

LICENSEE NAME AND ADDRESS Department of the Army U.S. Army Dental Research Detachment 310B, B street, Great Lakes, IL 60088	LICENSE NUMBER 12-32489-01	DOCKET NUMBER 030-36492
	LICENSE EXPIRATION DATE 04/30/2014	

A. LICENSE STATUS (Check the appropriate box)
 This license has expired. This license has not yet expired; please terminate it.

B. DISPOSAL OF RADIOACTIVE MATERIAL
 (Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)
 The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

1. No radioactive materials have ever been procured or possessed by the licensee under this license.

2. All activities authorized by this license have ceased, and all radioactive materials procured and/or possessed by the licensee under this license number cited above have been disposed of in the following manner:

a. Transfer of radioactive materials to the licensee listed below:

b. Disposal of radioactive materials:

1. Directly by the licensee:

2. By licensed disposal site:

3. By waste contractor:
On January and September 2009, ADCO services, Inc has removed all liquid, solid and LSV waste. Proofs of manifests are attached.

c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA.

C. SURVEYS PERFORMED AND REPORTED

1. A radiation survey was conducted by the licensee. The survey confirms:

a. the absence of licensed radioactive materials

b. that any remaining residual radioactivity is within the limits of 10 CFR 20, Subpart E, and is ALARA.

2. A copy of the radiation survey results:

a. is attached; or b. is not attached (Provide explanation); or c. was forwarded to NRC on: _____ Date _____

3. A radiation survey is not required as only sealed sources were ever possessed under this license, and


a. The results of the latest leak test are attached; and/or b. No leaking sources have ever been identified.

The person to be contacted regarding the information provided on this form:

NAME CPT Mabel A. Salas	TITLE Radiation Safety Officer	TELEPHONE (Include Area Code) (847) 688-7373	E-MAIL ADDRESS @us.army.mil
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Mail all future correspondence regarding this license to:

C. CERTIFYING OFFICIAL
I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE Kai P. Leung, Chief	SIGNATURE 	DATE 29 Sept 2009
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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 RESPECT. 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.



DEPARTMENT OF THE ARMY
UNITED STATES ARMY DENTAL AND TRAUMA RESEARCH DETACHMENT
310B B STREET, BUILDING 1-H
GREAT LAKES, ILLINOIS 60088-5259

MCMR-UWU

September 24, 2009

MEMORANDUM FOR RECORD

Subject: Decommissioning of Material Licensee # 12-32489-01, awarded April 10, 2004
Expiration date April 30, 2014

In 2004, The United States Army Dental and Trauma Research Detachment (USADTRD) was awarded the license to work with ^3H and ^{14}C , under the supervision of Dr Kai Leung. This laboratory is a 400 ft² area, located in the basement of 310 B, B street, 1-H Building in Great Lakes, Illinois, room G62. This letter is to inform that as of September 2009 all ^3H activity has permanently ceased in room G62, USADTRD. I have attached copies of the direct survey performed using a Geiger counter and the swipes in all the surfaces of room G62. As observed no residual activity is observed when I use the unrestricted criteria in NUREG 1757 Vol1 Appendix B.

Access has been restricted to authorized personnel only. All solid and liquid waste had been safely contained in separate Plexiglas boxes in room G62. As of September 2009, ADCO services, Inc. has removed all radioactive waste in preparation for decommissioning the laboratory. A total of three manifests are provided to show proof of safe removal of radioactive liquid and solid waste as of September 2009. Please review the historical site assessment along with the final survey package to decommission the lab.

The POC is the undersigned and can be reached at 8476887373x240 or 8476501724.
The fax is 8476887380. Dr Kai Leung can be reached at 8476887373x230.

A handwritten signature in black ink, appearing to read "M. Salas", is written over the typed name and title of the Principal Investigator.

CPT Mabel Salas, Ph.D
MS, Radiation Safety Officer
Principal Investigator Platelet
Preservation USADTRD

Chemistry Department
8476887373x240

Historic Site Assessment

Dr Kai Leung is authorized the use ^3H radioisotope to perform in vitro labeling of bacteria under License 12-32489-01 at the United States Army Dental and Trauma Research Detachment (USADTRD). This laboratory is a 400 ft², located in the basement of 310 B, B Street, 1-H Building in Great Lakes, Illinois, room G62. The first in vitro labeling experiment was performed in 2005 and as of September 2009 all tritium activity has permanently ceased. Under 12-32489-01, **only ^3H has been used and no ^{14}C experiment ever used.** The room is located away of personnel entrance and exclusive use of authorized personnel with close adherence to Standard Operating Procedures. Mr Robert P. Hays has performed two inspections in 2005 and 2007 with no reported abnormalities.

The method used to quantify the presence of Hydrogen-3 is the standard LS 6500 Scintillation or liquid scintillation counter. This instrument, serial number 7069903, was last calibrated in April 2009 by maintenance personnel from WRAIR, Mr Richard Rail. Samples are suspended in a "cocktail" Ready Safe™, classified as non-hazardous material and non gelling liquid. Beta particles emitted from the sample transfer energy to the "cocktail" solvent molecules which in turn produce the emitting light. In this way, each beta emission results in a pulse of light. The samples are placed in small transparent or translucent vials that are loaded into the scintillation counter.

Since 2005, all solid and liquid waste had been safely contained in large separate Plexiglas boxes in room G62 at room temperature. Similarly, the Amershan reagents are kept in small Plexiglas boxes at 4°C. At all times, a detailed record of stored, used and discarded amounts of isotopes are kept in the laboratory log books and a summary of such is represented in Table 1. Levels of ^3H radioactivity would not surpass the allowed 50 mCi as provided by License 12-32489-01. On January 2009, NRC' authorized waste disposal, ADCO services, received our first batch of solid and liquid radioactive waste. In September 2009, the second and last batch of solid, liquid and reagents were done (Manifests provided).

TABLE 1: Radioactive material usage per year

Year	2005	2006	2007	2008	2009
Purchased Amounts	20mCi	10mCi	20mCi	5mCi	none
Used Amounts	10.5mCi	10.4mCi	10.8mCi	1mCi	7.3mCi
Disposed by ADCO	0mCi	0mCi	0mCi	0mCi	January : 33mci September : 22mCi

Equipments used for the in vitro labeling of bacteria are:

- a) A refrigerator to store the reagents in Plexiglas boxes
- b) An incubator to grow bacteria
- c) Hood to prepare scintillation vials to count
- d) Centrifuges to process the samples

These centrifuges were removed by Defense Reutilization and Marketing Office (DRMO). Please see attached proof of lack of residual radioactivity on instruments (Table 2).

All swipe surveys are performed by tritium users in room G62 using the scintillation counter. The qualified personnel who enter G62 room and perform in vitro experiment are: RSO, Dr Kai Leung and his designated personnel. All authorized personnel follow USADTRD Standard Operating Procedures (SOP) as stated in the license. Per our laboratory SOP, we conduct contamination surveys of the immediate work areas at the end of the work day. A comprehensive survey of entire laboratory and areas adjacent to exit points is performed by RSO the next day after an in vitro experiment. This is done only on days that activity is used. All documentation of results is maintained in the log book, radiation survey and swipe test books located in the shelf of room G62. Any defects or failures in equipment or supplies used for radioactive material work is reported to the RSO immediately. All records contain a current list

of authorized users, radioactive material inventory (receipt, assignment and final disposition, radiation surveillance (radiation and contamination surveys), radioactive waste disposal (all liquid, solid and LSV manifests).

A Map of room G62 is attached to show the specific locations where instruments are placed and are used while performing in vitro labeling procedure. Each location has a number as represented on Map. Areas of floors, alphabetically labeled, are also checked on a random basis. Using the Biodex rad-wipe, swiping of a 10x10 cm² area is done. Each swipe is introduced in a pre-labeled scintillation counter vial and prepare to counts in the LS6500 scintillation counter. Counts are obtained and data representative is seen on Table 3.

For the direct confirmation a Geiger counter was used by Dr Ping Chen, serial Number 36955 Mft Ludlum Model, provided by ADCO services, Inc. This instrument was last calibrated on 12/23/2008. Results are also shown in Table 3. All surveys revealed no residual activity is observed when I use the unrestricted criteria in NUREG 1757 Vol1 Appendix B. The laboratory has been closed until clearance from NRC decommissioning Process to allow unrestricted use of the laboratory in room G62.

Table 2 : Check for residual radioactivity on equipments

CPT Mabel Salas

Instruments	cpm/100 cm²
refrigerator (11)	26
Incubator(5)	32
Hood (16)	25
Scintillation Counter (1)	22
**Centrifuge	18
** Microcentrifuge	37

** Instruments were removed by Defense Reutilization and Marketing office August 2009 processed according to regulations

Table 3 : Final Radioactive Swipes and Direct Survey Results

9/21/2009 CPT Mabel A. Salas performed swipes using Scintillation Counter, LS6500

9/22/2009 Dr Ping Chen used Geiger Counter, calibrated 12/23/2008

Location # are based on provided map attached (MAP #1)

Location #	Swipes cpm/100 cm 2	Direct Survey dpm/100cm2
1	22	0.01
2	33	0.02
3	38	0
4	19	0.02
5	32	0.02
6	48	0.02
7	42	0.01
8	26	0
9	35	0.01
10	17	0.02
11	26	0.02
12	16	0.01
13	19	0.01
14	62	0.01
15	56	0.03
16	25	0.01
17	21	0.01
18	28	0.03
19	32	0.01
20	20	0.01
21	31	0.01
22	22	0.01
23	26	0.01
24	21	0.01

Floors	Swipes cpm/100 cm 2	Direct dpm/100cm2
A (25)	51	0.04
B (26)	32	0.01
C (27)	32	0.01
D(28)	35	0.01
E(29)	36	0.01
F(30)	33	0.01
G(31)	16	0.01
H(32)	27	0.01
I(33)	43	0.01
Blank(34)	17	0

21 SEP 2009 12:31

ID:SWIPE TESTS

USER: 4

COMMENT: *Salas RSo*

PRESET TIME : 1.00
 DATA CALC : CPM H# : YES SAMPLE REPEATS: 1 PRINTER : STD
 COUNT BLANK : YES IC# : NO REPLICATES : 1 RS232 : STD
 TWO PHASE : NO AQC : NO CYCLE REPEATS : 1
 SCINTILLATOR: LIQUID LUMEX: NO LOW SAMPLE REJ: 0
 LOW LEVEL : NO HALF LIFE CORRECTION DATE: none

ISOTOPE 1: 3H %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0
 ISOTOPE 2: 14C %ERROR: 0.00 FACTOR: 1.000000 BKG. SUB: 0

SAM NO	POS	TIME MIN	H#	3H		14C		LUMEX %	ELAPSED TIME
				CPM	%ERROR	CPM	%ERROR		
B1	**1	1.00	97.9	22.00	42.64	15.00	51.64	24.31	1.68
B2	**2	1.00	111.6	33.00	34.82	12.00	57.74	19.82	3.41
B3	**3	1.00	127.4	38.00	32.44	18.00	47.14	15.05	5.16
B4	**4	1.00	109.5	19.00	45.88	8.00	70.71	23.15	7.00
B5	**5	1.00	90.4	32.00	35.36	16.00	50.00	36.65	8.87
B6	**6	1.00	128.6	48.00	28.87	16.00	50.00	37.92	10.62
B7	**7	1.00	120.2	42.00	30.86	14.00	53.45	26.98	12.39
B8	**8	1.00	95.2	26.00	39.22	15.00	51.64	19.07	14.13
B9	**9	1.00	161.6	35.00	33.81	20.00	44.72	35.22	15.91
B10	**10	1.00	89.4	17.00	48.51	15.00	51.64	9.51	17.74
B11	**11	1.00	94.5	26.00	39.22	17.00	48.51	18.50	19.50
B12	**12	1.00	90.8	16.00	50.00	12.00	57.74	14.76	21.24
B13	**1	1.00	88.3	19.00	45.88	11.00	60.30	15.23	23.13
B14	**2	1.00	112.3	62.00	25.40	7.00	75.59	44.45	25.00
B15	**3	1.00	109.0	56.00	26.73	13.00	55.47	32.51	26.78
B16	**4	1.00	95.8	25.00	40.00	17.00	48.51	18.86	28.54
B17	**5	1.00	92.5	21.00	43.64	17.00	48.51	11.73	30.39
B18	**6	1.00	95.7	28.00	37.80	14.00	53.45	17.06	32.35
B19	**7	1.00	113.7	32.00	35.36	12.00	57.74	36.79	34.12
B20	**8	1.00	103.9	20.00	44.72	21.00	43.64	11.55	35.86
B21	**9	1.00	109.7	31.00	35.92	20.00	44.72	14.42	37.73
B22	**10	1.00	114.0	22.00	42.64	12.00	57.74	26.24	39.58
B23	**11	1.00	117.5	26.00	39.22	15.00	51.64	25.44	41.36
B24	**12	1.00	113.9	21.00	43.64	13.00	55.47	25.02	43.11
B25	**1	1.00	127.4	51.00	28.01	21.00	43.64	34.50	45.00
B26	**2	1.00	140.0	32.00	35.36	17.00	48.51	38.09	46.75
B27	**3	1.00	134.5	32.00	35.36	21.00	43.64	39.07	48.52
B28	**4	1.00	138.7	35.00	33.81	18.00	47.14	32.29	50.29
B29	**5	1.00	128.4	36.00	33.33	12.00	57.74	24.81	52.05
B30	**6	1.00	142.8	33.00	34.82	14.00	53.45	38.86	53.81
B31	**7	1.00	105.6	16.00	50.00	16.00	50.00	29.63	55.58
B32	**8	1.00	135.6	27.00	38.49	20.00	44.72	30.06	57.34
B33	**9	1.00	167.2	43.00	30.50	19.00	45.88	52.17	59.11
B34	**10	1.00	70.3	17.00	48.51	8.00	70.71	0.68	60.84

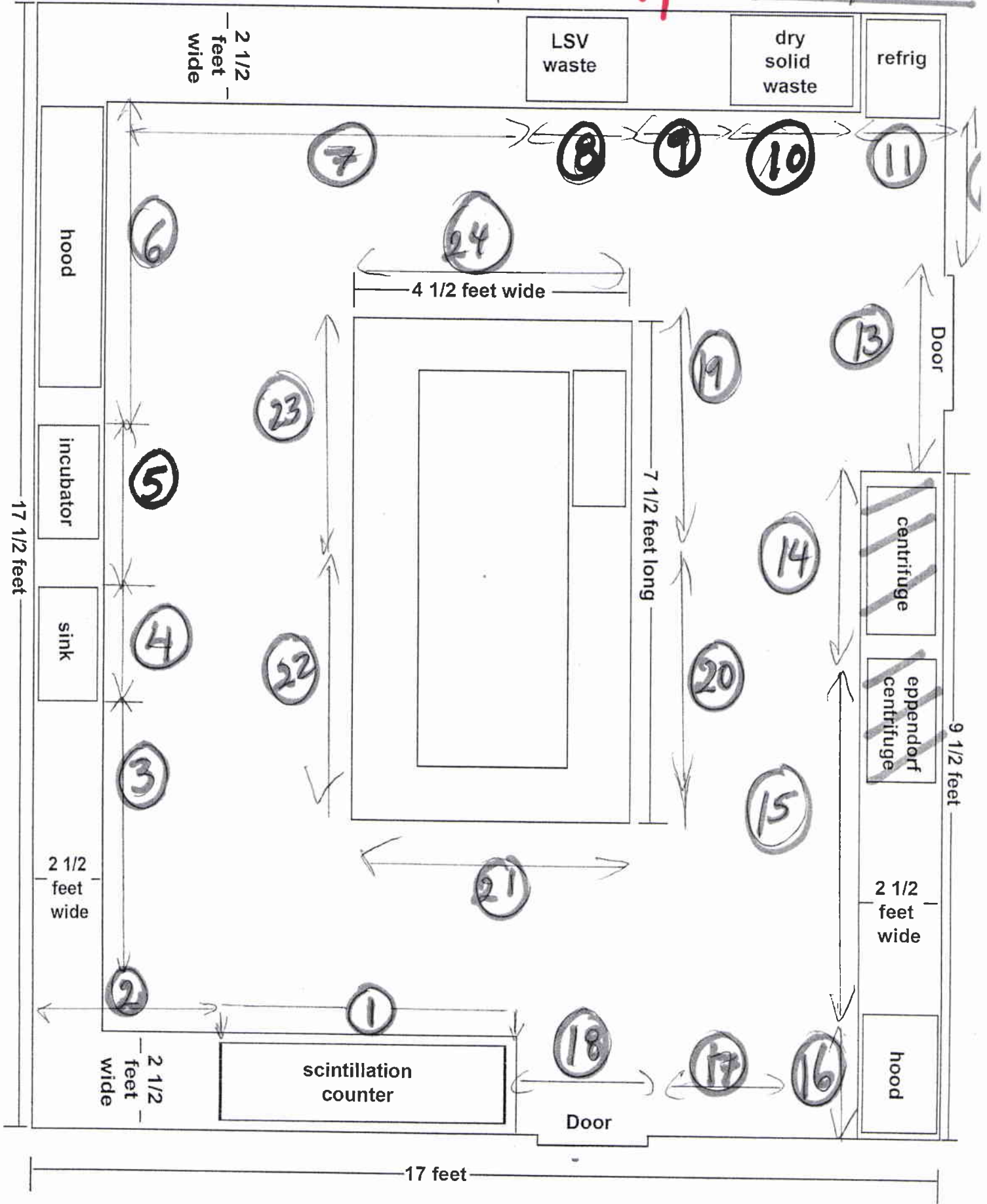
lab wipe



Flood

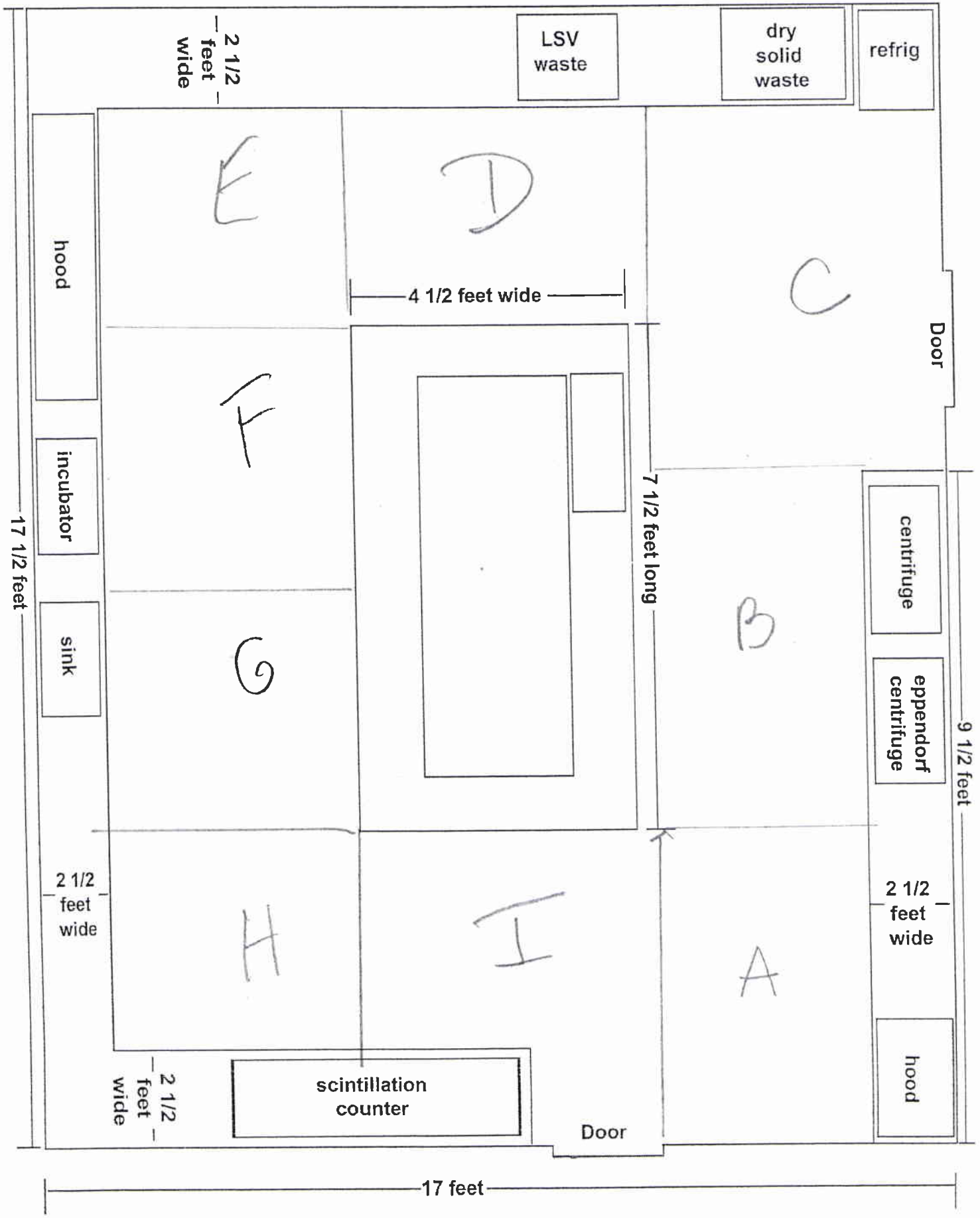
Blank
Blank
Blank

Blank Average CPM for 3H 30.56 COEF. OF VAR: 37.788
 Blank Average CPM for 14C 15.18 COEF. OF VAR: 24.839



Room G-62
FLOOR & Counter MAPS

Floors wipe Date 9/21/09





RPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
UNITED STATES ARMY DENTAL AND TRAUMA RESEARCH DETACHMENT
310B B STREET, BUILDING 1-H
GREAT LAKES, ILLINOIS 60088-5259

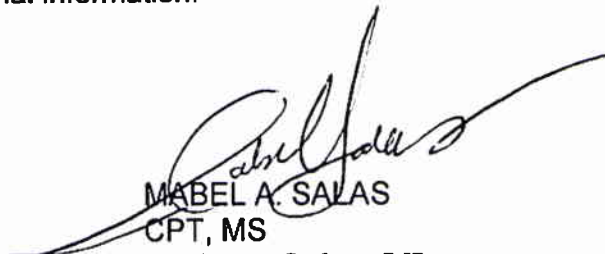
MCMR-UWU

18 September 2009

MEMORANDUM FOR Great Lakes Naval Station Fire Chief

SUBJECT: Final disposal of Hydrogen-3/Tritium Radioisotope waste by ADCO services, Inc. in preparation to decommission room G62

1. The purpose of this memorandum is to inform that on September 22, 2009 at 11:00 AM, ADCO services will dispose of all aqueous waste, scintillation vials, solid dry waste and unused tritium reagent from room G62, located in the basement of Building 1-H, 310B, B Street, Great Lakes, IL 60088. This is the last disposal in preparation to decommission the laboratory for unrestricted use.
2. This letter is to comply with the Great Lakes Navy Training Center instruction to inform the Fire Chief of disposal of radioactive materials.
3. Per USDPT regulations (49-CFR-172.604), ADCO requests a 24-hour emergency telephone number on all hazardous materials shipping papers. Fire chief, Mr Kraus, can be contacted at (847)-688-3829. Purchase request number for the payment of radioactive disposal is # 6263.
4. Please contact the undersigned by phone at 847-688-7373, extension 240; cell # 847-650-1724, fax 847-688-7380 or by email at: mabel.salas@us.army.mil if you have any questions or required additional information.


MABEL A. SALAS
CPT, MS
Radiation Safety Officer



ADCO

Services, Inc.

September 17, 2009

Ms. Mabel Salas
United States Army Dental and Trauma Research Detachment
310B, B Street Building 1H
Great Lakes, IL 60088

E-Mail: mabel.salas@us.army.mil

In all correspondence please refer to quote number: Q09-224

Dear Ms. Salas,

In response to your request for a quote for the removal and disposal of radioactive wastes, ADCO Services, Inc. can provide the following:

Scope and Cost:

Adco Services, Inc. will provide packaging, manifesting, labeling, transportation and disposal of the following item(s):

Description	Price
Disposal of .22 Gal of Aqueous liquid	\$ 750.00
Disposal of 0.48 Gal of liquid scintillation vials	\$ 350.00
Disposal of 2 pounds of solid dry waste	\$ 250.00
Disposal of 20 ml Amersham radioactive chemical	\$ 750.00
Transportation and fuel surcharge	\$ 74.92
Total cost = 2274.92	\$ 2174.92

Schedule:

Upon receipt of a purchase order, ADCO Services, Inc. will contact you to arrange a mutually agreeable time to have this waste material packaged and shipped.

Special Provisions:

ADCO Services, Inc. complies with the requirements of 10CFR20, appendix G, section III, C.1 and will notify you of the receipt of this material at our facility. ADCO Services, Inc. will issue a letter of processing/disposal upon request.

Per USDOT regulations (49-CFR-172.604), a 24-hour emergency telephone number is required on all hazardous materials shipping papers. If your facility does not have an emergency telephone number ADCO Services, Inc. can provide this service to you at an additional cost of \$50.00. Please advise us when accepting this quote if this service is needed.

Terms:

Payment terms are net 30 days from the date of invoice. All prices quoted herein will be valid for a period of 30 days from the date of this letter. If you have any questions or require additional information please feel free to contact us at (708) 429-1660.

Respectfully,


Len Warbiany
Facility Manager

09-0247L

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		ADCO SERVICES, INC. 5. SHIPPER - NAME AND FACILITY US ARMY DENTAL AND TRAUMA RESEARCH FOR THE ACCT OF ADCO SERVICE 3100 S STREET, BLDG 1H RM 00J GREAT LAKES, IL 60088		SHIPPER ID NUMBER 41881 <input type="checkbox"/> COLLECTOR <input type="checkbox"/> PROCESSOR <input checked="" type="checkbox"/> GENERATOR TYPE (Specs) G		7. FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) FORM 541 AND 541A 1 PAGE(S) FORM 542 AND 542A None PAGE(S) ADDITIONAL INFORMATION		8. MANIFEST NUMBER (Use this number on all continuation pages) 09-0247-L									
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 847-688-7373		SHIPMENT NUMBER 09-0247-L		9. CONTACTEE - Name and Facility ADCO SERVICES, INC. 17650 DUVAN DRIVE TINLEY PARK, IL 60477		CONTACT LEN WARBANY/FACILITY (Include Area Code) 708-629-1858		DATE 9-22-09									
ORGANIZATION US ARMY DENTAL AND TRAUMA RESEARCH		CONTACT DR. MABEL SALAS		TELEPHONE NUMBER (Include Area Code) 847-688-7373 X 240		SIGNATURE - Authorized generator (including waste recpt) <i>Len Warbany</i>		IS CERTIFICATION This is to certify that the herein named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the requirements of 49 CFR Parts 22 and 271 of equivalent state regulations.									
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 2		EPA ID NUMBER IL0047207504		SHIPPING DATE 09-22-09		DATE 9-22-09									
4. DOES EPA REGULATE THIS WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO * Yes * provide Manifest Number:		EPA MANIFEST NUMBER NONE REQUIRED		CONTACT ROBERT BASSETT		TELEPHONE (Include Area Code) 708-478-3013		AUTHORIZED SIGNATURE <i>Robert Bassett</i>									
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, ID number, and any additional information)		12. DOT LABEL "RADIOACTIVE"		13. TRANSPORT INDEX NA		14. PHYSICAL AND CHEMICAL FORM LIQUID AQUEOUS LIQUIDS		15. INDIVIDUAL RADIONUCLIDES H-3		16. TOTAL PACKAGE ACTIVITY (MIBq) (mCi) 8.1537E+02 (2.2037E+01)		17. (SA/SCO) CLASS NA		18. TOTAL WEIGHT OR VOLUME (If appropriate, enter) 26 LBS; 1.4 FT3 20		19. IDENTIFICATION NUMBER OF PACKAGE 09-0247-01	
DOT EXEMPT		NA		NA		Solid PAPER PLASTIC GLASS		H-3		2.2200E+00 (6.0000E-02)		NA		36 LBS; 1.4 FT3 10		09-0247-02	
FOR CONTIGUITY USE ONLY																	

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST
CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

1. MANIFEST TOTALS

NUMBER OF PACKAGES/ DISPOSAL CONTAINERS	NET WASTE VOLUME		NET WASTE WEIGHT		SPECIAL NUCLEAR MATERIAL (gms)			
	ml	l	kg	lb	U-233	U-235	Pu	Total
2	0.0792		22.6796		NP	NP	NP	NP
	2.8000		80.0000					
ACTIVITY								
ALL NUCLIDES		TRITIUM		C-14	Tc-99	I-131		
MSU	8.1759E+02		8.1759E+02		NP	NP	NP	
MU	2.2097E+01		2.2097E+01		NP	NP	NP	
								SOURCE (g)
								(kg) NA
								(BS) NA

2. MANIFEST NUMBER
09-0247 L

3. PAGE 1 OF 1 PAGE(S)

4. SHIPPER NAME
US ARM DENTAL AND TRAUMA RESEARCH

SHIPMENT ID NUMBER
81851

DISPOSAL CONTAINER DESCRIPTION					WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										16. WASTE CLASSIFICATION AS-C, Class A Stable AU- Class A 19- Class B B- Class B C- Class C		
1. CONTAINER IDENTIFICATION NUMBER, U.C. TRANSPORT PERMIT NUMBER	2. CONTAINER DESCRIPTION <small>(See Note 1 & Note 2A)</small>	3. VOLUME		4. WASTE AND CONTAINER WEIGHT <small>(kg) (lb)</small>	5. SURFACE RADIATION LEVEL (μSv/h) (mR/h)	13. SURFACE CONTAMINATION (MBq/100 cm ²) (μCi/100 cm ²)		11. PHYSICAL DESCRIPTION			12. WASTE DESCRIPTION (See Note 2 & Note 2A)	14. CHEMICAL DESCRIPTION (CHEMICAL FORM OR CHELATING AGENT)	15. RADIATION WEIGHT % <small>(% LA 129) (% LA 137)</small>	13. RADIOLOGICAL DESCRIPTION			
		ml (L)	l (L)			ALPHA	BETA (GROSS)	11.1	11.2	11.3				INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MSU) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT		MSU	MU
09-0247-001891	19 FIBER DRUM	0.0396	11.2000	3.0800E-04	NP	NP	25-J				88-100	AQUEOUS LIQUORINA	0.00	H-3	8.1537E+02	2.2037E+01	NA
		1.4000	28.0000	3.0800E-01	NP	NP				1.4000				Subtotal	8.1537E+02	2.2037E+01	
Total														Total	8.1537E+02	2.2037E+01	
09-0247-020141	16 FIBER DRUM	0.0396	11.3198	3.0800E-04	NP	NP	25-J				88-100	PAPER PLASTIC GLASSINA	0.00	H-3	2.2200E+00	6.0000E-02	AU
		1.4000	28.0000	3.0800E-01	NP	NP				1.4000				Subtotal	2.2200E+00	6.0000E-02	
Total														Total	2.2200E+00	6.0000E-02	
Shipment Totals		0.0792	22.6796												8.1759E+02	2.2097E+01	
		2.8000	80.0000														

Note 1: Container Description Codes. For containers/masks requiring disposal in approved structural overpacks the material code must be followed by "OP"

1. Wooden Box or Crate	8. Demeroliner
2. Metal Box	10. Gas Cylinder
3. Plastic Drum or Pail	11. BUL, Unpackaged Waste
4. Metal Drum or Pail	12. Unpackaged Components
5. Metal Tank or Liner	13. High Integrity Container
6. Concrete Tank or Liner	16. Other. Describe in Item 4, or additional page
7. Polyethylene Tank or Liner	
9. Fiberglass Tank or Liner	

Note 1A: General Specific Container Description Codes. (Choose one code as may be applicable.)

A. High Integrity Container - Poly
B. High Integrity Container - Poly with Steel Shell
C. High Integrity Drum Overpack - Poly
D. High Integrity Container - Stainless Steel
E. High Integrity Container - Fiberglass
F. Liner - Steel

Note 2: Waste Descriptor Codes. (Choose up to three which pertain/most by volume.)

20. Charcoal	29. Demolition Rubble	38. Evaporator Bottoms/Sediment
21. Incinerator Ash	30. Cation Ion-exchange Media	39. Carcinogenic
22. Soil	31. Anion Ion-exchange Media	40. Compressible Trash
23. Gas	32. Mixed Bed Ion-exchange Media	41. Noncompressible Trash
24. Oil	33. Contaminated Equipment	42. Animal Carcass
25. Aqueous Liquid	34. Organic Liquid (except oil)	43. Biological Material (except animal carcass)
26. Filter Media	35. Gases/over or Liquors	44. Activated Material
27. Mechanical Filter	36. Sealed Sources/Devices	99. Other. Describe in Item 11, or additional page
28. EPA or State Hazardous	37. Pails or Piping	

Note 2A: General Specific Waste Descriptor Codes. (Choose all applicable codes.)

O. Oxidized
H. Solid
J. Combustible
K. Non-combustible
L. Air Filter/Filter
M. Asbestos

Note 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume.) For media meeting disposal site structural stability requirements, the numerical code must be followed by "S," and the media vendor and brand name must also be identified in Item 13. Code 100-NONE REQUIRED.

90. Cement	94. Vinyl Ester Styrene
91. Concrete	95. Other Describe in Item 13, or additional page
92. Bitumen (asphalt)	100. None Required
93. Vinyl Chloride	

Note 3A: General Specific Solidification and Stabilization Media Codes. (Choose one code if applicable.)

10. Vitrified



RPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
UNITED STATES ARMY DENTAL AND TRAUMA RESEARCH DETACHMENT
310B B STREET, BUILDING 1-H
GREAT LAKES, ILLINOIS 60088-5259


MCMR-UWU

26 January 2009

MEMORANDUM FOR Great Lakes Naval Station Fire Chief

SUBJECT: Date for disposal of Hydrogen-3/Tritium Radioisotope by Adco services

1. The purpose of this memorandum is to inform that on January 30, 09 at 11:00 AM Adco services will dispose of all aqueous waste, scintillation vials and solid dry waste from room G62 located in the basement of Building 1-H, 310B B Street of USADTRD.
2. This letter is to comply with the Great Lakes Navy Training Center instruction to inform the Fire Chief of disposal of radioactive materials.
3. Per USDPT regulations (49-CFR-172.604), Adco requests a 24-hour emergency telephone number on all hazardous materials shipping papers. CPT Salas and Fire chief phone numbers were provided in the purchase request order #5915.
4. Please contact the undersigned by phone at 847-688-7373, extension 240; fax 847-688-7380 or by email at: mabel.salas@us.army.mil if you have any questions or required additional information.


MABEL A. SALAS
CPT, MS
Radiation Safety Officer



ADCO

Services, Inc.

January 15, 2009

Ms. Mabel Salas
United States Army Dental and Trauma Research Detachment
310B, B Street Building 1H
Great Lakes, IL 60088

E-Mail: mabel.salas@us.army.mil

In all correspondence please refer to quote number: Q09-014 (Revised 1-21-2009)

Dear Ms. Salas,

In response to your request for a quote for the removal and disposal of radioactive wastes, ADCO Services, Inc. can provide the following:

Scope and Cost:

Adco Services, Inc. will provide packaging, manifesting, labeling, transportation and disposal of the following item(s):

Description	Price
Disposal of .8 Gal of Aqueous liquid	\$ 750.00
Disposal of 1.6 Gal of liquid scintillation vials	\$ 350.00
Disposal of 4 pounds of solid dry waste	\$ 500.00
Transportation and fuel surcharge	\$ 74.92
Total cost <i>533mCi</i>	\$ 1,674.92

Schedule:

Upon receipt of a purchase order, ADCO Services, Inc. will contact you to arrange a mutually agreeable time to have this waste material packaged and shipped.

Special Provisions:

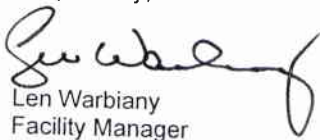
ADCO Services, Inc. complies with the requirements of 10CFR20, appendix G, section III, C.1 and will notify you of the receipt of this material at our facility. ADCO Services, Inc. will issue a letter of processing/disposal upon request.

Per USDOT regulations (49-CFR-172.604), a 24-hour emergency telephone number is required on all hazardous materials shipping papers. If your facility does not have an emergency telephone number ADCO Services, Inc. can provide this service to you at an additional cost of \$50.00. Please advise us when accepting this quote if this service is needed.

Terms:

Payment terms are net 30 days from the date of invoice. All prices quoted herein will be valid for a period of 30 days from the date of this letter. If you have any questions or require additional information please feel free to contact us at (708) 429-1660.

Respectfully,


Len Warbiany
Facility Manager

09-0021 P

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		ADCO SERVICES, INC. 3. SHIPPER - NAME AND FACILITY UNITED STATES ARMY DENTAL AND TRAUMA FOR THE ACCT OF ADCO SERVICE, 310 B. B STREET, 1H ROOM 062 GREAT LAKES, IL 60088		SHIPMENT I.D. NUMBER 61651 COLLECTOR PROCESSOR		7. FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) FORM 541 AND 541A PAGE(S) FORM 542 AND 542A None PAGE(S) ADDITIONAL INFORMATION None PAGE(S)		8. MANIFEST NUMBER (Use this number on all continuation pages) 09-0021 P									
1. EMERGENCY TELEPHONE NUMBER (Include Area Code) 847-688-7373, X240		SHIPMENT NUMBER 09-0021 P		<input checked="" type="checkbox"/> GENERATOR TYPE (Specify) G		9. CONSIGNEE - Name and Facility Address ADCO SERVICES, INC. 17650 DUVAN DRIVE TINLEY PARK, IL 60477		CONTACT LEN WARBIANY/FACILITY MGR TELEPHONE NUMBER (Include Area Code) 708-429-1660									
ORGANIZATION UNITED STATES ARMY DENTAL		CONTACT DR. MABEL SALAS		TELEPHONE NUMBER (Include Area Code) 847-688-7373, X240		SIGNATURE - Authorized consignee acknowledging waste receipt <i>[Signature]</i>		DATE 2.2.09									
2. IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		3. TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST 1		6. CARRIER - Name and Address ADCOM EXPRESS, INC. 17650 DUVAN DRIVE TINLEY PARK, IL 60477		EPA I.D. NUMBER ILD047267364		10. CERTIFICATION This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as required in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.									
4. DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO *Yes,* provide Manifest Number *****		EPA MANIFEST NUMBER NA		CONTACT ROBERT BASSETT		TELEPHONE NUMBER (Include Area Code) 708-429-3513		AUTHORIZED SIGNATURE <i>[Signature]</i>									
11. U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (Including proper shipping name, hazard class, UN ID number, and any additional information)		12. DOT LABEL "RADIOACTIVE"		13. TRANSPORT INDEX		14. PHYSICAL AND CHEMICAL FORM		15. INDIVIDUAL RADIONUCLIDES		16. TOTAL PACKAGE ACTIVITY (mCi)		17. LSA/SCO CLASS		18. TOTAL WEIGHT OR VOLUME (Use appropriate units)		19. IDENTIFICATION NUMBER OF PACKAGE	
Deregulated Scintillation Fluids (as per 10 CFR 20.2005)		NA		NA		Liquid BIODEGRADABLE		H-3		1.2210E+01 3.3000E-01 <i>3.3x10¹ Ps</i>		NA		25. LBS; 1.4 FT3		09-0021-01	
FOR CONSIGNEE USE ONLY				20.													

UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST

CONTAINER AND WASTE DESCRIPTION

Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste

NUMBER OF PACKAGES/ DISPOSAL CONTAINERS 1	NET WASTE VOLUME INC. 1.4000	NET WASTE WEIGHT 11.3398	1. MANIFEST TOTALS				2. MANIFEST NUMBER 09-0021 P				
				SPECIAL NUCLEAR MATERIAL (grams)				3. PAGE 1 OF 1 PAGE(S)			
				U-233	U-235	Pu	TOTAL		4. SHIPPER NAME UNITED STATES ARMY DENTA		
				NP	NP	NP	NP		SHIPMENT ID NUMBER 61651		
			ACTIVITY								
			ALL NUCLIDES	TRITIUM	C-14	Tc-99	I-129	SOURCE			
			MBq	1.2210E+01	1.2210E+01	NP	NP	NP	(kg)	NA	
			mCi	3.3000E-01	3.3000E-01	NP	NP	NP	(lbs)	NA	

DISPOSAL CONTAINER DESCRIPTION				WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER										18 WASTE CLASSIFICATION AS-Class A Stable AS-Class A Unstable B-Class B C-Class C	
5 CONTAINER IDENTIFICATION NUMBER /	6 CONTAINER DESCRIPTION (See Note 1 & Note 1A)	7 VOLUME (mL) (lit)	8 WASTE AND CONTAINER WEIGHT (kg) (lb)	9 SURFACE RADIATION LEVEL mSv/hr mrem/hr	10 SURFACE CONTAMINATION MBq/100 cm ² dpm/100 cm ²		11 WASTE DESCRIPTOR (See Note 2 & Note 2A)	12 APPROXIMATE WASTE VOLUME(S) IN CONTAINER II (m ³) (FT ³)	13 SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3 & Note 3A)	14 CHEMICAL DESCRIPTION CHEMICAL FORM CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1 %	15 RADIOLOGICAL DESCRIPTION			
					ALPHA	BETA-GAMMA						INDIVIDUAL RADIONUCLIDES AND ACTIVITY (MBq) AND CONTAINER TOTAL OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			
												RADIOISOTOPES			
09-0021-01/NA 310 S. B STREET 14 ROOM 043 GREAT LAKES, IL 60088	4	0.0398	11.3398	0.03	NP	NP	25,59-C1 - SEREG VIALS I BIODEGRADABLE-J	0.0398	I J	BIODEGRADABLE/ NP	0.00	H-3	1.2210E+01	3.3000E-01	NA
		1.4000	25.0000	.03	NP	NP		1.4000				Subtotal	1.2210E+01	3.3000E-01	
Shipment Totals		0.0398	11.3398										1.2210E+01	3.3000E-01	
		1.4000	25.0000												

3.3 x 10¹ *Palao*

NOTE 1: Container Description Codes. For containers/waste requiring disposal in approved structural overpacks the numerical code must be followed by "-OP-".

1. Wooden Box or Crate	9. Demersalizer
2. Metal Box	10. Gas Cylinder
3. Plastic Drum or Pail	11. B.A., Unpackaged Waste
4. Metal Drum or Pail	12. Unpackaged Components
5. Metal Tank or Liner	13. High Integrity Container
6. Concrete Tank or Liner	18. Other - Describe in Item 6, or additional page
7. Polyethylene Tank or Liner	
8. Fiberglass Tank or Liner	

Note 1A: Barnwell Specific Container Description Codes. (Choose one code as may be applicable.)

A. High Integrity Container - Poly
B. High Integrity Container - Poly with Steel Shell
C. High Integrity Drum Overpack - Poly
D. High Integrity Container - Stainless Steel
E. High Integrity Container - Fiberglass
F. Liner - Steel

NOTE 2: Waste Descriptor Codes. (Choose up to three which predominate by volume.)

20. Charcoal	29. Demolition Rubble	38. Evaporator Bottoms/Sludges/Concentrates
21. Incinerator Ash	30. Carbon Ion-exchange Media	39. Compressible Trash
22. Soil	31. Anion Ion-exchange Media	40. Noncombustible Trash
23. Gas	32. Mixed Bed Ion-exchange Media	41. Animal Carcass
24. Oil	33. Contaminated Equipment	42. Biological Material (except animal carcasses)
25. Aqueous Liquid	34. Organic Liquid (except oil)	43. Activated Material
26. Fiber Media	35. Disasters or Leakers	44. Other - Describe in Item 11, or additional page
27. Mechanical Filter	36. Sealed Source/Device	
28. EPA or State Hazardous	37. Paint or Plating	

Note 2A: Barnwell Specific Waste Descriptor Codes. (Choose all applicable codes.)

<input type="checkbox"/> Dewaxed
<input type="checkbox"/> Solid
<input type="checkbox"/> Combustible
<input type="checkbox"/> Non-combustible
<input type="checkbox"/> Air Filtration Fibers
<input type="checkbox"/> Asbestos

Note 3: Solidification and Stabilization Media Codes. (Choose up to three which predominate by volume.) For media meeting disposal site structural stability requirements, the numerical code must be followed by "-S" and the media vendor and brand name must also be identified in Item 13. Code 100=NONE REQUIRED.

01. Cement	94. Vinyl Ester Styrene
02. Concrete	95. Other - Describe in Item 13, or additional page
03. Bitumen	96. Other - Describe in Item 13, or additional page
04. Vinyl Chloride	100. None Required

Note 3A: Barnwell Specific Solidification and Stabilization Media Codes. (Choose this code if applicable.)

97. Wire Binder

09-0022 L 1

FORM 540 UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST SHIPPING PAPER		ADCO SERVICES, INC. 5 SHIPPER - NAME AND FACILITY UNITED STATES ARMY DENTAL AND TRAUMA (FOR THE ACCT OF ADCO SERVICE) 310 B. B STREET, 1H, ROOM 082 GREAT LAKES, IL 60088		SHIPMENT I.D. NUMBER 01651 COLLECTOR PROCESSOR		7 FORM 540 AND 540A PAGE 1 OF 1 PAGE(S) FORM 541 AND 541A 1 PAGE(S) FORM 542 AND 542A None PAGE(S) ADDITIONAL INFORMATION None PAGE(S)		8 MANIFEST NUMBER (Use the number on all continuation pages) 09-0022 L									
1 EMERGENCY TELEPHONE NUMBER (Include Area Code) 847-688-7373, X340		SHIPMENT NUMBER 09-0022 L		GENERATOR TYPE (Specify) G		9 CONSIGNEE - Name and Facility Address ADCO SERVICES, INC. 17650 DUVAN DRIVE TINLEY PARK, IL 60477		CONTACT LEN WARBIANY/FACILITY MGR TELEPHONE NUMBER (Include Area Code) 708-429-1660									
ORGANIZATION UNITED STATES ARMY DENTAL AND TRAUMA		CONTACT DR. MABEL SALAS		TELEPHONE NUMBER (Include Area Code) 847-688-7373, X340		SIGNATURE - Authorized consignee acknowledging waste receipt <i>[Signature]</i>		DATE 2-2-09									
2 IS THIS AN "EXCLUSIVE USE" SHIPMENT? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		3 TOTAL NUMBER OF PACKAGES IDENTIFIED ON THIS MANIFEST =====> 1		6 CARRIER - Name and Address ADCOM EXPRESS, INC. 17450 DUVAN DRIVE TINLEY PARK, IL 60477		EPA I.D. NUMBER IL0947267364		10 CERTIFICATION This is to certify that the herein-named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation. This also certifies that the materials are classified, packaged, marked, and labeled and are in proper condition for transportation and disposal as described in accordance with the requirements of 10 CFR Parts 20 and 61, or equivalent state regulations.									
4 DOES EPA REGULATED WASTE REQUIRING A MANIFEST ACCOMPANY THIS SHIPMENT? If "Yes," provide Manifest Number =====>		EPA MANIFEST NUMBER NA		CONTACT ROBERT BASSETT		TELEPHONE NUMBER (Include Area Code) 708-429-3613		AUTHORIZED SIGNATURE <i>[Signature]</i>									
11 U.S. DEPARTMENT OF TRANSPORTATION DESCRIPTION (including proper shipping name, hazard class, UN ID number, and any additional information)		12 DOT LABEL "RADIOACTIVE"		13 TRANSPORT INDEX		14 PHYSICAL AND CHEMICAL FORM		15 INDIVIDUAL RADIONUCLIDES		16 TOTAL PACKAGE ACTIVITY (mCi)		17 ILSA/SCO CLASS		18 TOTAL WEIGHT OR VOLUME (Use appropriate units)		19 IDENTIFICATION NUMBER OF PACKAGE	
DOT EXEMPT		NA		NA		Solid PAPER PLASTIC GLASS		H-3		1.1100E+01 3.0000E-01		NA		100 LBS; 4.1 FT3 41		09-0022-01	
FOR CONSIGNEE USE ONLY										20							

DEFENSE MEDICAL LOGISTICS STANDARD SUPPORT

DATE PREPARED: 18 SEP 2009

ACTIVE HISTORICAL MAINTENANCE REPORT

AS OF DATE: 18 SEP 2009

DODAAC: W74MYF

UIC: W03KAA

ORGANIZATION NAME: WALTER REED ARMY INSTITUTE OF RESEARCH

ORG. ID: W74MYF

ECN: 0Q0769

NOMENCLATURE: COUNTER, SCINTILLATION

ITEM ID: 666501Q120024

DEVICE CLASS: RADIATION COUNTERS

MANUFACTURER: BECKMAN COULTER INC

ACQUISITION DATE: 01 APR 2002

DIVISION: CLINICAL DIAGNOSTICS DIV

ACQUISITION COST: \$23,625.90

MEL: \$2,362.59

NAMEPLATE MODEL: LS6500

LIFE EXPECTANCY: 8 YEARS

MRLC: \$23,557.84

COMMON MODEL: LS 6500

ACQ. COMMODITY CLASS: EQUIPMENT-EXPENSE MEDICAL

SERIAL NO.: 7069903

ACN:

EQUIPMENT TYPE: INDIVIDUAL

ACCOUNTABLE EQUIPMENT: Y

OWNERSHIP: ORGANIZATIONAL

SYSTEM ECN:

MAINTENANCE REQUIRED: Y

LOCATION: RM G62

CUSTOMER ORG: WALTER REED ARMY INSTITUTE OF RESEARCH

CUSTODIAN NAME: LEUNG, KAI

CUSTOMER NAME: DTRD MICROBIOLOGY LEUNG MR4

CUSTODIAN PHONE: 8476887373

CUSTOMER ID: YRNDBA

SUBCUSTODIAN:

ASSEMBLAGE NO.:

ASSEMBLAGE DESC.:

INSTALLATION DATE:

MAINT. ACT: WRAIR MEDICAL MAINTENANCE VANCE MR4

WARRANTY END, LABOR:

OGA:

WARRANTY END, PARTS:

CONTRACTOR:

LAST INV. DATE: 20 AUG 2009

CONTRACT END DATE:

DATE LAST SERVICED: 10 APR 2009

MAINT. ASSESSMENT:

MODIFICATIONS: 0

RISK LEVEL: LOW RISK

CONDITION CODE: UNSERVICEABLE (CONDEMNED)

SERVICE TYPE

INTERVAL

DATE DUE

DATE LAST

HISTORY TO DATE

ORGANIZATIONAL

CONTRACT

CALIBRATION

12

APR 2010

APR 2009

DOWN TIME:

0.00

PREVENTIVE MAINTENANCE

12

APR 2010

APR 2009

UNSCHED. WO:

6

INSPECTION

12

APR 2010

APR 2009

PARTS COST:

\$2,025.00

\$0.00

UNSCHED. TIME:

13.60

6.00

UNSCHED. LABOR COST:

\$1,203.62

\$2,550.00

SCHED. TIME:

4.40

0.00

SCHED LABOR COST:

\$395.77

\$0.00

TOTAL COST:

\$3,624.39

\$2,550.00

TOTAL MAINTENANCE COST:

\$6,174.39

PLEASE FOLD THIS SHIPPING DOCUMENT IN HALF AND PLACE IT IN A WAYBILL POUCH AFFIXED TO YOUR SHIPMENT SO THAT THE BARCODE PORTION OF THE LABEL CAN BE READ AND SCANNED. ***WARNING: USE ONLY THE PRINTED ORIGINAL LABEL. FOR SHIPPING. USING A PHOTOCOPY OF THIS LABEL FOR SHIPPING PURPOSES IS FRAUDULENT AND COULD RESULT IN ADDITIONAL BILLING CHARGES, ALONG WITH THE CANCELLATION OF YOUR FEDEX ACCOUNT NUMBER.

From: Origin ID: FEPA (847) 688-7373
MR. ARTHUR PRESSLEY
U.S. ARMY DENTAL AND TRAUMA RESEARC
310B B STREET BUILDING 1H

GREAT LAKES, IL 60088

FedEx
Express



CL5050107/21/23

Ship Date: 29SEP09
ActWgt: 1.0 LB MAN
System#: 419296/CAFE2353
Account#: S 240774046

Delivery Address Bar Code



Ref #
Invoice #
PO #
Dept #

SHIP TO: **BILL SENDER**
MATERIALS LICENSING SECTION
US NUCLERAR REGULATORY COMMISSION
2443 WARRENVILLE ROAD
STE 210
LISLE, IL 605324352

PRIORITY OVERNIGHT

WED

Deliver By:
30SEP09

TRK# 9698 3430 4343

FORM
0201

ORD A2

60532 -IL-US

79 ENLA

