



**UNIFORMED SERVICES UNIVERSITY OF THE HEALTH
SCIENCES**

OFFICE OF THE PRESIDENT
4301 JONES BRIDGE ROAD
BETHESDA, MARYLAND 20814-4799
www.usuhs.edu



Br. 2

01 October 2019

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

RECRG11016*19AM07:22

03020775

SUBJECT: Notification of Building Decommissioning, USNRC Materials License 19-23344-01

License No. 19-23344-01
Docket No. 03020775

Dear Sir or Madam,

The purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of a change in the locations of the Uniformed Services University of the Health Sciences (USU) facilities where licensed material may be used or stored. As of 26 September 2019, the USU facility building 74 located on the Naval Support Activity Bethesda (NSAB) compound, Bethesda, Maryland has been released from radiological controls and is no longer authorized for radioactive materials use under the USU Radiation Safety Program. The USU Radiation Safety Committee voted to decommission the facility on 26 September 2019. The facility release memorandum dated 03 September 2019 is enclosed for your review. IAW the enclosed USU SOP EHS-R016 "Addition and Deletion of Buildings/Facilities to the USU Radiation Safety Program and USNRC License" dated 20 June 2019, no change to the authorized locations of use listed in Condition 10 is required. If you have questions, please contact LTC Brian Champine, USA, RSO at (301) 295-3305.

Sincerely,

Richard W. Thomas, MD, DDS
President

Enclosure:
As stated



UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

ENVIRONMENTAL HEALTH AND OCCUPATIONAL SAFETY
4301 JONES BRIDGE ROAD
BETHESDA, MARYLAND 20814-4799
www.usuhs.edu



03 September 2019

MEMORANDUM FOR THE USU RADIATION SAFETY COMMITTEE

SUBJECT: Decommissioning Radiological Surveys and Release of USU Building 74 for Unrestricted Use.

References: (a) USU NRC Byproduct Materials License 19-23344-01.
(b) USU SOP EHS-R015 Deposting Laboratories for Radioactive Materials Use.
(c) NUREG-1757, Vol. 1, Rev. 2, Consolidated Decommissioning Guidance - Decommissioning Process for Materials Licensees, September 2006.

1. General Information. The Uniformed Services University of the Health Sciences (USU) constructed Building 74 in 1988 on the main campus which is located on the Naval Support Activity Bethesda (NSAB) compound. The Bldg. 74 rooms S1008 (HAZMAT chemical waste storage) and S1009 (RAD waste storage) were assigned to EHS when the building opened for use in 1989. The only USU Radionuclide Experimental Authorization (REA) issued listing Bldg. 74 as an authorized location for use of radioactive materials under the USU Broad scope license was the REA U85-002 issued to the University Radiation Safety Officer. On 13 July 2001 the USU submitted an amendment request to the Nuclear Regulatory Commission (NRC) outlining procedures for adding and deleting NSAB compound buildings to the USU as circumstances require stating that an amendment would only be required for 1) any building added to the USU located outside the geographical boundaries of the NSAB compound or 2) for any use of RAM not currently authorized on the Broad scope license. It was not required to amend the Broad scope license before authorizing RAM use at Bldg. 74 in September 1989 because it is located on the NSAB compound.

a. The REA U85-002 issued to the University RSO was authorized for RAM use in Bldg. 74, room S1009 from September 1989 to 05 June 2019. Radioactive solid and liquid waste containing H-3, C-14, P-32, P-33, S-35, Tc-99m, I-125 and many of the Byproduct material with Atomic Numbers 1 through 83 that are authorized on the USU Broad scope license have been stored inside Bldg. 74, room S1009 awaiting waste processing and shipment as radioactive waste. Uranyl Acetate, Uranyl Nitrate and Uranyl Oxide waste has also been stored inside S1009 from 1989 to 2019 awaiting processing and shipment as mixed radioactive/hazardous materials waste. EHS-RSD staff deposted Bldg. 74, room S1009 IAW references (a) and (b) on 17 May 2019.

2. Historical Site Assessment.

Learning to Care for Those in Harm's Way

SUBJECT: Decommissioning Radiological Surveys and Release of USU Building 74 for Unrestricted Use.

a. Bldg. 74, Rm. S1009 has been designated for storage of sealed 55 gallon metal drums of dry solid and sealed source radioactive waste prior to shipment for disposal. S1009 including any waste container storage and/or work areas, floor areas, and doors was swiped and surveyed and cleared of any radiological contamination IAW references (a) and (b) on a monthly or bi-monthly basis from September 1989 through May 2019.

b. In 2000 the S&G Vyleater liquid scintillation vial (LSV) crusher was installed inside S1009. The Vyleater was used to process liquid scintillation vial waste for proper disposal at several times each year from 2000 to 2019. All LSV waste processed, liquid and solid, met the requirements of 10 CFR Part 20.2005 Disposal of specific wastes. Routine after-use clearance surveys of the Vyleater work area including swipe sample LSC analysis were performed in the S1009 with no fixed residual radiation or elevated radiation level areas identified.

c. In 2001 a metal shelf found to be contaminated with trace amounts of uranyl acetate from a past undocumented spill was decontaminated and processed for disposal inside S1009. The shelf and work area, equipment and floor, were swiped and surveyed and cleared of any radiological contamination IAW references (a) and (b) in February and March 2001.

3. Disposal of Radioactive Material Certification (in lieu of NRC Form 314): As of 17 May 2019, when the last radioactive sources and materials were removed by EHS-RSD personnel from Rm. S1009, all activities authorized by REA #U85-002 in Bldg. 74 had ceased, and all radioactive materials procured and/or possessed by the REA Holder were disposed of via transfer to the USU Radioactive Waste Storage Area, Bldg. A, Room G023, for disposal.

4. Release for Unrestricted Use (Deposting) Surveys and Results.

a. Decommissioning Group and Requirements: Using the Decision Tree in the reference (c) the type and quantity of radioactive material used at Bldg. 74 are classified under Group 2. The license actions recommended were successfully completed largely through the laboratory depositing survey procedures performed at Bldg. 74 on 17 May 2019. In addition monthly surveys including swipe sample LSC analysis were performed in the Bldg. 74, Rm. S1009 from 1989 through 2019 IAW references (a) and (b) with no fixed residual radiation or elevated radiation level areas identified.

b. Deposting Survey Records: Complete copies of all the depositing surveys related to the decommissioning of Bldg. 74 have been consolidated into a binder titled "Bldg. 74 Decommissioning Binder." The binder will be maintained and filed in the Radiation Safety Officer's Office, A2020-B.

c. Deposting Survey Procedures: Each depositing survey was completed in accordance with the standard operation procedure SOP EHS-R015, reference (b). The SOP meets the survey criteria outlined in 10 CFR 30.36(j)(2).

SUBJECT: Decommissioning Radiological Surveys and Release of USU Building 74 for
Unrestricted Use.

d. Instrumentation Used:

i. Handheld Survey Meters: Geiger Muller tube detectors were used for meter readings. Meter information such as Model, Serial Number, and Calibration Due Date varied by survey and are listed on each deposting survey.

ii. Liquid Scintillation Counter (LSC): The swipes were analyzed using the EHS-RSD LSC Perkin Elmer Tri-Carb 4910, Serial #SGLO41170613.

e. Deposting Survey Results by Room:

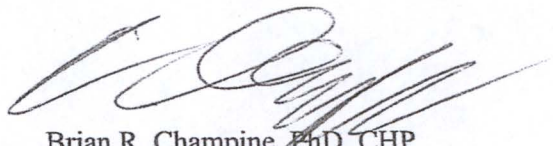
i. Bldg. 74, Room S1009. The survey was performed on 14 May 2019. All survey meter readings were at normal background levels. All 202 swipes taken of laboratory surfaces and equipment were below 200 dpm/100cm² and all but one of these swipes were analyzed as below 100 dpm/100cm². Swipe #52 was initially analyzed as 158 dpm/100cm² and was reanalyzed as 151 dpm/100cm². The shelf area corresponding to swipe #52 was cleaned and decontaminated. After decontamination a swipe taken of the area was below 100 dpm/100cm².

5. Final Summary and Point of Contact.

a. Summary: Based on the final status of all radiological surveys conducted, USU Building 74 meets the guidelines for release to unrestricted (general) public use. No use of radioactive materials has been authorized at Bldg. 74 under the USU Broad scope license since 17 May 2019.

b. Follow-Up Actions: The Nuclear Regulatory Commission shall be notified of the Bldg. 74 decommissioning summary through separate correspondence following the review and approval of this memorandum at the next USU Radiation Safety Committee meeting on 26 September 2019.

c. Point of Contact: Any questions or concerns may be directed to the undersigned or the Radiation Safety Division staff at (301) 295-3305 or (301) 295-9443.



Brian R. Champine, PhD, CHP
LTC, US Army
Assistant Vice President, Health and Safety
Radiation Safety Officer

Learning to Care for Those in Harm's Way

SUBJECT: Decommissioning Radiological Surveys and Release of USU Building 74 for
Unrestricted Use.

Enclosures:

- (1) Bldg. 74 REA Holder PI Summary 2000-2019.
- (2) Bldg. 74 Floor Plan, Ground Floor.
- (3) Bldg. 74 Listing of RAM Use Posted Areas and Non-Posted Areas.
- (4) Bldg. 74 Rm. S1009 Deposting Survey 17 May 2019.
- (5) NUREG-1757, Vol 1., Rev. 2, Figure 1.1 and Table 1.2.
- (6) NUREG-1757, Vol 1., Rev. 2, Chapter 9 Group 2 Decommissioning and Figure 8.1
- (7) NUREG-1748, Page 1-2 and 10 CFR 51.22.

ENCLOSURES (1), (2), (3) & (4)
INCLUDED

ENCLOSURES (5), (6) & (7)
NOT INCLUDED.
New 10/1/19

BLDG	ROOM	PRIMARY PI	LAB STATUS	DATE	REMARKS
BLDG.74	S1009	RSO	EHS	17May2019	DEPOSTING SURVEY 14MAY2019/DEPOSTED 17MAY2019

RSO	BLDG.74	POSTED	DEPOSTED	RADIOISOTOPES RECEIVED, STORED, & USED
S1009		19Sep1989	17May2019	H-3, C-14, P-32, P-33, S-35, I-125, Tc-99m, and other Byproduct materials with Atomic Numbers 1 through 83

USU WASTE SHIPMENTS	# OF 55 Gal. DRUMS	TOTAL ACTIVITY (mCi)	RADIOISOTOPES IN WASTE SHIPMENT
09 May 2017 dry solid waste	15	6.3490	H-3, C-14, Na-22, Mn-54, Fe-55, Co-57, Co-60, Ge-68, Sr-90, Cd-109, I-125, I-129, Ba-133, Cs-137, Tl-204, Po-210
carcass waste	2	2.0050	H-3
mixed waste	6	1.3880	H-3, C-14, U-238
total	23	9.7420	

12 Dec 2014 dry solid waste	4	25.9459	H-3, C-14, P-32, S-35, Ca-45, I-125, U-238
carcass waste	1	47.5550	H-3, C-14
total	5	73.5009	

08 Aug 2013 dry solid waste	4	83.4539	H-3, C-14, P-32, Ca-45, I-125, Ba-133, Cs-137, U-238
mixed waste	3	0.0309	H-3, C-14
total	7	83.4848	

20 Sep 2012 dry solid waste	3	4.6450	H-3, C-14, S-35, Ca-45
mixed waste	1	4.8303	H-3
total	4	9.4753	

13 Sep 2010 dry solid waste	3	4.6601	H-3, C-14, P-32, S-35, Ca-45, Co-60, Cs-137
mixed waste	1	0.3856	H-3, C-14, P-32
total	4	5.0457	

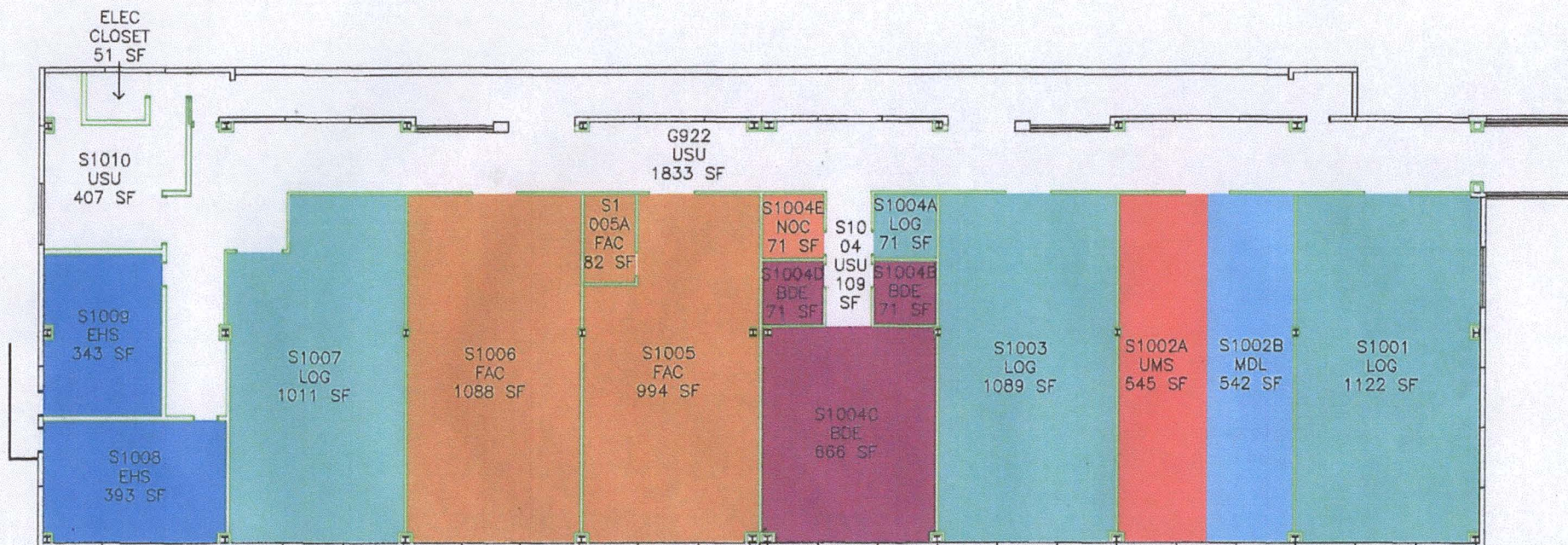
13 Feb 2009 dry solid waste	5	6.6784	H-3, C-14, U-238
mixed waste	1	14.4600	H-3, C-14, U-238
total	6	21.1384	

01 Apr 2008 dry solid waste	4	12.6260	H-3, C-14, U-238
total	4	12.6260	

Enclosure (1)

Enclosure (1)	USU WASTE SHIPMENTS		# OF 55 Gal. DRUMS	TOTAL ACTIVITY (mCi)	RADIOISOTOPES IN WASTE SHIPMENT
	19 Apr 2007	dry solid waste	5	7.5692	H-3, C-14, Na-22, Si-32, Cl-36, Mn-54, Co-57, Co-60, Ca-45, Sr-90, Tc-99, Ba-133, Cd-109, I-129, Cs-137, Pm-147, Eu-152, Tl-204
		carcass waste	1	201.2295	H-3, C-14
		mixed waste	2	15.6650	H-3, C-14, P-32, Cr-51, I-125
		total	8	224.4637	
	25 May 2006	dry solid waste	7	427.7519	H-3, C-14, Na-22, S-35, Ca-45, Fe-55, I-125, Cs-137, U-238
		mixed waste	1	3.9500	H-3, C-14, Cr-51
		total	8	431.7019	
	05 May 2005	dry solid waste	6	8.1026	H-3, C-14, P-32, S-35, Ca-45, Cd-109, I-125, Cs-137, Eu-152, U-238
		carcass waste	1	0.5997	C-14
		total	7	8.7023	
	17 Mar 2004	dry solid waste	5	19.3130	H-3, C-14, P-32, S-35, Ca-45, I-125, U-238
		carcass waste	1	161.2030	H-3, C-14
		mixed waste	1	5.6590	H-3, C-14, P-32, Cr-51
		total	7	186.1750	
	10 Sep 2003	dry solid waste	10	37.3300	H-3, C-14, P-32, S-35, Ca-45, Fe-59, Cd-109, I-125, Ra-226, U-238
		carcass waste	2	2.4600	C-14
		mixed waste	1	5.286	H-3, C-14
		total	13	45.0760	
	26 Feb 2002	dry solid waste	10	39.6547	H-3, C-14, P-32, P-33, S-35, Cl-36, Ca-45, Sc-46, Cr-51, Sr-85, Cd-109, I-125, Ce-141, Ra-226, U-238
		carcass waste	2	5.7378	C-14
		total	12	45.3925	
	28 Nov 2000	dry solid waste	14	79.745	H-3, C-14, P-32, S-35, Cl-36, Ca-45, Sc-46, Cr-51, Fe-59, Ni-63, Sr-85, Nb-95, I-125, Ba-133, Cs-137, Ce-141, Sn-113, Po-210, Ra-226, U-238
		mixed waste	5	17.984	H-3, C-14
		total	19	97.7290	

Enclosure (2)



LEGEND

■ BRIGADE COMMANDER	■ LOGISTICS DIVISION	■ UNIFORMED SERVICES UNIVERSITY
■ ENVIRONMENTAL HEALTH & OCCUPATIONAL SAFETY	■ MULTIDISCIPLINE LABORATORIES	■ UNIVERSITY MEDIA SERVICE
■ FACILITIES DIVISION	■ NETWORK OPERATION & COMMUNICATION	



**STORAGE
BUILDING 74**
1/18/13

USU Building 74 Impacted Class 3 Areas and Non-Impacted Areas

BLDG	FLOOR	ROOM OR AREA	DESCRIPTION	ISOTOPES OF CONCERN	D&D CLASSIFICATION
74	1st Floor	S1009	RADMAT Storage Room	H-3, C-14, Na-22, P-32, Si-32, P-33, S-35, Cl-36, Ca-45, Sc-46, Cr-51, Mn-54, Fe-55, Co-57, Fe-59, Co-60, Ni-63, Ge-68, Sr-85, Sr-90, Nb-95, Tc-99, Cd-109, Sn-113, I-125, I-129, Ba-133, Cs-137, Ce-141, Pm-147, Eu-152, Tl-204, Po-210, Ra-226, U-238	Impacted, Class 3
BLDG	FLOOR	ROOM OR AREA	DESCRIPTION	ISOTOPES OF CONCERN	D&D CLASSIFICATION
74	1st Floor	G922	Hallway	N/A	Non-impacted
74	1st Floor	S1001	LOG-PMO Storage Room	N/A	Non-impacted
74	1st Floor	S1002B	MDL Storage Room	N/A	Non-impacted
74	1st Floor	S1002A	UMS Storage Room	N/A	Non-impacted
74	1st Floor	S1003	LOG-PMO Storage Room	N/A	Non-impacted
74	1st Floor	S1004	Hallway	N/A	Non-impacted
74	1st Floor	S1004A	LOG Storage Room	N/A	Non-impacted
74	1st Floor	S1004B	BDE Storage Room	N/A	Non-impacted
74	1st Floor	S1004C	BDE Storage Room	N/A	Non-impacted
74	1st Floor	S1004D	BDE Storage Room	N/A	Non-impacted
74	1st Floor	S1004E	NOC Storage Room	N/A	Non-impacted
74	1st Floor	S1005	FAC Carpenter Shop	N/A	Non-impacted
74	1st Floor	S1005A	FAC Carpenter Shop Office	N/A	Non-impacted
74	1st Floor	S1006	FAC Storage Room	N/A	Non-impacted
74	1st Floor	S1007	LOG-TSB Refrig. Shop	N/A	Non-impacted
74	1st Floor	S1008	EHS-HAZMAT Storage Rm.	N/A	Non-impacted
74	1st Floor	S1010	Mechanical Room	N/A	Non-impacted

DEPOSITING SURVEY DATA

BLDG/RM: 74/0009	DATE(S) OF SURVEY: 14 May 2019
DEPT/REA: EHOS/Rad Safety	PI: RPO U85-002

PRE-DEPOSITING CHECKS

	YES	NO	N/A
1. REA Holder completed request for deactivation	X		
2. All radioactive sources have been removed or disposed	X		
3. All radioactive waste has been removed or disposed	X		
4. All equipment with a radioactive materials warning label has been surveyed and cleared or turned into EHS	X		
5. EHS survey meters have been collected	X		
6. EHS records have been checked for any Uranium or Thorium related isotope use in the deposited labs	X		
7. If Uranium or Thorium related isotopes were used, all swipe analysis results were below 100 dpm/100cm ²	X		

SURVEY METER DATA

CHECK SOURCE DATA

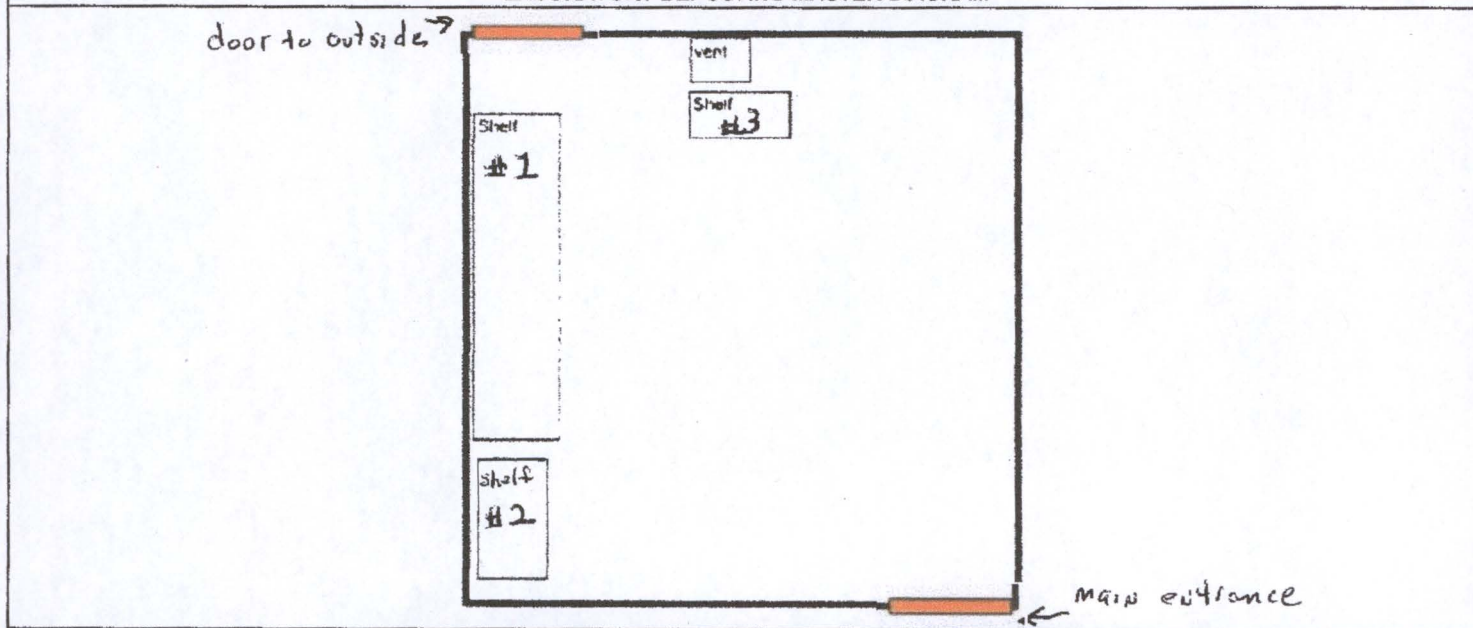
TYPE	MFR/MODEL	SN	CAL DUE	SOURCE SN	QA mR/hr	± 20%	QA Log
GM	VIC 190	107540	19-Aug-19	107540	1.9	YES	YES

SURVEY TEAM MEMBER

COLOR OF AREAS SURVEYED AND DIAGRAM #'s

SSG Caston	
SSG Thomas	
MR GRAY	

LABORATORY DEPOSITING MASTER DIAGRAM



SEE ATTACHED SURVEY FORMS FOR DETAILED SWIPE ANALYSIS RESULTS

<input checked="" type="checkbox"/> FINAL SWIPE RESULTS WERE ALL BELOW LIMITS FOR RELEASE	<input type="checkbox"/> SWIPE RESULTS ARE ABOVE DEPOSITING LIMITS
ANALYZER SIGNATURE OF APPROVAL FOR DEPOSITING: <i>[Signature]</i>	ANALYZER: Mr Gray
REVIEWER SIGNATURE OF APPROVAL FOR DEPOSITING: <i>[Signature]</i>	ANALYSIS DATE: 14 May 2019
	REVIEWER: BRIAN CHAMBERS
	REVIEW DATE: 17 MAY 2019

POST-DEPOSITING CHECKS

	YES	NO	N/A
The surveyed room/area has been de-posted and all radioactive warning signs and labels have been removed	X		

DEPOSTING SURVEY DATA

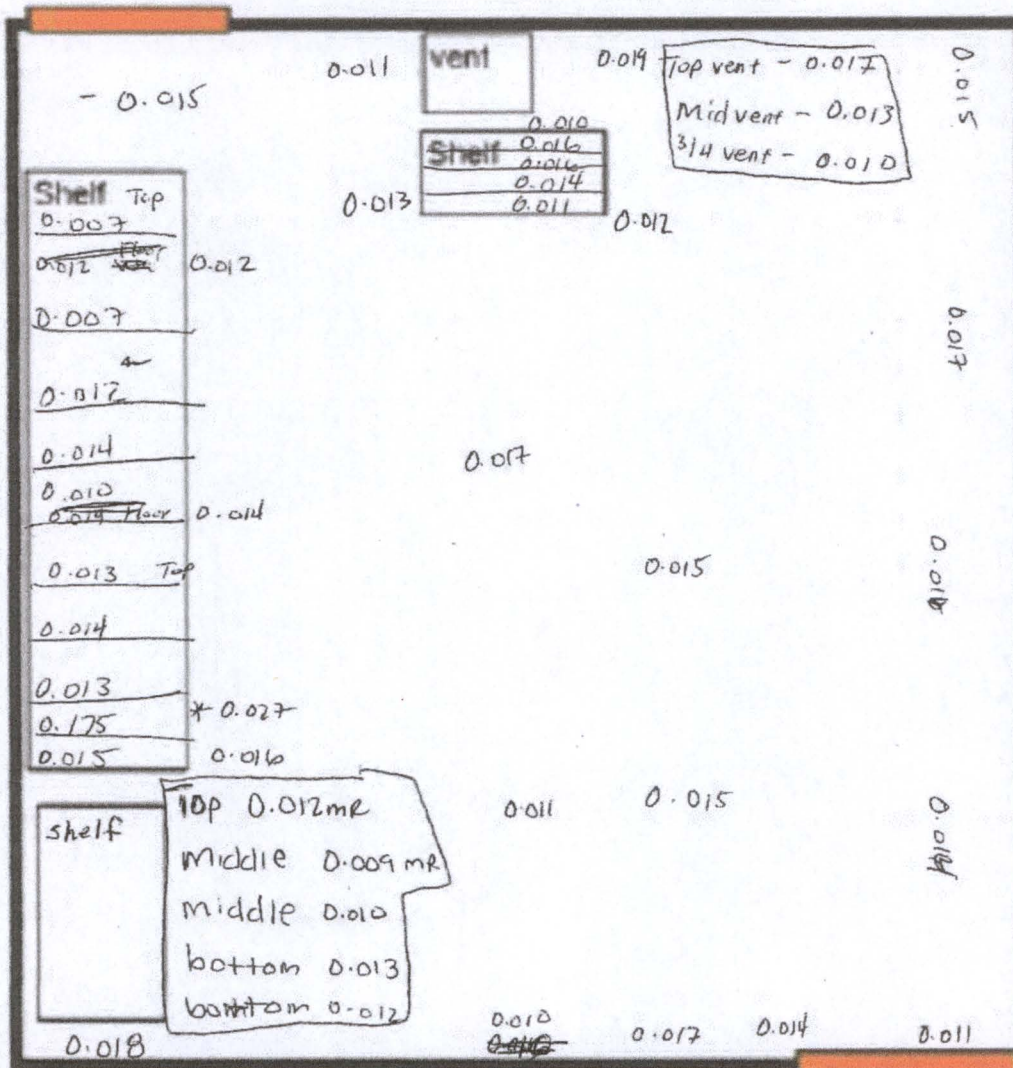
DATE/TIME: 14 May 2019

SURVEYOR: GRAY/THOMAS/CASTON

BLDG/RM: 74/0009

DEPT/REA/PI: EHOS/U85-002/RPO

DEPOSTING DIAGRAM # 1A (Readings)



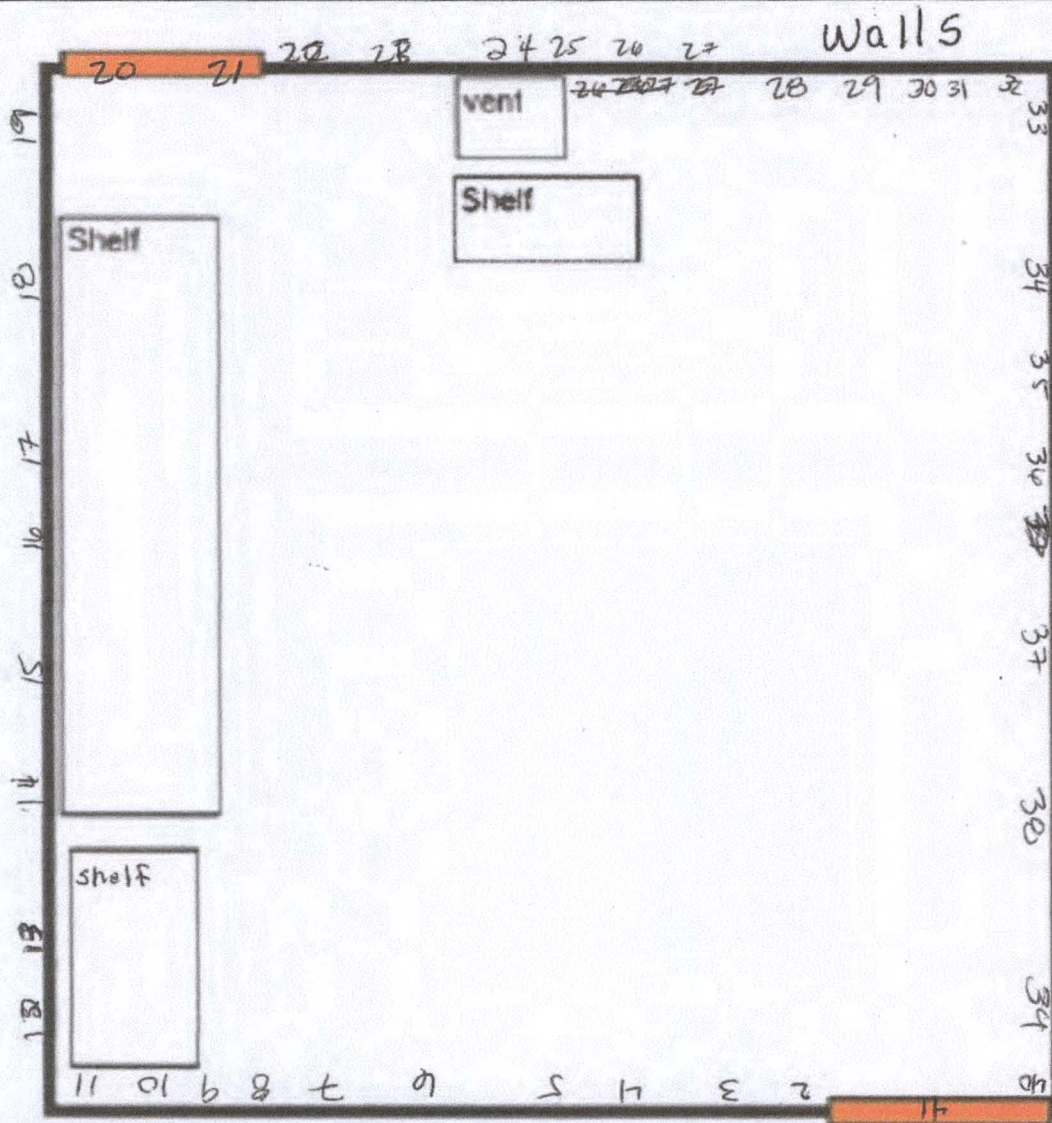
METER READINGS	SWIPE ANALYSIS <input checked="" type="checkbox"/> DISC <input type="checkbox"/> GAMMA <input type="checkbox"/> MCA <input checked="" type="checkbox"/> N/A					
All readings are written in mR/hr directly on the diagram	RESULTS (per 100 cm ²): <input type="radio"/> U or Th < 100 dpm <input type="radio"/> All < 200 dpm <input type="radio"/> Decon/Resurvey Required ≥ 200 dpm					
	SWIPE #	ISOTOPE	DPM	SWIPE #	ISOTOPE	DPM
SWIPE SAMPLES						
Noted numerically (2,3,4) on the diagram beginning with No. 2. BKG= No. 1						
COMMENTS:						
ANALYZER SIGNATURE:			ANALYZER: Gray/Thomas/Caston			
REVIEWER SIGNATURE:			ANALYSIS DATE: 14 May 19			
			REVIEWER: BRIAN CHAMPINE			
			REVIEW DATE: 17 MAY 2019			

*Trigger Levels : Deposting General - < 0.05 mR/hr; Deposting Equipment - 2.0 mR/hr

** All survey meter information is listed on the Cover Page of this deposing survey packet**

Enclosure (4)

DEPOSTING SURVEY DATA	
DATE/TIME: 14 May 2019	SURVEYOR: GRAY/THOMAS/CASTON
BLDG/RM: 74/0009	DEPT/REA/PI: EHOS/U85-002/RPO
DEPOSTING DIAGRAM # 2A (Walls)	



METER READINGS	SWIPE ANALYSIS					
All readings are written in mR/hr directly on the diagram	<input checked="" type="checkbox"/> LSC <input type="checkbox"/> GAMMA <input type="checkbox"/> MCA <input type="checkbox"/> N/A					
	RESULTS (per 100 cm ²): <input checked="" type="radio"/> U or Th < 100 dpm <input type="radio"/> All < 200 dpm <input type="radio"/> Decon/Resurvey Required ≥ 200 dpm					
	SWIPE #	ISOTOPE	DPM	SWIPE #	ISOTOPE	DPM
SWIPE SAMPLES						
Noted numerically (2,3,4) on the diagram beginning with No. 2. BKG= No. 1						
COMMENTS:						
ANALYZER SIGNATURE: <i>[Signature]</i>			ANALYZER: Mr Gray			
REVIEWER SIGNATURE: <i>[Signature]</i>			ANALYSIS DATE: 14 May 2019			
			REVIEWER: BRIAN CAMPBELL			
			REVIEW DATE: 17 MAY 2019			

*Trigger Levels : Deposting General – < 0.05 mR/hr; Deposting Equipment –2.0 mR/hr

** All survey meter information is listed on the Cover Page of this deposing survey packet**

Enclosure (4)

DEPOSTING SURVEY DATA

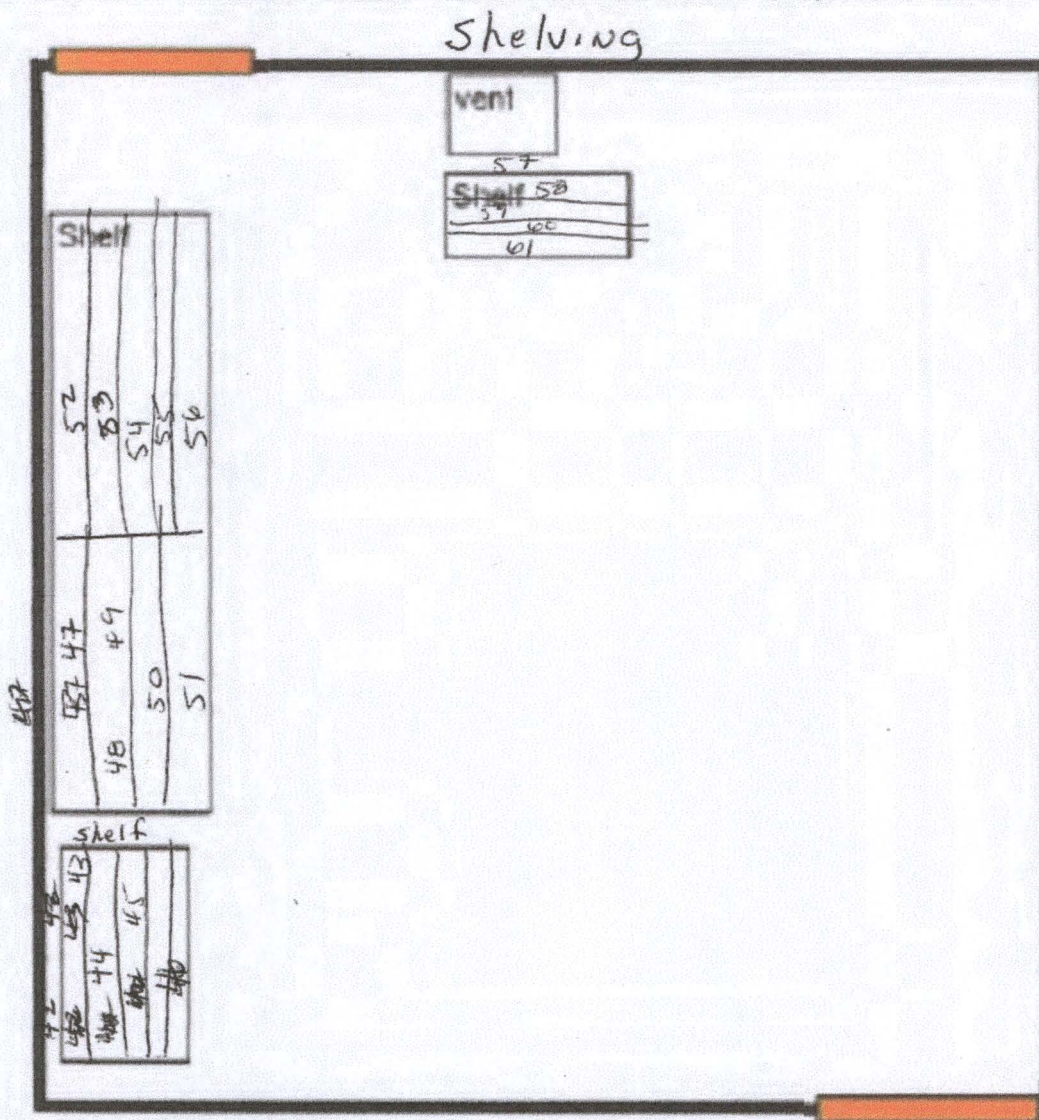
DATE/TIME: 14 May 2019

SURVEYOR: GRAY/THOMAS/CASTON

BLDG/RM: 74/0009

DEPT/REA/PI: EHOS/U85-002/RPO

DEPOSTING DIAGRAM #3#(shelves)



METER READINGS

All readings are written in mR/hr
directly on the diagram

SWIPE ANALYSIS

☒ LSC

☐ GAMMA

☐ MCA

☐ N/A

RESULTS (per 100 cm²): ☐ U or Th < 100 dpm ☒ All < 200 dpm ☐ Decon/Resurvey Required ≥ 200 dpm

SWIPE #	ISOTOPE	DPM	SWIPE #	ISOTOPE	DPM
52	C14	158			

SWIPE SAMPLES

Noted numerically (2,3,4) on the diagram
beginning with No. 2. BKG= No. 1

COMMENTS:

#62 decon + reswiped @ #203 = < 100 dpm U+Th

ANALYZER SIGNATURE

ANALYZER: Mr. Gray

ANALYSIS DATE: 14 May 19

REVIEWER SIGNATURE

REVIEWER: BRIAN CAMPBELL

REVIEW DATE: 17 May 2019

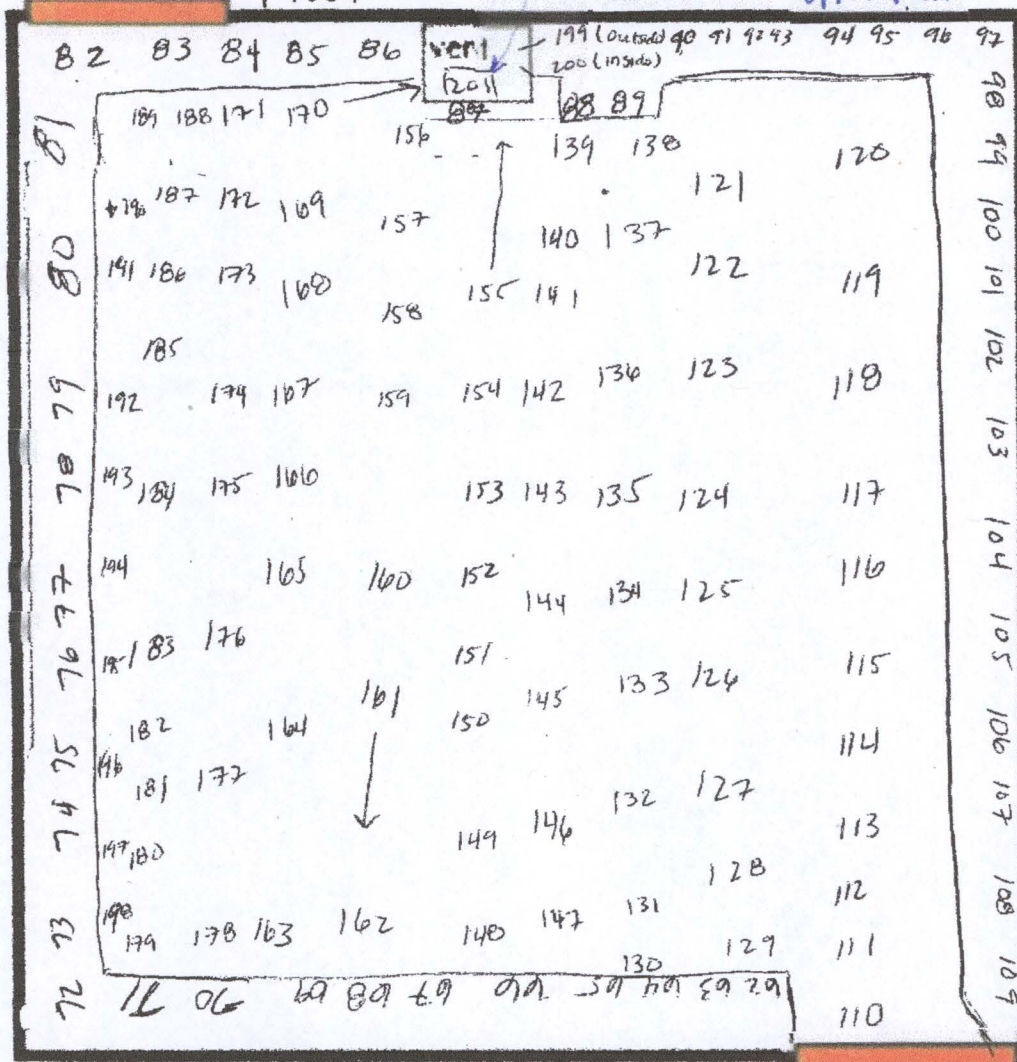
*Trigger Levels : Deposting General - < 0.05 mR/hr; Deposting Equipment -2.0 mR/hr



** All survey meter information is listed on the Cover Page of this deposting survey packet**

Enclosure (4)

DEPT/REA/PI: EHOS/U85-002/RPO

199-200
upper vent



METER READINGS All readings are written in mR/hr directly on the diagram		SWIPE ANALYSIS RESULTS (per 100 cm ²): <input checked="" type="checkbox"/> U or Th < 100 dpm <input type="checkbox"/> All < 200 dpm <input type="checkbox"/> Decon/Resurvey Required ≥ 200 dpm					
		SWIPE #	ISOTOPE	DPM	SWIPE #	ISOTOPE	DPM
SWIPE SAMPLES Noted numerically (2,3,4) on the diagram beginning with No. 2. BKG= No. 1							
COMMENTS:							
ANALYZER SIGNATURE: 				ANALYZER: M. Gray			
REVIEWER SIGNATURE: 				ANALYSIS DATE: 14 May 2019			
				REVIEWER: BRIAN CHAMPION			
				REVIEW DATE: 17 May 2019			

**** All survey meter information is listed on the Cover Page of this depositing survey packet****

Enclosure (4)

Protocol# 1 - Room Survey.lsa

User: Default

H3 and C14 Contamination Survey

Assay Definition

Report Name: Room Survey

Output Data Path: C:\Packard\Tricarb\Results\Default\Room Survey\20190514_0858

Raw Results Path: C:\Packard\Tricarb\Results\Default\Room Survey\20190514_0858\20190514_0858.results

Comma-Delimited File Name: C:\Packard\Tricarb\Results\Default\Room Survey\20190514_0858\Room Survey.csv

Assay File Name: C:\Packard\TriCarb\Assays\Room Survey.lsa

Background Subtract

Background Subtract: On - 1st Vial

Low CPM Threshold: Off

2 Sigma ? Terminator: Off

Regions	LL	UL	Bkg Subtract
A	0.0	12.0	1st Vial
B	12.0	156.0	1st Vial
C	156.0	1700.0	1st Vial

Bldg 74, Rm 0009
Depositing swipes

Cycle 1 Results

S#	Count	Time	CPMA	CPMB	CPMC	H3 DPM	C14 DPM	P32 DPM	tSIE	MESSAGES
1	10.00	7	8	5	0	0	5	627.53	B	
2	1.00	2	16	3	0	20	3	545.64		
3	1.00	4	8	4	6	9	4	617.88		
4	1.00	0	0	0	0	0	0	631.31		
5	1.00	1	0	7	2	0	7	622.34		
6	1.00	3	1	10	6	1	10	604.34		
7	1.00	0	4	2	0	6	2	594.56		
8	1.00	0	0	0	0	0	0	582.44		
9	1.00	5	0	4	12	0	4	601.22		
10	1.00	0	2	6	0	2	6	598.30		
11	1.00	1	0	0	3	0	0	608.43		
12	1.00	2	0	6	6	0	6	609.40		
13	1.00	0	0	2	0	0	2	607.59		
14	1.00	0	1	1	0	1	1	614.20		
15	1.00	0	1	1	0	2	1	606.47		
16	1.00	0	5	0	0	6	0	611.56		
17	1.00	0	3	0	0	4	0	582.23		
18	1.00	3	0	2	7	0	2	601.37		
19	1.00	0	4	3	0	5	3	581.40		
20	1.00	0	0	0	1	0	0	590.99		
21	1.00	0	0	0	0	0	0	596.39		
22	1.00	1	4	4	1	5	4	586.42		
23	1.00	3	2	2	6	2	2	590.07		
24	1.00	0	0	1	0	1	1	583.88		
25	1.00	0	0	0	0	0	0	605.97		
26	1.00	3	4	6	5	5	6	594.24		
27	1.00	0	0	0	0	0	0	603.55		
28	1.00	3	3	1	4	3	1	598.90		
29	1.00	0	0	2	2	0	2	596.58		
30	1.00	2	0	0	5	0	0	565.49		
31	1.00	2	0	2	4	0	2	556.25		
32	1.00	0	0	0	0	0	0	594.41		
33	1.00	3	3	1	5	3	1	611.02		
34	1.00	0	0	2	0	0	2	605.47		
35	1.00	0	0	1	1	0	1	590.09		
36	1.00	0	0	0	0	0	0	595.59		

Enclosure (4)

Protocol# 1 - Room Survey.lsa

User: Default

H3 and C14 Contamination Survey

(14)

37	1.00	0	2	0	0	3	0	581.84
38	1.00	1	0	0	3	0	0	580.09
39	1.00	0	1	2	0	1	2	572.07
40	1.00	0	1	0	0	2	0	592.64
41	1.00	0	0	0	0	1	0	605.25
42	1.00	2	11	2	1	14	2	585.46
43	1.00	0	2	0	0	3	0	577.39
44	1.00	4	6	2	7	7	2	593.88
45	1.00	1	1	0	2	2	0	578.44
46	1.00	0	2	1	0	3	1	584.78
47	1.00	0	6	0	0	8	0	532.71
48	1.00	1	0	0	4	0	0	600.64
49	1.00	0	2	0	0	3	0	589.66
50	1.00	0	3	1	0	5	1	570.90
51	1.00	0	11	4	0	14	4	567.87
52	1.00	34	132	0	30	158	0	579.55
53	1.00	0	2	3	0	3	3	584.89
54	1.00	0	1	2	0	2	2	579.98
55	1.00	5	3	1	9	3	1	567.85
56	1.00	0	3	0	0	4	0	579.20
57	1.00	2	1	0	4	1	0	604.32
58	1.00	1	6	0	1	8	0	600.02
59	1.00	0	8	0	0	10	0	577.62
60	1.00	8	3	2	15	2	2	596.64
61	1.00	0	4	2	0	5	2	577.38
62	1.00	0	0	0	0	0	0	546.71
63	1.00	3	5	4	5	5	4	569.96
64	1.00	1	9	2	0	11	2	571.53
65	1.00	0	0	0	0	1	0	592.08
66	1.00	1	0	7	3	0	7	576.00
67	1.00	2	0	0	4	0	0	567.67
68	1.00	0	8	0	0	10	0	562.95
69	1.00	0	0	0	0	0	0	571.11
70	1.00	0	0	0	0	0	0	551.03
71	1.00	0	0	1	0	0	1	577.47
72	1.00	1	0	0	4	0	0	564.20
73	1.00	0	0	7	0	0	7	588.04
74	1.00	0	1	1	0	2	1	562.30
75	1.00	0	0	0	0	1	0	579.68
76	1.00	0	0	2	0	0	2	554.05
77	1.00	0	0	1	0	0	1	575.11
78	1.00	0	4	0	0	5	0	578.05
79	1.00	0	0	1	0	0	1	596.70
80	1.00	0	0	0	0	0	0	574.29
81	1.00	0	0	2	0	0	2	563.98
82	1.00	3	0	0	8	0	0	541.14
83	1.00	0	0	4	0	0	4	546.45
84	1.00	0	1	0	0	1	0	598.36
85	1.00	2	0	0	5	0	0	566.39
86	1.00	0	0	3	0	0	3	586.78
87	1.00	0	3	2	0	4	2	538.74
88	1.00	0	0	1	1	0	1	573.74
89	1.00	0	5	2	0	7	2	577.47
90	1.00	1	1	2	2	1	2	544.94
91	1.00	0	0	1	1	0	1	561.04
92	1.00	0	0	8	0	0	8	562.64
93	1.00	0	0	0	0	0	0	576.77
94	1.00	0	5	0	0	7	0	530.45
95	1.00	0	5	1	0	6	1	582.83
96	1.00	0	7	0	0	9	0	522.25
97	1.00	0	6	0	0	8	0	509.03
98	1.00	0	7	1	0	9	1	470.20
99	1.00	0	1	0	0	2	0	533.02

Top of shelf
#1

Protocol# 1 - Room Survey.lsa

User: Default

H3 and C14 Contamination Survey

100	1.00	1	3	2	2	4	2	563.49
101	1.00	0	0	0	0	0	0	564.55
102	1.00	0	0	0	0	0	0	533.72
103	1.00	0	0	0	0	0	0	571.47
104	1.00	5	0	1	11	0	1	558.61
105	1.00	0	8	3	0	9	3	573.42
106	1.00	0	2	0	0	3	0	545.19
107	1.00	0	4	0	0	5	0	583.01
108	1.00	0	0	0	1	0	0	585.53
109	1.00	0	3	1	0	4	1	581.20
110	1.00	0	1	0	0	1	0	529.54
111	1.00	0	0	0	0	0	0	547.13
112	1.00	0	2	0	0	2	0	556.26
113	1.00	0	0	0	0	0	0	590.65
114	1.00	0	0	0	0	0	0	544.69
115	1.00	0	0	4	0	1	4	585.30
116	1.00	0	0	0	0	0	0	597.02
117	1.00	0	0	1	0	0	1	593.62
118	1.00	0	3	4	0	4	4	571.23
119	1.00	0	1	0	0	2	0	578.25
120	1.00	0	0	0	0	0	0	589.21
121	1.00	2	0	0	5	0	0	575.77
122	1.00	2	0	2	6	0	2	549.95
123	1.00	0	0	1	0	0	1	565.01
124	1.00	0	6	0	0	8	0	606.08
125	1.00	0	2	1	0	2	1	608.30
126	1.00	0	4	2	0	5	2	576.67
127	1.00	0	0	0	0	0	0	582.63
128	1.00	2	2	0	4	3	0	574.76
129	1.00	0	0	1	0	0	1	601.89
130	1.00	0	4	2	0	6	2	536.30
131	1.00	1	0	0	3	0	0	571.71
132	1.00	0	4	2	0	5	2	571.36
133	1.00	0	4	0	0	5	0	604.76
134	1.00	0	3	1	0	4	1	579.98
135	1.00	2	0	0	4	0	0	557.63
136	1.00	2	2	0	4	2	0	590.29
137	1.00	0	2	0	0	3	0	596.37
138	1.00	0	1	0	0	2	0	577.21
139	1.00	0	2	2	0	3	2	546.48
140	1.00	0	3	0	0	4	0	591.98
141	1.00	2	1	1	4	1	1	577.72
142	1.00	0	2	0	0	2	0	570.94
143	1.00	0	2	3	0	3	3	588.56
144	1.00	0	0	0	0	0	0	590.16
145	1.00	0	0	0	0	0	0	601.79
146	1.00	0	0	0	0	0	0	589.84
147	1.00	6	1	1	12	0	1	569.40
148	1.00	0	3	1	0	4	1	553.21
149	1.00	0	5	0	0	7	0	578.70
150	1.00	0	0	4	0	0	4	562.66
151	1.00	0	1	2	0	2	2	561.19
152	1.00	0	4	1	0	6	1	581.98
153	1.00	0	1	5	0	2	5	586.93
154	1.00	0	0	3	0	0	3	589.51
155	1.00	0	0	4	0	0	4	569.76
156	1.00	0	1	1	0	2	1	550.29
157	1.00	0	0	0	0	0	0	598.53
158	1.00	0	0	1	0	0	1	566.23
159	1.00	0	7	2	0	9	2	576.10
160	1.00	0	3	4	0	4	4	591.95
161	1.00	0	0	0	0	0	0	572.02
162	1.00	0	1	0	0	2	0	527.71

Protocol# 1 - Room Survey.lsa

User: Default

H3 and C14 Contamination Survey

163	1.00	0	0	0	0	1	0	500.73
164	1.00	0	3	0	0	4	0	593.78
165	1.00	0	7	0	0	8	0	574.60
166	1.00	0	0	0	1	0	0	577.18
167	1.00	1	0	0	3	0	0	571.85
168	1.00	0	5	0	0	7	0	590.52
169	1.00	0	8	0	0	10	0	579.18
170	1.00	0	2	3	0	3	3	585.81
171	1.00	0	0	0	0	0	0	563.51
172	1.00	0	4	0	0	5	0	567.01
173	1.00	3	0	1	7	0	1	596.74
174	1.00	1	0	0	3	0	0	600.59
175	1.00	0	0	0	0	0	0	583.50
176	1.00	2	0	0	6	0	0	566.49
177	1.00	0	4	0	0	5	0	589.68
178	1.00	0	4	3	0	5	3	546.89
179	1.00	0	2	0	0	3	0	581.94
180	1.00	4	0	1	9	0	1	589.93
181	1.00	0	7	1	0	9	1	570.69
182	1.00	1	0	0	2	0	0	545.86
183	1.00	0	0	2	0	0	2	569.96
184	1.00	1	3	1	2	4	1	554.18
185	1.00	0	0	0	0	0	0	509.01
186	1.00	0	2	0	0	3	0	564.27
187	1.00	5	0	0	12	0	0	552.27
188	1.00	0	5	0	0	7	0	589.68
189	1.00	0	0	0	0	0	0	603.46
190	1.00	0	0	0	0	0	0	570.92
191	1.00	2	2	0	4	2	0	545.66
192	1.00	5	1	3	11	1	3	547.78
193	1.00	0	4	0	0	5	0	576.65
194	1.00	0	3	4	0	4	4	554.00
195	1.00	0	0	6	0	0	6	539.36
196	1.00	1	2	0	2	3	0	557.36
197	1.00	0	1	1	0	2	1	589.35
198	1.00	0	2	2	0	3	2	543.59
199	1.00	0	0	3	0	1	3	614.57
200	1.00	0	1	3	0	2	3	599.03
201	1.00	0	0	6	0	1	6	539.14
202	1.00	24	125	1	12	151	1	579.27
203	1.00	0	0	0	0	0	0	623.98

re row of 52
after decon
of shelf
#1



UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES

ENVIRONMENTAL HEALTH AND OCCUPATIONAL SAFETY
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20 June 2019

STANDARD OPERATING PROCEDURE

SUBJECT: SOP EHS-R016 Addition and Deletion of Buildings/Facilities to the USU Radiation Safety Program and USNRC License

- References:
- (a) Code of Federal Regulations, Title 10, Part 19, "Notices, Instructions and Reports to Workers; Inspections."
 - (b) Code of Federal Regulations, Title 10, Part 20, "Standards for Protection Against Radiation."
 - (c) Code of Federal Regulations, Title 10, Part 30, "Rules of General Applicability to Domestic Licensing of Byproduct Material."
 - (d) USU Nuclear Regulatory Commission Byproduct Materials License #19-23344-01.
 - (e) USU Instruction 6402, "Compliance with USUHS Radiation Safety Guide." February 2012.
 - (f) U.S. NRC NUREG-1556, Vol. 11, "Consolidated Guidance About Materials Licenses."
 - (g) U.S. NRC NUREG-1757, Vol. 1, Rev.2, "Consolidated Decommissioning Guidance: Decommissioning Process for Materials Licensees."

1. **PURPOSE.** This standard operating procedure (SOP) is the USU internal guidance for adding and deleting buildings/facilities, those either located on the Naval Support Activity Bethesda (NSAB) compound such as the USU's main campus or those located off-site to the USU Radiation Safety Program and USNRC Type A Broad scope license. Environmental Health & Occupational Safety Directorate (EHS) personnel will use this SOP to ensure the use or storage of radioactive material (RAM) in acquired NSAB or off-site buildings or facilities, under USU cognizance, complies with references (a) through (g). EHS personnel will use this SOP to ensure USU buildings or facilities located on NSAB or off-site are decommissioned prior to either transfer from USU cognizance to another responsible owner or demolition IAW references (a) through (g).

2. **APPLICABILITY.** This SOP applies to all EHS personnel responsible for the conduct of the USU Radiation Safety Program as required by references (a) through (g). This SOP applies to any building/facility located on the NSAB compound, or located off-site from NSAB, that is formally transferred to or from USU possession.

3. **RESPONSIBILITIES.** The Radiation Safety Officer (RSO) is responsible for ensuring any

SUBJECT: SOP EHS-R016 Addition and Deletion of Buildings/Facilities to the USU Radiation Safety Program and USNRC License

facility changes involving past, present or future RAM use are conducted IAW references (a) through (g) and other applicable regulations.

4. BACKGROUND

a. The NSAB compound is a contiguous Federal property not crossed by public roads; however, the property currently comprises two postal mailing addresses:

4301 Jones Bridge Road, Bethesda, MD 20814 - for USU
and

8901 Wisconsin Avenue, Bethesda, MD 28089 - for all other NSAB & tenant commands

The main access roads onto the NSAB compound are located on Jones Bridge Road and Wisconsin Avenue. If and when NSAB buildings are formally transferred to USU possession, the transfer will include an address change from 8901 Wisconsin Avenue to 4301 Jones Bridge Road. Thus upon USU's acquisition of additional NSAB buildings, the Broad scope license condition 10 address continues to appropriately apply to these buildings. Such transfers of buildings between NSAB and its tenant commands and USU will not require an amendment to the Broad scope license as there is no change in the address listed for condition 10. All USU buildings located at NSAB are regulated under the current Broad scope license. If RAM use is authorized in an additional USU building at NSAB a Broad scope license amendment request will be submitted only if the RAM use is of a nature requiring a license amendment specific to that use.

b. Any building/facility acquired off-site in the civilian community (outside of the geographical boundaries of NSAB) will require submission of an amendment to the Broad scope license before any work with RAM can occur at that location. At a minimum a new address for licensed RAM use must be added to condition 10 of the license.

5. USU ACQUISITION/CONSTRUCTION OF BUILDINGS ON THE NSAB BASE. The RSO performs or ensures all applicable initial and ongoing radiation safety coordinations are begun upon being informed of a USU decision to acquire or construct a building at NSAB. The RSO coordination includes consideration of:

a. Previous RAM use in NSAB buildings transferred to USU possession and if required a thorough radiological survey at turnover.

b. Consideration of future USU RAM use, facility design, and functional considerations.

6. PREVIOUS RAM USE IN BUILDINGS TRANSFERRED TO USU POSSESSION. If

SUBJECT: SOP EHS-R016 Addition and Deletion of Buildings/Facilities to the USU Radiation Safety Program and USNRC License

RAM was previously used in any building transferred to USU, the RSO will:

a. Ensure that the building is transferred to USU IAW the provisions of applicable sections (see especially items 7-15) of NUREG 1556 Vol. 11 App H. The RSO will ensure written documentation of any previous RAM use is submitted to the Radiation Safety Committee (RSC) for review and is filed as part of the USU decommissioning files.

b. Ensure that all previous RAM use in the transferred building by any other licensee is terminated and the appropriate level of documented decommissioning of the facility has been performed prior to initiation of USU authorized RAM use. This will preclude more than one NRC licensee conducting licensed activities at the same address.

c. Review current USU financial assurance documents, and, if necessary, update and, upon RSC approval, resubmit the financial assurance documents for decommissioning in order to cover any substantial change to costs or cost analyses.

7. PREPARATIONS FOR RAM USE IN BUILDINGS TRANSFERRED TO USU POSSESSION.

a. RAM use in any building possessed by USU will be IAW with USU NRC Broad scope license conditions and will be conducted IAW the USU Radiation Safety Guide. RAM use will be authorized under Radionuclide Experimental Authorizations (REA) issued by the USU Radiation Safety Committee (RSC) to Principal Investigators (PI) with credentials and experience approved by the RSC.

b. The RSO will coordinate review of the facility design to meet requirements for proposed RAM use areas. The RSO will submit floor plans and design criteria to the RSC as requested for approval, and will ensure that design requirements are met prior to RSC approval of REAs to PIs.

c. The RSO will coordinate review of personnel and logistic support requirements for expansion of USU RAM use into additional facilities. The RSO will ensure that all personnel and logistic support requirements are met prior to the approval of the RSC.

d. Prior to RAM use expansion into new facilities the RSO will present for RSC approval a written consideration of the financial assurance implications of the expansion.

8. DECOMMISSIONING RAM USE BUILDINGS IN OR TO BE TRANSFERRED FROM USU POSSESSION.

a. The RSO will ensure all buildings/facilities with prior RAM use under the USU NRC

EHS

20 June 2019

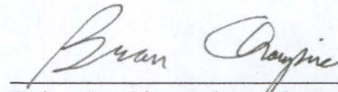
SUBJECT: SOP EHS-R016 Addition and Deletion of Buildings/Facilities to the USU Radiation Safety Program and USNRC License

Broad scope license will be decommissioned IAW references (a) through (g) before transfer to another responsible owner.

b. The RSO will ensure all buildings/facilities with prior RAM use under the USU NRC Broad scope license will be decommissioned IAW references (a) through (g) if any of the conditions listed under 10 CFR 30.36(d) are met.

c. The RSO will ensure all buildings/facilities with prior RAM use under the USU NRC Broad scope license will be decommissioned IAW references (a) through (g) before demolition.

9. EFFECTIVE DATE. This SOP is effective immediately.



Date: 20 JUN 2019

Brian R. Champine, Ph.D, CHP

LTC, US Army

Assistant Vice President, Health and Safety

Radiation Safety Officer



ACKNOWLEDGEMENT - RECEIPT OF CORRESPONDENCE

Name and Address of Applicant and/or Licensee

Brian Champine
Radiation Safety Officer
Uniformed Services University
of the Health Sciences
4301 Jones Bridge Road
Bethesda, Maryland 20814-4799

Date

November 7, 2019

License Number(s)

19-23344-01

Mail Control Number(s)

616911

Licensing and/or Technical Reviewer or Branch

Commercial, Industrial, R&D, and Academic Branch

This is to acknowledge receipt of your: ☒ Letter and/or ☐ Application Dated: 01 October 2019

The initial processing, which included an administrative review, has been performed.

☒ Amendment ☐ Termination ☐ New License ☐ Renewal

☒ There were no administrative omissions identified during our initial review.

☐ This is to acknowledge receipt of your application for renewal of the material(s) license identified above. Your application is deemed timely filed, and accordingly, the license will not expire until final action has been taken by this office.

☐ Your application for a new NRC license did not include your taxpayer identification number. Please fill out NRC Form 531, Request for Taxpayer Identification Number, located at the following link:
<http://www.nrc.gov/reading-rm/doc-collections/forms/nrc531.pdf>

Send the completed NRC Form 531, by facsimile, to the following number: (301) 415-5387

☐ The following administrative omissions have been identified:

Your application has been assigned the above listed MAIL CONTROL NUMBER. When calling to inquire about this action, please refer to this control number. Your application has been forwarded to a technical reviewer. Please note that the technical review, which is normally completed within 180 days for a renewal application (90 days for all other requests), may identify additional omissions or require additional information. If you have any questions concerning the processing of your application, our contact information is listed below:

Select a location (Use keyboard arrows to select). . .