



THE CATHOLIC UNIVERSITY OF AMERICA

*Environmental Health and Safety
Washington, DC 20064
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April 30, 2015

Licensing Assistance Team
US Nuclear Regulatory Commission Region I
2100 Renaissance Boulevard
Suite 100
King of Prussia, PA 19406-2713

J6

SNM-164

07000190

REC-10501-15-0039

RE: Response To Comments Related to

License No. 08-02075-03, Docket No. 03000638

License No. SUD-157, Docket No. 04006329

To Whom It May Concern:

In response to two emails from Mr. Dennis Lawyer to Mahmoud Haleem, RSO of the Catholic University of America, dated April 9, 2015, please see the following responses related to the three numbered items in the two emails:

1. The Certification of Financial Assurance has been updated to reflect the newly requested activity limits. A copy has been enclosed as per your request.
2. Delete Barium-134 from the list of nuclides on our license amendment request.
3. Leak test certificates are enclosed for each of the sealed sources requiring leak tests which we wish to remove from our license, having transferred them to appropriately licensed facilities. No leak test was done for the two plated Neptunium-237 sources since the plated alpha sources have activities that are less than 10 μ Ci.

If you have any questions, please contact Mr. Haleem for further clarification.

Sincerely,


Jerry Conrad

Associate VP for Facilities Operation

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NMSS/RGN1 MATERIALS-002

Enclosures: Certification of Financial Assurance
Leak Test Certificates of Sources to be removed from license

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THE CATHOLIC UNIVERSITY OF AMERICA

CERTIFICATION OF FINANCIAL ASSURANCE

Principal: The Catholic University of America

NRC license number 08-0075-03: The Catholic University of America, Marist Annex Building, Cardinal Station, Washington, DC 20064

NRC license number SUD-157: The Catholic University of America, Marist Annex, Washington, DC 20064

NRC license number SNM-164: The Catholic University of America, 620 Michigan Avenue, N.E., Washington, DC 20064

Issued by: U.S. Nuclear Regulatory Commission

I certify that, as of the date of this certification, the Catholic University of America is licensed to possess the following types of licensed materials: sealed sources or plated foils with a half-life greater than 120 days licensed under 10 CFR Part 30, unsealed byproduct material with a half-life greater than 120 days licensed under 10 CFR Part 30, source material in a readily dispersible form licensed under 10 CFR Part 40, and unsealed special nuclear material licensed under 10 CFR Part 70 in the following amounts.

License No. 08-0075-03

<u>Byproduct Material</u>	<u>Chemical or Physical Form</u>	<u>Amount of Material</u>
Any byproduct material with atomic numbers 3 through 83	Any	Not to exceed 10 mCi per radionuclide and 500 mCi total
Any byproduct material with atomic numbers greater than 83	Any	Not to exceed 10 μ Ci per radionuclide and one mCi total
Hydrogen 3	Any	2 curies
Carbon 14	Any	50 mCi
Phosphorous 32	Any	30 mCi
Phosphorous 33	Any	30 mCi
Sulfur 35	Any	30 mCi
Potassium 42	Any	100 mCi
Strontium 90	Any	30 mCi
Molybdenum 99	Any	200 mCi

NONNEGOTIABLE

Technetium 99m	Any	200 mCi
Iodine 125	Any	25 mCi
Iodine 131	Any	100 mCi
Cesium 134	Any	30 mCi
Cesium 137	Any	50 mCi
Lead 210	Any	250 µCi
Lead 214	Any	250 µCi
Bismuth 210	Any	250 µCi
Bismuth 214	Any	250 mCi
Polonium 210	Any	250 µCi
Polonium 214	Any	250 µCi
Radon 222	Any	250 µCi
Radium 226	Any	250 µCi
Thorium 230	Any	100 µCi
Americium 241	Any	35 µCi

Nickel 63	Foils or plated sources (Amersham Model NBC 7020, NRD Model-1001 or DuPont Merck Model NER-002)	Not to exceed 15 mCi per source and 45 mCi total
Nickel 63	Foils (New England Nuclear)	225 mCi
Samarium 151	Sealed Source (Model 0103 DA Product Code SSD167)	500 mCi

License No. SUD-157

<u>Source Material</u>	<u>Chemical or Physical Form</u>	<u>Amount of Material</u>
Natural Uranium	Any	40 kilograms
Depleted Uranium	Any	40 kilograms
Natural Thorium	Any	50 kilograms
Thorium 232	Any	50 kilograms

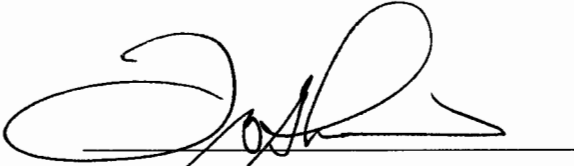
License No. SNM-164

<u>Special Nuclear Material</u>	<u>Chemical or Physical Form</u>	<u>Amount of Material</u>
Uranium enriched to not more than 2%	Any	5 kilograms
Uranium enriched to not more than 1%	Any	10 kilograms
Plutonium 238	Any	30 microcuries
Plutonium 239	Plated alpha sources	1 microgram

NONNEGOTIABLE

Plutonium 239	Any	20 microcuries
Plutonium 240	Any	3 microcuries
Plutonium 241	Any	760 microcuries
Plutonium 242	Any	200 microcuries
Plutonium 244	Any	1 microcuries

I also certify that financial assurance in the amount of four hundred fifty thousand dollars (\$450,000) has been obtained for the purpose of decommissioning as prescribed by 10 CFR Parts 30, 40 and 70.



Mr. Frank G. Persico, V.P. University Relations and Chief of Staff

4-28-15

Date

Corporate seal

NONNEGOTIABLE

LEAK TEST FOR Cs-137 SEALED SOURCE
Activity 120 mCi

Date: 10/07/2008

Isotope	Source #	License #	Device Authorized User	Location	Date	Results μCi
Cs-137	S-121	6.LL <i>6. MM</i>	Beam Calibrator RSO	Han-36	10/07/2008	<0.005

Leak test of CS-137 source (120mcI) 10/07/08

Tenneco Series 5450
Unit ID: 55457
Mount: Outlet

SWIPE SURVEY 387
Procedure: Proof

05Oct2008
12:27:03
Pg: 1/27

Model: 40 Time Min: 1.00 Seal Pnts: 1 End Pnts: 001:001
Rtg Dbr: Auto/3-6 Eff Calor: Auto/3-6 Int Calor: Yes/On Sol Dbr: Yes/On
P Preset: 50000000 S Preset: 50000000 W Time: 0 Wt Dbr: 0
GULF NFB: 0.05 BULD NFB: 24.20 VLLD NFB: 77.20 GULD NFB: 100.00

1st Pnts: 71-99 02Feb2008 1386
A Bkg: BkgBlank 02Feb2008 7.00E-03 ± 1.97E-03
B Bkg: BkgBlank 02Feb2008 24.32 ± 0.33
C Eff: 91.019 02Feb2008 77.32 ± 1.86 A-B: 10.66 ± 0.11
D Eff: 71-99 02Feb2008 75.37 ± 1.76 B-D: 7.80E-02 ± 3.75E-03
E: 1.00 ± 0.00 A Action: 50.00 A NDA: 1.16 dpm
F: 1.00 ± 0.00 B Action: 200.00 B NDA: 22.98 dpm

SAMPLE NUM:RPT	TIME MIN	ALPHA CTS	BETA CTS	ALPHA NCPM	BETA NCPM	ALPHA dpm	BETA dpm	SAMPLE START	
001:001	1.00	22001	2486	21999.00	115.31	58941.52	325.92	12:22:54	— Alpha check source
002:001	1.00	3	36765	-25.75	36740.36	-49.01	1.03E+05	12:24:04	— Beta check source
083:001	1.00	0	27	-7.2E-02	2.68	-0.19	7.58	12:25:14	→ Background
015:001	1.00	1	19	0.93	-5.42	2.50	-15.33	12:26:24	→ Sample wipe

RADIOACTIVE SEALED SOURCES REQUIRING LEAK TESTS

Date: 11/05/2010

Isotope Serial # Activity	Source #	License #	Device Authorized User	Location	Date	Results μCi
Am-241 MRC-AM-211 (200 mCi)	S-107	6.HH 6. II	RSO Storage	Rad Storage	11/05/2010	<0.005
Am-241 NUMEC#9AMG14 (30 mCi)	S-104	6.GG 6. GG	RSO Storage	Rad Storage	11/05/2010	<0.005

Tennaltec Series 5440
Unit ID: 55440
User: Guest

SWIRE SUPPLY SPT
Processor: Proc0

18Aug2009
11:00:15
Rev 4.03

Mode: 02 Time Min: 1.00 Smpl Rpt: 1 Grp Rpt: 001:001
kg Bkg: Auto/Sys Bkg Calc: Auto/Sys Ant Calc: Yes/On SpI Corr: Yes/On
Preset: 90000000 B Preset: 90000000 Wk Time: 0 Wk Its: 0
ALLD NFB: 0.25 BOLD NFB: 21.20 ALLD NFB: 37.20 BOLD NFB: 100.00

g+g Plate: 1c-FF 18Aug2009 1410
g Skg: BkgBlank 18Aug2009 0.10 $\pm 0.34E-02$
B Skg: BkgBlank 18Aug2009 24.57 ± 0.30
g Eff: PuZ39 18Aug2009 17.50 ± 1.57 g-16: 10.08 $\pm 0.34E-01$
B Eff: 1c-FF 18Aug2009 25.39 ± 1.77 B-16: 0.10 $\pm 0.01E-02$
Kct: 1.00 ± 0.00 g Action: 50.00 g M04: 1.40 ± 0.00
Kct: 1.00 ± 0.00 B Action: 200.00 B M04: 27.10 ± 0.00

SAMPLE	TIME	ALPHA	BETA	ALPHA	BETA	ALPHA	BETA	SAMPLE
NUM/FPT	MIN	CTS	CTS	%CFM	%CFM	cts	cts	START

001-001	1.00	20-FF	1992	20604.10	841.30	19071.34	1036.93	10:48:00	- Alpha check source
011-001	1.00	1	36192	-35.50	19107.17	-145.14	1.02E-05	10:49:10	- Beta check source
016-001	1.00	0	24	-0.10	-0.55	-0.27	-0.57	10:50:21	- Background
025-001	1.00	0	14	-8.7E-02	-10.55	-0.20	-29.97	10:51:30	- Am-241 (200 mci)
034-001	1.00	1	16	0.90	-8.00	0.42	-24.47	10:52:39	- Am-241 (30 mci)
033-001	1.00	0	16	-9.1E-02	-8.55	-0.24	-24.16	10:53:49	- Pig inside surface Area.

RADIOACTIVE SEALED SOURCES REQUIRING LEAK TESTS

Date: 05/03/2013

Isotope	RMIC#	License #	Device Authorized User	Location	Date	Results μCi
Sm-151	88-324	6.CC	RSO	RSO-SAFE	05/03/2013	<0.005
Co-57	06-11	LL	RSO	RSO-SAFE	05/03/2013	<0.005
Sn-119m	10-47	A	RSO	RSO-SAFE	05/03/2013	<0.005
Co-57	09-28	MM	Mossbauer Dr. Muller	Han-230	05/03/2013	<0.005
Co-60		6Z	RSO	RSO-SAFE	05/03/2013	<0.005

Tennetec Series 5APC

SWIPE SURVEY RPT

03May2013

Unit ID: 55APC

13:26:07

User: Guest

Procedure: ProcC

Rev4.05

Mode: 18 Time Min: 1.00 Sopl Rpt: 1 Grp Rpt: 001:001
 Bkg Sub: Auto/Sys Eff Calc: Auto/Sys Act Calc: Yes/On Spl Corr: Yes/On
 a Preset: 90000000 B Preset: 90000000 Wk Time: 0 Wk Cts: 0
 BLD 1FS: 0.25 BULD 1FS: 21.20 aLLD 1FS: 37.20 bULD 1FS: 100.00

a+B Plat: Tc-99 03Apr2012 1380
 a Bkg: BkgBlank 03Apr2012 0.90 $18.83E-02$
 B Bkg: BkgBlank 03Apr2012 19.95 \pm 0.31
 a Err: Pu239 03Apr2012 35.10 \pm 1.90 a-18: 10.34 $17.86E-02$
 B Err: Tc-99 03Apr2012 35.55 \pm 1.77 B-18: $6.40E-02$ $14.87E-03$
 Ia: 1.00 \pm 0.00 a Action: 50.00 a MDA: 4.12 dpm
 IB: 1.00 \pm 0.00 B Action: 200.00 B MDA: 20.72 dpm

SAMPLE NUM:RPT	TIME MIN	ALPHA CTS	BETA CTS	ALPHA NCPM	BETA NCPM	ALPHA dpm	BETA dpm	SAMPLE START
001:001	1.00	8710	7443	8704.33	6522.09	22840.81	18343.95	13:13:32
002:001	1.00	1	31517	-20.08	31497.03	-52.71	88588.19	13:18:10
020:001	1.00	0	15	-0.90	-4.85	-2.36	-13.65	13:19:20
061:001	1.00	0	23	-0.90	3.14	-2.37	8.84	13:20:29
018:001	1.00	2	20	1.09	-6.3E-02	2.87	-0.17	13:21:39
099:001	1.00	0	22	-0.90	2.14	-2.37	6.02	13:22:48
066:001	1.00	0	19	-0.90	-0.85	-2.37	-2.40	13:23:57
007:001	1.00	0	16	-0.90	-3.85	-2.36	-10.84	13:25:07

- Alpha source

- Beta source

- Background

- Co-57, Room 230 VSL, 5

- Sn-119m, safe, Radwaste Stb

- Sm-151, safe, Radwaste St

- Co-57, safe, Radwaste St

- Co-60, safe Radwaste St