000002279
 BENCHMARK LIMITS LOW: 62.00 HIGH: 242.4

SAM	TIME	ISO1 DPM	2SIG1	ISO2 DPM	2SIG2	DPM3	2SIG3	ERR
		ISO1%EFF CH1	ISO1%EFF CH2	ISO2%EFF CH1	ISO2%EFF CH2			ERR
1	10.00	-5.61167	*****	-9.33624	*****	-0.16	*****	108
		48.24	0.73	15.76	65.83			
2	10.00	-7.20720	*****	-1.19886	*****	0.24	994.4	108
		46.16	0.94	15.28	63.58			
3	10.00	-5.76862	*****	-10.1767	*****	-0.36	*****	108
		47.20	0.93	15.50	64.62			
4	10.00	-4.29439	*****	-7.76587	*****	-0.26	*****	108
		-6.36	0.93	15.42	64.25			
5	10.00	-8.32783	*****	-4.14936	*****	-2.06	*****	108
		46.51	0.94	15.35	63.91			
6	10.00	-8.04810	*****	-4.48179	*****	-0.84	290.0	108
		46.27	0.94	15.30	63.69			
7	10.00	-7.96579	*****	-3.68922	*****	-1.46	*****	108
		46.86	0.93	15.42	64.25			
8	10.00	-3.91332	*****	-7.37450	*****	-0.66	*****	108
		47.25	0.93	15.58	65.00			
9	10.00	-4.87678	*****	-6.73876	*****	1.24	199.1	108
		45.92	0.94	15.24	63.38			
10	10.00	-4.12248	*****	-8.89961	*****	-0.16	*****	108
		45.77	0.93	15.45	64.37			
11	10.00	-1.74618	*****	4.647008	103.1	-0.76	*****	108
		46.04	0.74	15.26	63.48			
12	10.00	-4.12475	*****	-8.14289	*****	-1.76	*****	108
		47.33	0.93	15.53	64.74			
13	10.00	-0.94834	110.0	7.950881	60.14	-1.46	*****	110
		47.67	0.93	15.61	65.13			
14	10.00	-3.22110	25.65	17.67053	31.33	1.84	136.8	108
		47.82	0.97	14.82	61.36			
15	10.00	-3.68224	*****	7.041501	490.8	1.44	172.6	108
		38.05	1.01	14.60	60.25			

ALL Areas VERIFIED < 20dpm ALPHA
 JAILLI

INITIAL SURVEY

ULTS

USER: 5 ID: C.G. SMITH226 PRESET TIME: 5.00
 SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR: N RS232: N
 H#: 2 AGC: Y QCF: N RCM: N

TUE 26 MAR 1996 15:25

LSR-TIME: 0.50 INT: 0.50

CHANNEL 1-LL: 0 UL: 400 2SIGMA: 2.00 BKG SUB: 14.01 BKG 2SIG: 1.99 LSR: 12
 CHANNEL 2-LL: 400 UL: 670 2SIGMA: 2.00 BKG SUB: 18.73 BKG 2SIG: 1.75 LSR: 12
 CHANNEL 3-LL: 670 UL: 1000 2SIGMA: 2.00 BKG SUB: 13.86 BKG 2SIG: 1.70 LSR: 12

DUAL LABEL DPM, SET UP ON THU 18 JAN 1990 10:31

UNKNOWN ID: H3 AND C14 SAMPLES UNKNOWN REPLICATES: 1

UNKNOWN NORM FACTOR ISO1: Q 1.00000 ISO2: Q 1.00000

UNKNOWN UNITS ISO1: DPM ISO2: DPM

CALCULATE COEFF: N HALF LIFE (DAYS) ISO1: N ISO2: N

QUENCH COEFF ISO1, CH1 A: 4.154366 B: -0.0020919 C: -0.0000128 D: -0.0000000241

ISO1, CH2 A: -0.0078470 B: -0.0035243 C: 0.00003872 D: -0.0000000756

ISO2, CH1 A: 3.656112 B: -0.0192957 C: 0.00012275 D: -0.0000002462

ISO2, CH2 A: 3.141091 B: -0.0200114 C: 0.00012186 D: -0.0000002279

QUENCH LIMITS LOW: 62.60 HIGH: 242.4

SAM	TIME	ISO1 DPM	2SIG1	ISO2 DPM	2SIG2	CPM3	2SIG3	ERR
		ISO1%EFF CH1	ISO1%EFF CH2	ISO2%EFF CH1	ISO2%EFF CH2			ERR
1	0.50	7.400144	*****	-22.6733	*****	2.14	528.8	111
		47.78	0.93	15.64		65.27		106
2	0.50	-12.8394	*****	-13.5178	*****	-9.86	*****	111
		46.27	0.94	15.30		63.69		106
3	0.50	8.761276	568.7	-13.7143	*****	-7.86	*****	111
		46.86	0.93	15.42		64.25		109
4	0.50	-8.05262	*****	11.43170	198.4	-3.86	*****	111
		46.86	0.93	15.42		64.25		108
5	0.50	-17.1017	*****	5.415776	405.8	-5.86	*****	111
		46.27	0.94	15.30		63.69		108
6	0.50	8.825854	568.7	-7.55233	*****	8.14	163.0	111
		46.04	0.94	15.26		63.48		109
7	0.50	0.354330	*****	-1.14128	*****	-9.86	*****	111
		46.86	0.93	15.42		64.25		108
8	1.00	-8.03601	*****	5.156088	287.1	-2.86	*****	111
		47.44	0.93	15.55		64.87		108
9	0.50	-2.91906	*****	-4.22144	*****	0.14	7561.	111
		46.62	0.94	15.37		64.02		108
10	0.50	-10.2306	*****	3.218251	405.8	0.14	7561.	111
		47.89	0.93	15.47		64.49		108
11	0.50	-13.7146	*****	2.196169	996.3	4.14	289.9	111
		46.17	0.94	15.30		63.69		108
12	0.50	14.60723	370.8	-16.8398	*****	-7.86	*****	111
		47.89	0.93	15.47		64.49		109
13	0.50	5.721113	300.8	7.976028	263.0	-3.86	*****	111
		47.90	0.93	15.67		65.41		110
14	0.50	6.259557	300.9	8.431857	263.0	-5.86	*****	111
		43.66	0.96	14.91		61.79		110
15	0.50	-2.04830	*****	-7.68957	*****	-1.86	*****	111
		42.58	0.97	14.80		61.25		108

PROOF OF LSC CAPABILITY TO DETECT 20 dpm ALPHA EMITTER

GIVEN:

1) $.095 \text{ g Th(NO}_3)_4 \text{ (NATURAL THORIUM)} = .005 \mu\text{Ci}$

2) $20 \text{ dpm} = 9.01 \times 10^6 \mu\text{Ci}$

3)
$$\frac{5 \text{ mL}}{.005 \mu\text{Ci}} \mid \frac{9.01 \times 10^{-6} \mu\text{Ci}}{X} \quad X = 9.01 \times 10^{-3} \text{ mL SOLUTION OF NATURAL THORIUM + COCKTAIL}$$

PROCEDURE:

- 1) 4 SAMPLES WERE PREPARED WITH $0.1 \text{ g} (\approx .095 \text{ g})$ NATURAL THORIUM + 5 mL COCKTAIL
2 SAMPLES WERE PREPARED WITH ONLY 5 mL COCKTAIL

BREAKDOWN OF SAMPLES

SAMPLE I.D.

A+B MIXTURE OF 0.1 g THORIUM AND "OPTIFLOR" BIODEGRADABLE SCINT. COCKTAIL

C+D MIXTURE OF 0.1 g THORIUM AND "NEUTRALIZER" TOLUENE BASED SCINT. COCKTAIL

E 5 mL OF "OPTIFLOR"

F 5 mL OF "NEUTRALIZER"

NOTE: THE TWO "OPTIFLOR" SAMPLES (A+B) SHOWED PARTIAL MIXING
THE TWO "NEUTRALIZER" SAMPLES (C+D) SHOWED FULL MIXING.

SEE RESULTS (A)

- 2) FROM THE ABOVE SAMPLES (A, B, C, D, E+F) $9 \mu\text{L}$ SAMPLES WERE DRAWN
AND MIXED WITH 5 mL OF THE APPROPRIATE SCINT. COCKTAIL.

BREAKDOWN OF SAMPLES

SAMPLE I.D.

A'+B' $9 \mu\text{L}$ MIXTURE OF $.005 \mu\text{Ci}/5 \text{ mL}$ MIXED WITH ADDITIONAL 5 mL OF "OPTIFLOR"

C'+D' $9 \mu\text{L}$ OF $.005 \mu\text{Ci}/5 \text{ mL}$ SOLUTION MIXED WITH ADDITIONAL 5 mL OF "NEUTRALIZER".

E' $9 \mu\text{L}$ OF 5 mL SOLUTION MIXED WITH AN ADDITIONAL 5 mL OF OPTIFLOR.

F' $9 \mu\text{L}$ OF 5 mL SOLUTION MIXED WITH AN ADDITIONAL 5 mL OF NEUTRALIZER.

NOTE: ALL SAMPLES SHOWED FULL MIXING

SEE RESULTS (B)

USER: 7 ID: THORIUM
SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR: N RS232: N
AH: 2 ADD: Y QCF: N RCM: N

THU 02 MAY 1996 07:36

LSR-TIME: 10.00 INT: 10.00
CHANNEL 1-LL: 0 UL: 400 2SIGMA: 0.20 BKG SUB: 14.01 BKG 2SIG: 1.99 LSR:
CHANNEL 2-LL: 400 UL: 670 2SIGMA: 0.20 BKG SUB: 18.73 BKG 2SIG: 1.75 LSR:
CHANNEL 3-LL: 670 UL: 1000 2SIGMA: 0.20 BKG SUB: 13.86 BKG 2SIG: 1.70 LSR:

DUAL LABEL DPM, SET UP ON THU 18 JAN 1990 10:31
UNKNOWN ID: H3 AND C14 SAMPLES UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1: Q 1.00000 ISO2: Q 1.00000
UNKNOWN UNITS ISO1: DPM ISO2: DPM

CALCULATE COEFF: N HALF LIFE (DAYS) ISO1: N ISO2: N
QUENCH COEFF ISO1, CH1 A: 4.154366 B: -0.0020919 C: -0.0000128 D: -0.0000000241
ISO1, CH2 A: -0.0078470 B: -0.0035243 C: 0.00003872 D: -0.0000000736
ISO2, CH1 A: 3.656112 B: -0.0192957 C: 0.00012275 D: -0.0000002451
ISO2, CH2 A: 5.141091 B: -0.0200114 C: 0.00012186 D: -0.0000002274
QUENCH LIMITS LOW: 62.60 HIGH: 242.4

SAM	TIME	ISO1 DPM	2SIG1	ISO2 DPM	2SIG2	CPM3	2SIG3	
		ISO1%EFF CH1		ISO2%EFF CH2		ISO2%EFF CH1	ISO2%EFF CH2	
* 1	10.00	1404.096	1.22	14194.55	0.68	37212.24	0.33	
		42.70	0.97	14.81		61.31		
A	10.00	27352.58	0.49	20119.88	0.54	20816.74	0.44	
		49.15	0.92	16.03		67.08		
B	10.00	35091.26	0.42	33145.36	0.42	28018.84	0.38	
		49.04	0.92	15.99		66.91		
E	10.00	-1.37505	*****	-0.75738	*****	3.24	81.05	
		49.93	0.92	16.29		68.31		
C	10.00	34703.03	0.40	45977.02	0.35	38102.54	0.32	
		50.38	0.92	16.46		69.08		
D	10.00	25230.55	0.46	39142.54	0.38	35559.14	0.34	
		50.49	0.92	16.50		69.28		
F	10.00	8.473521	54.58	3.654727	106.5	4.64	58.85	
		52.54	0.91	17.45		73.68		

* MEASUREMENT FROM A .005m $\frac{4}{2}$ L SAMPLE DATE 12/95, UTILIZED FOR COMPARISON BASIS ONLY

USER: 7 ID: THORIUMPRIME RESET TIME: 10.00
SAMPLE REPEAT: 1 CYCLE REPEAT: 1 SCR:N RS232:N
RAT 2 AGO:Y DCF:N RCM:N

THU 02 MAY 1996 13:31

LSR-TIME: 10.00 INT: 10.00

CHANNEL 1-LL: 0 UL: 400 2SIGMA: 0.20 BKG SUB: 14.01 BKG 2SIG: 1.99 LSR: 12
CHANNEL 2-LL: 400 UL: 670 2SIGMA: 0.20 BKG SUB: 18.73 BKG 2SIG: 1.75 LSR: 12
CHANNEL 3-LL: 670 UL: 1000 2SIGMA: 0.20 BKG SUB: 13.86 BKG 2SIG: 1.70 LSR: 12

CUMUL LABEL DPM, SET UP ON THU 18 JAN 1990 10:31
UNKNOWN ID: H3 AND C14 SAMPLES UNKNOWN REPLICATES: 1
UNKNOWN NORM FACTOR ISO1:Q 1.00000 ISO2:Q 1.00000
UNKNOWN UNITS ISO1:DPM ISO2:DPM

CALCULATE COEFF:N HALF LIFE (DAYS) ISO1:N ISO2:N
QUENCH COEFF ISO1, CH1 A: 4.154366 B: -0.0020919 C: -0.0000128 D: -0.0000000241
ISO1, CH2 A: -0.0078470 B: -0.0035243 C: 0.00003872 D: -0.0000000756
ISO2, CH1 A: 3.656112 B: -0.0192957 C: 0.00012275 D: -0.00000002463
ISO2, CH2 A: 5.141091 B: -0.0200114 C: 0.00012186 D: -0.00000002274
QUENCH LIMITS LOW: 62.60 HIGH: 242.4

SAM	TIME	ISO1 DPM	2SIG1	ISO2 DPM	2SIG2	CPM3	2SIG3	EFF
		ISO1%EFF CH1	ISO1%EFF CH2	ISO2%EFF CH1	ISO2%EFF CH2			
A'	10.00	-4.68872	*****	-4.85028	*****	31.44	13.56	100
		49.60	0.92	16.17		67.77		
B'	10.00	-2.80275	*****	-6.95985	*****	31.14	13.65	100
		49.49	0.92	16.14		67.59		
E'	10.00	-3.17586	*****	-11.3933	*****	-2.66	*****	100
		49.49	0.92	16.14		67.59		
C'	10.00	12.27084	36.91	8.077699	50.01	98.34	6.82	114
		53.90	0.91	18.28		77.46		
D'	10.00	9.062079	55.53	0.632088	490.8	94.24	6.98	114
		53.79	0.91	18.21		77.16		
F'	10.00	-0.35947	*****	-8.36277	*****	-1.46	*****	100
		53.69	0.91	18.14		76.85		
*	10.00	4.600791	57.54	15.57563	32.54	137.84	5.65	114
		49.49	0.92	16.14		67.59		

* MEASUREMENT FROM .005 ml / 5ml SAMPLE DATED 12/95 UTILIZED FOR COMPARISON ONLY

BETWEEN:

LICENSE FEE MANAGEMENT BRANCH, ARM
AND
REGIONAL LICENSING SECTIONS

(FOR LFMS USE)
INFORMATION FROM LTS

PROGRAM CODE: 03800
STATUS CODE: 0
FEE CATEGORY: EX 10
EXP. DATE: 20050531
FEE COMMENTS: 170.11(A)(4) V
DECOM FIN ASSUR REQD: N
.....

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

APPLICANT/LICENSEE: TRANSPORTATION, DEPARTMENT OF
RECEIVED DATE: 970116
DOCKET NO: 7000510
CONTROL NO.: 124114
LICENSE NO.: SNM-463
ACTION TYPE: TERMINATION

2. FEE ATTACHED

AMOUNT: -----
CHECK NO.: -----

3. COMMENTS

SIGNED M. A. Perkins
DATE 1/16/97

B. LICENSE FEE MANAGEMENT BRANCH (CHECK WHEN MILESTONE 03 IS ENTERED 1_1)

1. FEE CATEGORY AND AMOUNT: -----

2. CORRECT FEE PAID. APPLICATION MAY BE PROCESSED FOR:

AMENDMENT -----
RENEWAL -----
LICENSE -----

3. OTHER -----

SIGNED -----
DATE -----