SIEMENS

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October 27, 2011

RCZ

Nuclear Materials Safety Branch U.S. Nuclear Regulatory Commission, Region I 475 Allendale Road King of Prussia, PA 19406-1415 ATTN: Licensing and Assistance Team

REF: NRC License #07-30325-01 03034J96 Termination of license

In our letter dated September 19, 2011, Siemens Healthcare Diagnostics, Glasgow notified your office of our intent to terminate NRC license 07-30325-01, with an expiration date of October 31, 2011. We have now completed decommissioning activities as described in the attached NRC Form 314.

All radioactive materials have been removed for disposal by a licensed waste contractor, Veolia Environmental Services. Copies of the waste manifests are enclosed.

A radiation survey of all laboratory surfaces and equipment in the one active laboratory (laboratory 300), and one storage area, was conducted by Dade Moeller & Associates, Inc. No areas of contamination were detected, as noted in the enclosed survey report. Results of surveys conducted by Siemens personnel are also enclosed for two additional laboratories that have previously been decommissioned:

Laboratory 251 October 1995 Laboratory 9 October 1998

Upon final notification from your office that all documentation is complete, and that the license is satisfactorily terminated, we will start the process to terminate the current financial assurance agreements.

Please contact me if there is any additional information or documentation that will be required to complete the termination activities.

Sincerely,

Virgn B. Jærmian

Roger B. Jamieson Radiation Safety Officer Sr. Manager, Global EHS Product Stewardship 302-631-7161

Siemens Healthcare Diagnostics Inc.

P.O. Box 6101 Newark, DE 19714-6101 www.siemens.com/diagnostics



NRC FORM 314 U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB: NO. 315	0-0028 EXPIRES: 10/31/2013
(12-2010) 10 CFR 30.36(j)(1); 40.42(j)(1);	Estimated burden per response to con	upply with this mandatory collection request: 30 minutes
70.38(j)(1); and 72.54(k)(5)(1)(1)	released for unrestricted use. Send of	omments regarding burden estimate to the Information
CERTIFICATE OF DISPOSITION OF MATERIALS	or by internet e-mail to Infocollects.R	ar Regulatory Commission, Washington, DC 20555-0001 Resource@nrc.gov, and to the Desk Officer, Office o
	Information and Regulatory Affairs, N Budget, Washington, DC 20503. If a m	IEOB-10202, (3150-0028), Office of Management and leans used to impose an information collection does no
	display a currently valid OMB control person is not required to respond to the	number, the NRC may not conduct or sponsor, and a
ICENSEE NAME AND ADDRESS	LICENSE NUMBER	DOCKET NUMBER
Siemens Healthcare Diagnostics Inc.	07-30325-01	030-34196
P.O. BOX 6101 Newark DE 19714-6101	LICENSE EXPIRATION DATE	
	Oct	ober 31, 2011
A. LICENSE STATUS (Check the ☐ This license has expired. ✓ This license has not yet expired; please	appropriate box) terminate it.	
B. DISPOSAL OF RADIOACT		
(Check the appropriate boxes and complete as necessary. If additional space is not the licensee, or any individual executing this certificate on behalf of the license	eeded, provide attachments ee, certifies that:)
1. No radioactive materials have ever been procured or possessed by	the licensee under this lice	nse.
 All activities authorized by this license have ceased, and all radioact under this license number cited above have been disposed of in the 	ive materials procured and following manner.	/or possessed by the licensee
a. Transfer of radioactive materials to the licensee listed below:		
✓ b. Disposal of radioactive materials:		
$\Box 1 \text{ Directly by the licensee}$		
2. By licensed disposal site:		
✓ 3. By waste contractor:		
Veolia Environmental Services 215-289-3700		
Phila., PA 19137		
c. All radioactive materials have been removed such that any remai	ning residual radioactivity is	s within the limits of 10 CFR
Part 20, Subpart E, and is ALARA.		
C. SURVEYS PERFORMED A	ND REPORTED	
 I. A radiation survey was conducted by the licensee. The survey contin I. a, the absence of licensed radiaactive materials 	ns:	
✓ b. that any remaining residual radioactivity is within the limits of 10 0	JFR 20, Subpart E, and is a	ALARA.
✓ 2. A copy of the radiation survey results:		
\checkmark a. is attached; or \square b. is not attached (Provide explanation); or	c. was forwarded to NRC	on:
3. A radiation survey is not required as only sealed sources were ever p	ossessed under this license	e, and
a. The results of the latest leak test are attached; and/or	b. No leaking sources ha	ve ever been identified.
The person to be contacted regarding the information provided on this form:		
Roger B. Jamieson Sr. Manager EHS (RSO)	1ELEPHONE (Include Area Code) 302-631-7161	roger.b.jamieson@siemens.com
Mail all future correspondence regarding this license to: Roger B. Jamieson MS 503 PO Box 6101 Newark, DE 19714-6101		
C. CERTIFYING OFF	ICIAL FOREGOING IS TRUE AND	CORRECT
PRINTED NAME AND TITLE SIGNATURE / /	SRA	DATE
"Milliam Di Bedeyk Director Will	SMY!	10/27/2011
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 18 WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY	CRIMIRAL PENALTIES. NRC R U.S.C. SECTION 1001 MAKES I OF THE UNITED STATES AS TO	EGULATIONS REQUIRE THAT T A CRIMINAL OFFENSE TO MAKE A) ANY MATTER WITHIN ITS JURISDICTION.
NRC FORM 314 (12-2010)		

CERTIFICATE OF DISPOSITION OF MATERIALS

PLEASE READ THESE INSTRUCTIONS BEFORE COMPLETING NRC FORM 314.

Subpart E of 10 CFR Part 20 establishes the radiological criteria for license terminations/decommissioning of facilities licensed under 10 CFR Parts 30, 40, 50, 60, 61, 70, and 72, as well as other facilities subject to the Commission's jurisdiction under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended.

INSTRUCTIONS

Section B, Item 2.

Licensees should describe the specific radioactive material transfer actions. If radioactive wastes were generated in terminating this license, the licensee should describe the disposal actions taken, including the disposition of low-level radioactive waste, mixed waste, greater-than-Class-C waste, and sealed sources.

Section B, Item 2.a.

The information provided concerning the transfer of radioactive material to another licensee should specify the date of the transfer, the name of the licensee recipient, an individual contact name and telephone number for the licensee recipient, and the recipient's NRC or Agreement State license number.

Section B, Item 2.b.

For disposal of radioactive materials, licensees should describe the specific disposal method or procedure (e.g., decay-in-storage). For those cases when radioactive materials are disposed of by a licensed disposal site or by a waste contractor, the licensee should specify the name, address, and telephone number of the licensee disposal site operator or waste contractor.

Section B, Item 2.c.

"Residual radioactivity," as defined in 10 CFR 20.1003, means radioactivity in 'areas' (structures, materials, soils, etc.) remaining as a result of activities (licensed and unlicensed) under the licensee's control from sources used by the licensee, excluding background radiation. ALARA is defined in 10 CFR 20.1003.

FILE CERTIFICATES AS FOLLOWS:

IF YOU ARE LOCATED IN:

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND CERTIFICATES TO:

LICENSING ASSISTANT SECTION NUCLEAR MATERIALS SAFETY BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION I 475 ALLENDALE ROAD KING OF PRUSSIA, PA 19406-1415

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND CERTIFICATES TO:

MATERIALS LICENSING SECTION U.S. NUCLEAR REGULATORY COMMISSION, REGION III 2443 WARRENVILLE ROAD, SUITE 210 LISLE, IL 60532-4352

IF YOU ARE LOCATED IN:

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND CERTIFICATES TO:

MATERIAL RADIATION PROTECTION SECTION U. S. NUCLEAR REGULATORY COMMISSION, REGION IV 612 E. LAMAR BOULEVARD, SUITE 400 ARLINGTON, TX 76011-4125





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DESIGNATED FACILITY TO GENERATOR





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1	UNIFORM HAZARDOUS	1. Generator ID Number	2. Page 1 d	of 3. Emergency Respons	e Phone	4. Manifest Track		VEQ
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	I certify that the waste min	imization statement identified in 40	CFR 262.27(a) (if I am a large quantity ge	nerator) or (b) (if I am a sma	all quantity gener	ator) is true.		-
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SIG	19. Hazardous Waste Report Ma	anagement Method Codes (i.e., cod	es for hazardous waste treatment, dispos	al, and recycling systems)				
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🕗 Dade Moeller

438 N. Frederick Ave., Suite 220 Gaithersburg, Maryland 20877 (301) 990-6006 www.moellerinc.com

October 26, 2011

William Bedzyk Siemens Healthcare Diagnostics P.O. Box 6101 Newark, DE 19714-6101

Re: Radiation Safety Decommissioning Survey

Dear Dr. Bedzyk:

Please accept this letter as notification of the completion of the Final Status Survey for decommissioning and free release of Siemens Healthcare Diagnostics - Room 300, 700 GBC Drive, Newark, Delaware 19702. Please find two Sample Analysis Reports (attached). Survey results indicate that the room and its contents meet the requirements for free release; however, the formal Final Status Survey Report will be delivered to you upon its completion. I anticipate that the report will be available prior to October 31, 2011. I will be happy to answer any questions that may arise.

Sincerely,

Don Samaan Commercial Health Physicist don.samaan@moellerinc.com

Encls.: Sample Analysis Reports (11-0216 and 11-0233)

🏼 Dade Moeller

704 S. Illinois Ave., Suite C-104 Oak Ridge, Tennessee 37830 (865) 481-6050 www.moellerinc.com

Sample Analysis Report

Client Name:	Siemens Heal	thcare Diagnostics	Sample Date:	09/26/2011 1300-1400		
Client Address:	William Bedz	yk	Analysis Date:	09/27/2011 1436-1816		
P.O. Box 610		1	Analysis Number:	11-0216		
Newark, Del		ware 19714				
Phone:	(302) 631-695	56	Fax:	n/a		
Email:	william.d.bed	zyk@siemens.com				
Project Information.		Clearance Survey - See Attached Wine Lo	or for Details on Each	Location Sampled		
N to affermation.		The second	g for Details on Each	Location Bampica		
Number of Samples:		/8				
Type of Analysis Requi	ired:	LSC				
Instrument(s) Used:		Beckman LS 6500				
Radionuclide(s) of Interest:		Various (H-3, C-14, 1-125)				

	Protocol Settings and Background Information											
Window ID	Window Settings (keV)	Count Time (min)	Avg. Counting Eff. (%)	Avg. Bkgd. Rate (cpm)	Avg. Total Bkgd (counts)	2σ (a)	%2σ	LLD (b)	MDA (c)			
Н-3	0-18	2	43.3	6.8	13.5	5.1	37.7	20.1	23.2			
C-14	18-156	2	92.8	5.5	11.0	4.6	41.8	18.5	9.9			
WINDI	156-2000	2	100.0	6.0	12.0	4.8	40.0	19.1	9.6			
Avg. Bkgd	. H-3 (dpm):	12.5	Avg. Bkgd	. C-14 (dpm)	7.2	Avg. B	kgd. Windov	w 1 (dpm)	18.3			

(a) 2 standard deviation of average total background counts.

(b) Lower Limit of Detection - lowest count level statistically visible above average total background counts.

(c) Minimum Detectable Activity - lowest dpm value detectable above background.

Sample #75 (Trash Compactor #5) yielded 51.7 dpm (H-3). All other samples analyzed yielded no detectable radioactive contamination.

Analysis Completed By:

Date: 10

Results Verified By:

Date: 11 Analytical Laboratory Information:

~ Dade Moeller is licensed by the State of Tennessee (R-01111-J21) to perform radioactive sample analysis. ~

 \sim Raw analytical data is maintained by the laboratory for regulatory purposes; copies available upon written request. \sim \sim Quality Assurance/Quality Control Information and Analytical Procedures are maintained and available upon written request. \sim

Specializing in Occupational and Environmental Health Sciences

9/27/2011

Page: 2 of 4

Results of Sample Anal	ysis	Average Background:	18.3	dpm	
Sample ID (Smear#)	Raw Data ID Number	Sample Location	Results	Nuclide	Results (net dpm)
1	1	Room 300 #1	24.5	n/a	6.3
2	2	Room 300 #2	23.0	n/a	4.8
3	3	Room 300 #3	21.5	n/a	3.3
4	4	Room 300 #4	25.5	n/a	7.3
5	5	Room 300 #5	20.0	n/a	1.8
6	6	Room 300 #6	16.0	n/a	-2.3
7	7	Room 300 #7	15.5	n/a	-2.8
8	8	Room 300 #8	19.5	n/a	1.3
9	9	Room 300 #9	20.0	n/a	1.8
10	10	Room 300 #10	19.0	n/a	0.8
11	11	Room 300 #11	20.0	n/a	1.8
12	12	Room 300 #12	17.5	n/a	-0.8
13	13	Room 300 #13	18.0	n/a	-0.3
14	14	Room 300 #14	20.5	n/a	2.3
15	15	Room 300 #15	23.5	n/a	5.3
16	16	Room 300 #16	17.5	n/a	-0.8
17	17	Room 300 #17	32.0	n/a	13.8
18	18	Room 300 #18	23.0	n/a	4.8
19	19	Room 300 #19	26.0	n/a	7.8
20	20	Room 300 #20	17.5	n/a	-0.8
21	21	Room 300 #21	18.0	n/a	-0.3
22	22	Room 300 #22	20.0	n/a	1.8
23	23	Room 300 #23	19.5	n/a	1.3
24	24	Room 300 #24	25.0	n/a	6.8
25	25	Room 300 #25	24.0	n/a	5.8
26	26	Room 300 #26	19.0	n/a	0.8
27	27	Room 300 #27	18.0	n/a	-0.3
28	28	Room 300 #28	22.0	n/a	3.8
29	29	Room 300 #29	23.5	n/a	5.3
30	30	Room 300 #30	16.5	n/a	-1.8
31	31	Room 300 #31	18.5	n/a	0.3
32	32	Room 300 #32	17.0	n/a	-1.3
33	33	Room 300 #33	17.0	n/a	-1.3

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Specializing in Occupational and Environmental Health Sciences

9/27/2011

Page: 3 of 4

Results of Sample Anal	ysis	Average Background:	18.3	apm	
Sample ID (Smear#)	Raw Data ID Number	Sample Location	Results	Nuclide	Results (dpm)
34	34	Room 300 #34	18.0	n/a	-0.3
35	35	Room 300 #35	19.0	n/a	0.8
36	36	Room 300 #36	24.5	n/a	6.3
37	37	Room 300 #37	17.5	n/a	-0.8
38	38	Room 300 #38	16.5	n/a	-1.8
39	39	Room 300 #39	18.0	n/a	-0.3
40	40	Room 300 #40	25.5	n/a	7.3
41	41	Room 300 #41	28.5	n/a	10.3
42	42	Room 300 #42	15.5	n/a	-2.8
43	43	Room 300 #43	19.0	n/a	0.8
44	44	Room 300 #44	20.5	n/a	2.3
45	45	Room 300 #45	19.0	n/a	0.8
46	46	Room 300 #46	17.0	n/a	-1.3
47	47	Room 300 #47	20.0	n/a	1.8
48	48	Room 300 #48	16.5	n/a	-1.8
49	49	Room 300 #49	22.5	n/a	4.3
50	50	Room 300 #50	21.5	n/a	3.3
51	51	Room 300 #51	18.0	n/a	-0.3
52	52	Room 300 #52	14.0	n/a	-4.3
53	53	Room 300 #53	23.5	n/a	5.3
54	54	Room 300 #54	26.0	n/a	7.8
55	55	Room 300 #55	20.5	n/a	2.3
56	56	Room 300 #56	22.5	n/a	4.3
57	57	Room 300 #57	15.5	n/a	-2.8
58	58	Room 300 #58	20.0	n/a	1.8
59	59	Room 300 #59	20.0	n/a	1.8
60	60	Room 300 #60	18.0	n/a	-0.3
S1	62	Cell Harvester #1	18.0	n/a	-0.3
S2	63	Cell Harvester #2	15.5	n/a	-2.8
\$3	64	Cell Harvester #3	22.0	n/a	3.8
S4	65	Cell Harvester #4	18.0	n/a	-0.3
S5	66	Cell Harvester #5	18.5	n/a	0.3
S6	67	Cell Harvester #6	18.5	n/a	0.3

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Results of Sample Analysis		Average Background:	18.3	dpm	
Sample ID (Smear#)	Raw Data ID Number	Sample Location	Results	Nuclide	Results (dpm)
S7	68	Cell Harvester #7	16.5	n/a	-1.8
S8	69	Cell Harvester #8	23.0	n/a	4.8
31	71	Trash Compactor #1	19.5	n/a	1.3
32	72	Trash Compactor #2	20.5	n/a	2.3
33	73	Trash Compactor #3	16.0	n/a	-2.3
34	74	Trash Compactor #4	22.5	n/a	4.3
35	75	Trash Compactor #5	70.1	H-3	51.7
36	76	Trash Compactor #6	19.5	n/a	1.3
37	77	Trash Compactor #7	19.5	n/a	1.3
38	78	Trash Compactor #8	15.5	n/a	-2.8
39	79	Trash Compactor #9	19.0	n/a	0.8
40	80	Trash Compactor #10	24.0	n/a	5.8
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Room 300 RAM laboratory

1 Computers / printers

2 Refrigerator exterior

3 Refrigerator interior

4 Wallac 1277 exterior

5 Wallac 1277 interior

6 Wallac 1209 exterior

7 Wallac 1209 interior

8 RAM-labeled pipettors, group A

9 RAM-labeled pipettors, group B

10 RAM-labeled pipettors, group C

11 Tray of green Gamma racks

12 Tray of Beta racks

13 Platewasher 260 base

14 Platewasher 260 injector / hoses

15 Leaded trashcan interior / exterior

16 Large glass flasks (RAM labeled)

17 Flask stoppers / hoses

18 Lead foil in tray

19 3-H waste cylinder

20 White stepcan (trash)

21 Box of green Gamma racks

22 Plastic buckets

23 Metal trays, shields

24 Bags and boxes of unused scint vials

25 Misc. Computer Equipment (rear bench)

26 Platewasher 260 in plastic tray

27 Rototorque

28 Centrifuge rotor

29 Centrifuge exterior and tray

30 Hoses / trays inside cabinet

31 Misc. sterile supplies in closet

32 Bottles of scintillation fluid

33 Plastic jugs of scint fluid (leaking)

34 Misc. items in cabinet under sink

35 Cabinet 1 - cleaning supplies

36 Liquids / sprays @ sink top

37 Blue plastic source vials, group A

38 Blue plastic source vials, group B

39 Cabinet 2 shelves

40 Lead Pigs, group A

41 Lead Pigs, group B

42 plastic tray (RAM)

43 Cuvette racks, group A

44 Cuvette racks, group B

45 RAM needles

46 rack with RAM tweezers, scalpels

- 47 RAM waste (black)
- 48 RAM items in drawer, bench 2
- 49 RAM funnel under bench 2
- 50 Buckets / trays under bench 2

51 Leaded canister under bench 2

- 52 Misc. Supplies, Cabinet 3
- 53 RAM boxes, Cabinet 3
- 54 Misc. in drawers, Cabinet 3
- 55 RAM metal trays, bench 3 A
- 56 RAM metal trays, bench 3 B

57 Leaded gloves / lead apron in drawer

58 Scintillation fluid / dispensers bench 3

- 59 Filtered Cabinet below bench 3
- 60 Plexiglas box in cabinet bench 3

Cell Harvester in RAM Storage Building

- 1 Plastic tray
- 2 Metal base
- 3 Power console
- 4 Injection rack
- 5 Injection tubes (removed)
- 6 Injection needles and ports
- 7 Miscellaneous hoses
- 8 Storage bag / covering

Trash Compactor in RAM Storage Building

- 1 Top and door exterior
- 2 Side and rear panels
- 3 External motor
- 4 Door (interior)
- 5 Interior of bag compartment (box)
- 6 Box liner insert
- 7 Compaction plate
- 8 Cart / base
- 9 Dolly
- 10 Floor and wheels

Dade Moeller

704 S. Illinois Ave., Suite C-104 Oak Ridge, Tennessee 37830 (865) 481-6050 www.moellerinc.com

Sample Analysis Report

Client Name:	Siemens Heal	thcare Diagnostics	Sample Date:	10/18/2011 1230		
Client Address:	William Bedz	zyk	Analysis Date:	10/24/2011 1253-1538		
P.O. Box 610		1	Analysis Number:	11-0233		
	Newark, Dela	ware 19714				
Phone: (302) 631-69		56	Fax:	(302) 631-6998		
Email:	william.d.bed	zyk@siemens.com				
Project Information:		Decommissioning Survey				
Number of Samples:		55				
Type of Analysis Requ	ired:	LSC				
Instrument(s) Used:		PerkinElmer Tri-Carb 2810TR				
Radionuclide(s) of Inte	erest:	Various (H-3, C-14, I-125)				

	Protocol Settings and Background Information									
Window ID	Window Settings (keV)	Count Time (min)	Avg. Counting Eff. (%)	Avg. Bkgd. Rate (cpm)	Avg. Total Bkgd (counts)	2σ (a)	%2σ	LLD (b)	MDA (c)	
Н-3	0-18	2	43.9	5.5	11.0	4.6	41.8	18.5	21.0	
C-14	18-156	2	94.3	8.3	16.5	5.6	34.1	21.9	11.6	
WIND1	156-2000	2	100.0	4.3	8.5	4.0	47.5	16.6	8.3	
Avg. Bkgd	. H-3 (dpm):	10.3	Avg. Bkgd	. C-14 (dpm)	9.2	Avg. B	kgd. Windov	w 1 (dpm)	18.0	

(a) 2 standard deviation of average total background counts.

(b) Lower Limit of Detection - lowest count level statistically visible above average total background counts.

(c) Minimum Detectable Activity - lowest dpm value detectable above background.

 Sample Analysis yielded no detectable radioactive contamination.

 Analysis Completed By:
 Date: 10/25/11

 Results Verified By:
 Date: 10/25/14

 Analytical Laboratory Information:
 - Dade Moeller is licensed by the State of Tennessee (R-01111-J21) to perform radioactive sample analysis. ~

 ~ Raw analytical data is maintained by the laboratory for regulatory purposes; copies available upon written request. ~

 ~ Quality Assurance/Quality Control Information and Analytical Procedures are maintained and available upon written request. ~

Specializing in Occupational and Environmental Health Sciences

10/24/2011

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Results of Sample Anal	<u>ysis</u>	Average Background: 18.0		18.0 dpm		
Sample ID (Smear#)	Raw Data ID Number	Sample Location	Results	Nuclide	Results (net dpm)	
1	1	Room 300 #1	25.0	n/a	7.0	
2	2	Room 300 #2	30.5	n/a	12.5	
3	3	Room 300 #3	31.5	n/a	13.5	
4	4	Room 300 #4	23.5	n/a	5.5	
5	5	Room 300 #5	33.0	n/a	15.0	
6	6	Room 300 #6	28.5	n/a	· 10.5	
7	7	Room 300 #7	26.0	n/a	8.0	
8	8	Room 300 #8	27.5	n/a	9.5	
9	9	Room 300 #9	23.0	n/a	5.0	
10*	10	Room 300 #10	15.5	n/a	-4.0	
11	11	Room 300 #11	34.0	n/a	16.0	
12	12	Room 300 #12	20.5	n/a	2.5	
13	13	Room 300 #13	27.5	n/a	9.5	
14	14	Room 300 #14	27.5	n/a	9.5	
15	15	Room 300 #15	25.5	n/a	7.5	
16	16	Room 300 #16	22.0	n/a	4.0	
17	17	Room 300 #17	30.0	n/a	12.0	
18	18	Room 300 #18	20.5	n/a	2.5	
19	19	Room 300 #19	19.5	n/a	1.5	
20	20	Room 300 #20	22.5	n/a	4.5	
21	21	Room 300 #21	24.0	n/a	6.0	
22	22	Room 300 #22	25.0	n/a	7.0	
23	23	Room 300 #23	23.0	n/a	5.0	
24	24	Room 300 #24	19.5	n/a	1.5	
25	25	Room 300 #25	23.0	n/a	5.0	
26	26	Room 300 #26	20.0	n/a	2.0	
27	27	Room 300 #27	16.5	n/a	-1.5	
28	28	Room 300 #28	24.5	n/a	6.5	
29	29	Room 300 #29	21.5	n/a	3.5	
30	30	Room 300 #30	19.5	n/a	1.5	
31	31	Room 300 #31	17.0	n/a	-1.0	
32	32	Room 300 #32	22.0	n/a	4.0	
33	33	Room 300 #33	19.0	n/a	1.0	

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Results of Sample Anal	ysis	Average Background:	1: 18.0 dpm		
Sample ID (Smear#)	Raw Data ID Number	Sample Location	Results	Nuclide	Results (dpm)
34	34	Room 300 #34	19.5	n/a	1.5
35	35	Room 300 #35	15.0	n/a	-3.0
36	36	Room 300 #36	17.5	n/a	-0.5
37	37	Room 300 #37	23.5	n/a	5.5
38	38	Room 300 #38	19.0	n/a	1.0
39	39	Room 300 #39	14.5	n/a	-3.5
40	40	Room 300 #40	20.0	n/a	2.0
41	41	Room 300 #41	12.0	n/a	-6.0
42	42	Room 300 #42	14.0	n/a	-4.0
43	43	Room 300 #43	18.5	n/a	0.5
44	44	Room 300 #44	19.5	n/a	1.5
45	45	Room 300 #45	12.5	n/a	-5.5
46	46	Room 300 #46	15.5	n/a	-2.5
47	47	Room 300 #47	20.0	n/a	2.0
48	48	Room 300 #48	12.0	n/a	-6.0
49	49	Room 300 #49	18.5	n/a	0.5
50	50	Room 300 #50	17.5	n/a	-0.5
51	51	Room 300 #51	15.5	n/a	-2.5
52	52	Room 300 #52	21.0	n/a	3.0
53	53	Room 300 #53	18.5	n/a	0.5
54	54	Room 300 #54	22.5	n/a	4.5
55	55	Room 300 #55	15.5	n/a	-2.5
*Recount Value Used					

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	Room 300 - Final Status Survey
1	Bench 1 - left surface
2	Bench 1 - right surface
3	Bench 1 - Drawers 1-4
4	Bench 1 - Drawers 5-7
5	Bench 1 - Cabinet
6	Closet doors and top shelf
7	Closet shelves 2-4
8	Sink
9	Bench 2 - left surface @ sink
10	Bench 2 - shelves #1
11	Bench 2 - left walls
12	Bench 2 - cabinet #1
13	Bench 2 - center surface
14	Bench 2 - shelves #2
15	Bench 2 - center walls
16	Bench 2 - center drawers
17	Bench 2 - cabinet #2
18	Bench 2 - right surface
19	Bench 2 - shelves #3
20	Bench 2 - right walls
21	Bench 2 - right drawers
22	Bench 2 - ventilated cabinet
23	Wall 1
24 25	
25	
20	
21 28	
20 29	Wall 2
30	Wall 2
31	Wall 2
32	Wall 2
33	Wall 2
34	Wall 2
35	Wall 2
36	Wall 2
37	Wall 3
38	Wall 3
39	Wall 3
40	Wall 3
41	Wall 3
42	Wall 3
43	Floor
44	Floor
45	Floor
16	Hoor

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47 Floor 48 Floor 49 Floor 50 Floor 51 Floor 52 Floor 53 Floor 54 Floor

55 Exterior of door

DECOMMISSIONING CHECKLIST FOR AN AREA THAT USED OR STORED UNSEALED RADIOACTIVE MATERIALS

The following checklist is to be used with any Restricted, Controlled or Unresticted Area that used or stored radioisotopes, including common use or equipment rooms. It will guide the radioisotope user in preparing a radioactive material area for release as a general use area, no longer under the Site Radiation Safety Program. Both the Principal Investigator (P.I.) and the person overseeing or performing the decommissioning are to be listed below.

AREA TO BE DECOMMISSIONED: BLDG: 5h < d ROOM: CageBUSINESS UNIT: CA_T PRINCIPAL INVESTIGATOR: $William D \cdot B_{2} d_{2} y^{k}$ PROCESS OVERSEER: $William D \cdot B_{2} d_{2} y^{k}$ ISOTOPES USED: $Equipment storasc - 3|t, |^{4}C, |^{2S}I$ Date Completed Initials Process Description 16/29/2011 By e-mail, notify Site RSO of the area being decommissioned. Include a history of the radioactive materials used (radioisotopes, typical quantity per experiment, areas of use, time period of use, type of work, prior users, previous spills or known contamination). Outline the steps proposed in the decommissioning process. for RSO review, RS^{2} wet f(t, t, d) < f(t, t

$$\frac{2 9/26}{20 11}$$

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$$\frac{6000}{20 0}$$
Decontaminate and wipe test all equipment used in radioactive material work area. Record results in lab wipe test record book. Action level: 200 dpm/100 sq. cm.
$$\frac{9/26}{20 11}$$
Decontaminate and wipe test lab facilities. Action level: 200 dpm/100 sq. cm. Record results in lab wipe test record book as final decommissioning wipes. Notify RSO of any wipe tests above 2,000 dpm. Number of wipe tests necessary varies but should be more detailed than a routine test.
$$\frac{10/27/2011}{2011}$$
Have an RSO review wipe test records and lab facility. RSO will have a verifying wipe test performed.
$$\frac{10/27/2011}{2011}$$
Provide the documentation to the RSO, including final wipe test results.

Principle Investigator Certification for Bldg Shid Rm Cage

I certify that the process outlined in the above checklist has been completed by me or the information supplied has been reviewed by me. The decommissioning documentation is complete and accurate.

Signature of Principal Investigator ___<u>10/27/70</u>11 Date William D. Brdzyk Printed Name of Principal Investigator Review and approval signature of RSO 11/15/11

(Send copies of the decommissioning packet to the Principal Investigator. File the original in the Radiation Safety Office)

Page 1 of 2

Upon Receiving the Approved Checklist Follow Steps 6 through 9:

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Date Completed	Initials	Process Description
6 10/5/2011	WRS	Deface or remove all radioisotope markings and labels in the area.
7 10/27/2011	SP	Attach a copy of the completed checklist to the decommissioned area's wipe test record book.
8 10/27/2011	653	Hold lab wipe test record book for 3 years through research group. Records to be available to RSO or NRC, upon request.
		Records location: B700 3EO 3
9 10/27/2011	wes	Send a completed copy of this page to the Site Radiation Safety Office.

RECOMMISSIONING THE AREA

Any previously decommissioned area that will again use or store radioactive materials must be relisted with the Site Radiation Safety Office. Complete the section below and a Radioactive Material Area Census Form, and send them to the Site Radiation Safety Office. A new wipe test record book is recommended, with the original decommissioning date noted.

Date of decommissioning:
Date of reuse of radioisotopes in previously decommissioned area:
Principal Investigator recommissioning area:
Area Location:
Classification:
Date of Census Form Submittal:
Comments:

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DECOMMISSIONING CHECKLIST FOR AN AREA THAT USED OR STORED UNSEALED RADIOACTIVE MATERIALS

The following checklist is to be used with any Restricted, Controlled or Unresticted Area that used or stored radioisotopes, including common use or equipment rooms. It will guide the radioisotope user in preparing a radioactive material area for release as a general use area, no longer under the Site Radiation Safety Program. Both the Principal Investigator (P.I.) and the person overseeing or performing the decommissioning are to be listed below.

AREA TO BE DECOMMISSIONED: BLDG: 700 ROOM: L300 BUSINESS UNIT: CAI PRINCIPAL INVESTIGATOR: William D. Bidzyk PROCESS OVERSEER: WILLIAM D. BEZZYK ISOTOPES USED: 14C, 3H, 125 I Date Completed Initials Process Description 16/29/2011 By e-mail, notify Site RSO of the area being decommissioned. Include a

		history of the radioactive materials used (radioisotopes, typical quantity per experiment, areas of use, time period of use, type of work, prior users, previous spills or known contamination). Outline the steps proposed in the decommissioning process, for RSO review. RSO white at June 29, 2011 Radiu time Sefstz Committee Misting.
2 9/24/2011	W	Decontaminate and wipe test all equipment used in radioactive material work area. Record results in lab wipe test record book. Action level: 200 dpm/100 sq. cm.
3 <u>9/26/2011</u>	LAS	Decontaminate and wipe test lab facilities. Action level: 200 dpm/100 sq. cm. Record results in lab wipe test record book as final decommissioning wipes. Notify RSO of any wipe tests above 2,000 dpm. Number of wipe tests necessary varies but should be more detailed than a routine test.
4 10/27/2011	11 R 2	Have an RSO review wipe test records and lab facility. RSO will have a verifying wipe test performed.
5 10/27/2011	w So	Provide the documentation to the RSO, including final wipe test results.

Principle Investigator Certification for Bldg 700 Rm L 300

I certify that the process outlined in the above checklist has been completed by me or the information supplied

has been reviewed by me. The decomprised of the decomprised of the decomplete and accurate. Signature of Principal Investigator $\frac{10/2 \ 3/2011}{\text{Date}}$ William. D. Bidzyk Printed Name of Principal Investigator Review and approval signature of RSO 10/20/11

(Send copies of the decommissioning packet to the Principal Investigator. File the original in the Radiation Safety Office)

Page 1 of 2

Upon Receiving the Approved Checklist Follow Steps 6 through 9:

Date Completed	Initials	Process Description
6 10/5/2011	WS	Deface or remove all radioisotope markings and labels in the area.
7 10/27/2011	_LSE	Attach a copy of the completed checklist to the decommissioned area's wipe test record book.
8 10/27/2011	unes	Hold lab wipe test record book for 3 years through research group. Records to be available to RSO or NRC, upon request.
		Records location: B700 3E03
9 10/27/2011	WAS	- Send a completed copy of this page to the Site Radiation Safety Office.

RECOMMISSIONING THE AREA

Any previously decommissioned area that will again use or store radioactive materials must be relisted with the Site Radiation Safety Office. Complete the section below and a Radioactive Material Area Census Form, and send them to the Site Radiation Safety Office. A new wipe test record book is recommended, with the original decommissioning date noted.

Date of decommissioning:			
Date of reuse of radioisotopes in previously decommissioned area:			
Principal Investigator recommissioning area:			
Area Location:			
Classification:			
Date of Census Form Submittal:			
Comments:			

Radiation Safety Manual

RADIATION QUARTERLY AUDIT FORM

Ι.	Da	te:10/13/95	Auditor:	R. Jamieson	
	Fa	cility: <u>B700 Cob251</u>	Contact:	S. Chavier	
II.	Ar	ea Posting	N/A	OK	<u>Comments</u>
	1.	Proper Warning Signs			
	2.	NRC Form 3 Posted			
	3.	Part 19 Available			ومن هو من هو من بين بين الم الله من من هو من الله عن
	4.	Authorization Signs Clear			
	5.	Isotopes & Amounts Listed			
	6.	Contact Person(s) Listed			
	Co	mments: Lab Decommi	SSION	ecl	
III.	Ra	dioisotope Use Areas			
	1.	Work Area Clearly Labeled			
	2.	No Unnecessary Equipment in Laboratory			
	3.	Lab Equipment Labelled		· ·	والمراجعة والمراجعة والمراجعة والمراجع والمراجع والمراجعة والمراجع والمراجع والمراجع والمراجع
	4.	Containment Tray or Absorbent			
	5.	No Smoking, Eating, Drinking, Food, or Cosmetics in Lab			
	6.	Daily or as Used Contamination Surveys Conducted			
	7.	Records kept in DPM or mrem/hr			
	8.	Date of Last Survey			
		• Record any Problems & Correctiv	e Actions		
	Co	omments:			
IV.	Ec	quipment Inventory			
	1.	List Equipment in Laboratory			
		• Survey Meters (Make, Model. Ser	ial #)		
		• Beta/Gamma Counters (Make. M	odel. Serial	#)	
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Radiation Safety Office

Revised 6/1/94

RADIOISOTOPE LAB EQUIPMENT LAB 251 9-19-95

THE FOLLOWING EQUIPMENT HAS BEEN WIPE TESTED FOR BETA EMISSIONS AND SURVEYED WITH AN EBERLINE GAMMA PROBE SER# 2082 FOR GAMMA EMISSIONS. NO GAMMA EMISSIONS ABOVE BACKGROUND WERE FOUND. BETA COUNTS OVER THREE TIMES BACKGROUND WERE FOUND ON THREE DIFFERENT PIECES OF EQUIPMENT. THE AMES ALIQUOT MIXER SN 118750 HAD <u>893</u> <u>DPM</u>.THE VWR 1230 WATER BATH MODEL 1230 SN 3851230 HAD <u>267 DPM</u> AND PAPER LEFT ON THE PHD HARVESTER HAD 171 DPM.

WIPE TESTING FOR BETA RADIATION ON AREAS NOTED ON THE QUARTERLY AUDIT FORM FOR LAB 251 WERE WITHIN BACKGROUND LEVELS.

RT 6000 SORVALL REFRIGERATED CENTRIFUGE SN#830294 WATER BATH NATIONAL APPLIANCE MODEL 101-1 SN#12-77-1136-13 JORDAN REFRIGERATOR MODEL FT-1W-BRG SN#15651879B SN#7700297 GAMMA MASTER LKB GAMMA COUNTER ORBITAL SHAKER BELLCO **SN#SH973** RADIOIODINE FUME HOOD MODEL 190-210 GILSON MICRO FRACTIONATOR FA# 7011-0051-55 SN#2293032 THERMOLYNE DRY BATH FA# 7300-004-63 SN# 118757 TWO AMES ALIQUOT MIXERS SN#118750 SN2994 FISHER ISO TEMP DRY BATH MODEL 145 MAGNISTIR CAT# 1250 TWO CORNING HOT PLATE STIRRER MODEL PC351 VWR 1230 WATERBATH MODEL 1230 SN#3851230 PHD CELL HARVESTER

9-27-95 RADIOISOTOPE LAB 251 WIPE TESTING FOR BETA RADIATION

MORE EXTENSIVE WIPE TESTING WAS PERFORMED IN LAB 251 BECAUSE OF THE EQUIPMENT IN THAT LAB THAT HAD 3 TIMES THE NORMAL BACKGROUND. THE PHD HARVESTER WAS THE ONLY PIECE OF EQUIPMENT KNOWN TO HAVE BEEN USED FOR BETA RADIATION AND WILL BE OFFERED FOR USE BY ANOTHER RADIATION LABORATORY WITHIN DUPONT. THE AMES ALIQUOT MIXER WAS PLACED IN DRY WASTE AND WILL BE DISPOSED OF. THE VWR WATER BATH MODEL 1230 SN 3851230 WAS DECONTAMINATED AND RETESTED. ALL WIPES ON THIS INSTRUMENT WERE NORMAL BACKGROUND. NORMAL BACKGROUND WAS DETERMINED TO BE 54 DPM. IN ADDITION TO THE INSTRUMENT WIPE TESTS THE FOLLOWING TEST WERE DONE IN LAB 251.

ITEM	DPM
VWR WATER BATH INTERIOR	40
TOP SURFACE OF WATER BATH	46
CONTROL PANEL OF WATER BATH	40
PHD HARVESTER BOTTOM PLATE	52
HARVESTOR BOTTOM PUNCHES	42
BENCH TOP NEAR HARVESTER	42
DEIONIZED WATER KNOB	42
COLD WATER KNOB	42
HOT WATER KNOB	40
SINK INTERIOR	42
HOOD BY WASTE CONTAINERS	94
RIGHT HANDLES HOOD CABINET	36
LEFT HANDLES HOOD CABINET	42
FLOOR BY WASTE CONTAINERS	52
FLOOR BY WASTE CONTAINERS	42
BENCH TOP WORK STATION LEFT	33
BENCH TOP WORK STATION LEFT	27
BENCH TOP WORK STATION TAPE	12
BENCH TOP WORK STATION RIGHT	33
SCREWDRIVER	40
FLASK 1000 ML	40
FLASK 500 ML	40
TELEPHONE	42
R 6000 CENTRIFUGE	57
R 6000 CENTRIFUGE	63
HOOD BY WASTE CONTAINERS(REPEAT)	85

DECOMMISSIONING CHECKLIST FOR AN AREA THAT USED OR STORED UNSEALED RADIOACTIVE MATERIALS

The following checklist is to be used with any Restricted, Controlled or Unresticted Area that used or stored radioisotopes, including common use or equipment rooms. It will guide the radioisotope user in preparing a radioactive material area for release as a general use area, no longer under the Site Radiation Safety Program. Both the Principal Investigator (P.I.) and the person overseeing or performing the decommissioning are to be listed below.

AREA TO BE DECOMMISSIONED: BLDG: 100 ROOM: Lab9 (back lab)			
1	BUSINESS UNI	T: Technology	
1	PRINCIPAL INV	VESTIGATOR: MEA M. Quann	
]	PROCESS OVE	RSEER: Roger Jamieson	
]	ISOTOPES USE	D: $125 I, 3H, 32$	
Date Completed	Initials	Process Description	
1_10/5/98	LMQ	By e-mail, notify Site RSO of the area being decommissioned. Include a history of the radioactive materials used (radioisotopes, typical quantity per experiment, areas of use, time period of use, type of work, prior users, previous spills or known contamination). Outline the steps proposed in the decommissioning process, for RSO review.	
2913098	Lma RJ	Decontaminate and wipe test all equipment used in radioactive material work area. Record results in lab wipe test record book. Action level: 200 dpm/100 sq. cm.	
3 9/30 98	LHQ 25	Decontaminate and wipe test lab facilities. Action level: 200 dpm/100 sq. cm. Record results in lab wipe test record book as final decommissioning wipes. Notify RSO of any wipe tests above 2,000 dpm. Number of wipe tests necessary varies but should be more detailed than a routine test.	
4 10 2 98	LHG RJ	Have an RSO review wipe test records and lab facility. RSO will have a verifying wipe test performed.	
5 10/2/98	LHQRS	Provide the documentation to the RSO, including final wipe test results.	
Principle Investiga	ator Certification	for Bldg 100 Rm Lab 9	

I certify that the process outlined in the above checklist has been completed by me or the information supplied has been reviewed by me. The decommissioning documentation is complete and accurate.

10 5198 uann Signature of Principal Investigator Date UANN Printed Name of Principal Investigator Review and approval/signature of RSO Date

(Send copies of the decommissioning packet to the Principal Investigator. File the original in the Radiation Safety Office)

Date Completed	Initials	Process Description
6 10/5/98	LHQ	Deface or remove all radioisotope markings and labels in the area.
	<u> </u>	wipe test record book.
8_1015198	LMQ	Hold lab wipe test record book for 3 years through research group. Records to be available to RSO or NRC, upon request.
		Records location: w RSO
9 10/5/48	LAQ	Send a completed copy of this page to the Site Radiation Safety Office.

Upon Receiving the Approved Checklist Follow Steps 6 through 9:

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RECOMMISSIONING THE AREA

Any previously decommissioned area that will again use or store radioactive materials must be relisted with the Site Radiation Safety Office. Complete the section below and a Radioactive Material Area Census Form, and send them to the Site Radiation Safety Office. A new wipe test record book is recommended, with the original decommissioning date noted.

Date of decommissioning:
Date of reuse of radioisotopes in previously decommissioned area:
Principal Investigator recommissioning area:
Area Location:
Classification:
Date of Census Form Submittal:
Comments:

Roger Jamieson Site Radiation Safety Officer

9/98

The radiation lab in building 100 Lab 9 is going to be decommissioned.

The isotope history of the lab was primarily ¹²⁵I. Some ³H and ³²P were also used.

³²P was used by Angeline Stoltzfus over the time period June through August 1995. Typical amounts of use were less than 100 uCi in enzyme assays. ¹²⁵I was used by Lisa Quann and other approved users. Typical amounts of use were less than 100 uCi is antibody binding assays.

For the decommissioning of the lab, all the instruments and equipment in radioactive material work areas will be wipe tested for gamma emission and beta emission. The lab facilities will be wipe tested for the same forms of emission. The results will be evaluated and if any wipes are found to be twice background, the items or areas will be cleaned and re wiped.

Lisa Quann



Sample #	Location	Beta Counts (DPM)	Gamma Counts (DPM)
1	Sink – left	12	145
2	Sink -right, interior	10	150
3	Floor	11	153
4	Floor	14	127
5	Floor	12	163
6	Lab bench	12	142
7	Lab bench	12	149
8	Lab bench	11	144
9	Lab bench	11	98
10	Floor	11	86
11	Beta counter – outside	14	152
12	Beta counter – inside	11	146
13	Table	13	135
14	Gamma counter outside	12	138
15	Gamma counter – inside	13	148
16	Floor	11	146
17	Floor	14	144
18	Floor	14	138
19	Floor	13	88
20	Floor	14	103
21	Refrigerator top	14	147
22	Refrigerator – handles	10	161
23	Freezer – inside	14	127
24	Freezer – door, inside	20	117
25	Refrigerator – shelves	31	153
	Rewipe: blank	34	
	10/1/98 Top shelf	19	
	Middle shelf	33	
	Bin cover	14	
26	Refrigerator – inside bottom	12	152

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Sample #	Location	Beta Counts (DPM)	Gamma Counts (DPM)
27	Refrigerator – inside door	11	144
28	Refrigerator – inside, right	10	150
29	Refrigerator – inside, left	12	110
30	Refrigerator – inside, bottom	19	105
	Lab Equipment		
31	Plastic storage bins	13	150
32	Lead shield box	13	148
33	Large plastic tray	12	123
34	Chair	13	132
35	Plastic tote	15	147
36	Gray racks	12	150
37	Bag sealer	13	134
38	Incubator – inside	14	158
39	Incubator – outside	10	108
40	Magnetic tray – top	11	106
41	Magnetic tray – bottom	13	141
42	Stir plate		158
43	Vortex mixer	13	138
44	Rocker	13	115
45	Tray	12	146
46	Tray	14	135
47	Tray	12	123
48	Timer	12	139
49	Timer	13	82
50	Magnetic plate	13	98
51	Magnetic advanced	13	151
52	Shield	11	157
53	Yellow rack	13	140
54	Clear rack	10	127
55	Repeater pipette	13	147
56	Tool	15	139
57	Vacuum flasks	13	141
58	Racks	13	142
59	Repeater pipette lid	13	95
60	Mop	11	94
61	Plastic containers	13	148
62	Big	16	149
63	Rubber bulb	11	130
64	Blank	10	135
65	Blank	10	151

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Sincerely, Licensing Assistance Team Leader