

The Groves Campus  
7107 Elm Valley Drive  
Kalamazoo, MI 49009  
p: 269.353.1582  
f: 269.353.1299

mhtsc.kvcc.edu

July 6, 2015

Ms. Sara Forster  
Materials Licensing Branch  
United States Nuclear Regulatory Commission  
Region III  
2443 Warrenville Road Ste 210  
Lisle, Illinois 60532-4352

Dear Ms. Forster,

We have discontinued use of radioactive materials at our site and would like to decommission our laboratory. I have completed NRC form 314.

All radioactive materials have been removed from our site. I have attached copies of the documents related to the transfer of the radioactive materials (see attached manifest and disposal records).

We have also had the sealed barium-133 source removed from our Packard Tricarb scintillation counter by the manufacturer (documents attached).

We have also conducted radiation surveys (wipe tests) of our site. We took multiple wipes throughout the laboratory area (as shown on the attached map). We found no residual radioactivity (results attached).

Please let me know if you have any questions.

Sincerely,



Robert Kilkuskie, Ph.D.  
Executive Director

RECEIVED JUL 13 2015

<b>NRC FORM 314</b> (8M-YYYY) 10 CFR 30.38(c)(1)(iv) 10 CFR 40.42(c)(1)(iv) 10 CFR 70.38(c)(1)(iv)	<b>U.S. NUCLEAR REGULATORY COMMISSION</b>	APPROVED BY OMB: NO. 3160-0028 EXPIRES: MM/DD/YYYY <small>Estimated burden per response to comply with this mandatory information collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility has been cleared of radioactive material before the facility is released for unrestricted use. Forward comments regarding burden estimate to the Records Management Branch (T-8 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0028), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>
<b>CERTIFICATE OF DISPOSITION OF MATERIALS</b>		
INSTRUCTIONS: ALL ITEMS MUST BE COMPLETED - PRINT OR TYPE SEND THE COMPLETED CERTIFICATE TO THE NRC OFFICE SPECIFIED ON THE REVERSE		
LICENSEE NAME AND ADDRESS Michigan Technical Education Center Kalamazoo Valley Community College 7107 Elm Valley Drive Kalamazoo, MI 49009		LICENSE NUMBER 21-32574-01 LICENSE EXPIRATION DATE June 30, 2016
<b>A. MATERIALS DATA (Check one and complete as necessary)</b>		
THE LICENSEE OR ANY INDIVIDUAL EXECUTING THIS CERTIFICATE ON BEHALF OF THE LICENSEE CERTIFIES THAT: (Check and/or complete the appropriate item(s) below.)		
<input type="checkbox"/> 1. NO MATERIALS HAVE EVER BEEN PROCURED OR POSSESSED BY THE LICENSEE UNDER THIS LICENSE. OR <input checked="" type="checkbox"/> 2. ALL ACTIVITIES AUTHORIZED BY THE LICENSE HAVE CEASED AND ALL MATERIALS PROCURED AND/OR POSSESSED BY THE LICENSEE UNDER THE LICENSE NUMBER CITED ABOVE HAVE BEEN DISPOSED OF IN THE FOLLOWING MANNER. (If additional space is needed, use the reverse side or provide attachments.)		
Describe specific material transfer actions and, if there were radioactive wastes generated in terminating this license, the disposal actions including the disposition of low-level radioactive wastes, mixed waste, Greater-than-Class-C waste, and sealed sources, if applicable. Hydrogen-3 and Iodine-125 waste was disposed by contractor. Sealed Source (Ba-133) removed by manufacturer. For transfers, specify the date of the transfer, the name of the licensed recipient, and the recipient's NRC license number or Agreement State name and license number. Hydrogen-3 & Iodine-125 transferred to Bionomics (EPA ID TND982116493) on 1/14/15 Sealed source to Caliper on 2/19/15 If materials were disposed of directly by the licensee rather than transferred to another licensee, licensed disposal site or waste contractor, describe the specific disposal procedures (e.g., decay in storage). N/A		
<b>B. OTHER DATA</b>		
<input checked="" type="checkbox"/> 1. OUR LICENSE HAS NOT YET EXPIRED; PLEASE TERMINATE IT. <input type="checkbox"/> 2. A RADIATION SURVEY WAS CONDUCTED BY THE LICENSEE TO CONFIRM THE ABSENCE OF LICENSED RADIOACTIVE MATERIALS AND TO DETERMINE WHETHER ANY CONTAMINATION REMAINS ON THE PREMISES COVERED BY THE LICENSE. (Check one) <input type="checkbox"/> NO (Attach explanation) <input checked="" type="checkbox"/> YES, THE RESULTS (Check one) <input checked="" type="checkbox"/> ARE ATTACHED, or <input type="checkbox"/> WERE FORWARDED TO NRC ON (Date)		
3. THE PERSON TO BE CONTACTED REGARDING THE INFORMATION PROVIDED ON THIS FORM	NAME ROBERT KILKUSKIE	TELEPHONE NUMBER (Include Area Code) 269-353-1582
4. MAIL ALL FUTURE CORRESPONDENCE REGARDING THIS LICENSE TO ROBERT KILKUSKIE 7107 ELM VALLEY DRIVE MTEC/KVCC KALAMAZOO, MI, 49009		
<b>CERTIFYING OFFICIAL</b>		
I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT		
PRINTED NAME AND TITLE ROBERT KILKUSKIE, Director	SIGNATURE Robert Kilhushie	DATE 6/2/15
WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECTS. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTIONS.		

NRC FORM 314 (8M-YYYY)

PRINTED ON RECYCLED PAPER



P.O. Box 817 – Kingston, TN 37763 – (865) 220-8501

May 14, 2015

**DISPOSAL CERTIFICATE**

Robert Kilkuskie  
Kalamazoo Valley Community College  
7107 Elm Vally Drive  
Kalamazoo, MI 49009

Dear Robert Kilkuskie:

This letter certifies that EnergySolutions (formerly Duratek) has processed the materials from your shipment as indicated below:

Please reference the following table for detailed disposal information.

Manifest Number	Shipment Date	Container Number	Incineration Completion Date
KVCC1142015	01/14/15	KVCC-01, 02, 03, and 04	02/28/2015

Note: Any ash from the incineration process becomes Duratek's (EnergySolutions) waste.

If you have any questions please feel free to contact me at (865) 220-8501.

Sincerely,

*D. Agana*

Denise Agana  
Transportation

Cc: File 2015-02

[illegible]



Estimated burden per response to comply with this information collection request: 3.3 hours. This uniform manifest is required by NRC to meet reporting requirements of Federal and State Agencies for the safe transportation and disposal of low-level waste. Send comments regarding burden estimates to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to [infocollect@nrc.gov](mailto:infocollect@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOS-10202, (3150-0166), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

FORM 541 EnergySolutions, Bear Creek Processing Operations										1. MANIFEST TOTALS				2. MANIFEST NUMBER											
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST										NUMBER OF PACKAGES/ DISPOSAL CONTAINERS		NET WASTE VOLUME		NET WASTE WEIGHT		SPECIAL NUCLEAR MATERIAL (grams)				KVCC1142015					
CONTAINER AND WASTE DESCRIPTION										4		m <sup>3</sup> ft <sup>3</sup>		kg lb		U-233		U-235		Pu		TOTAL		PAGE 1 OF 2 PAGE(S)	
Additional Nuclear Regulatory Commission (NRC) Requirements for Control, Transfer and Disposal of Radioactive Waste										35.000		15.876		NP		NP		NP		NP		4. SHIPPER NAME			
ACTIVITY (MBq/mCi) (LLD UNITS IN uCi/cc)										ALL NUCLIDES		TRITIUM		C-14		Tc-99		I-129		SOURCE		Kalamazoo Valley Community College			
MBq										1.1858E+02		1.1562E+02		NP		NP		NP		NP		SHIPMENT ID NUMBER			
mCi										3.2048E+00		3.1248E+00		NP		NP		NP		NP		KVCC1142015			
DISPOSAL CONTAINER DESCRIPTION										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER												16. WASTE CLASSIFICATION			
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME m <sup>3</sup> ft <sup>3</sup>	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm <sup>2</sup> dpm/100 cm <sup>2</sup>		11. WASTE DESCRIPTOR (See Note 2)	12. APPROXIMATE WASTE VOLUME(S) IN CONTAINER m <sup>3</sup> ft <sup>3</sup>	13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION			16. WASTE CLASSIFICATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C										
					ALPHA	BETA-GAMMA						INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT													
9 - Innerpack Container																									
15-000023 (KVCC-01) 3058	19 Fiber Box DI O	0.0600	2.268	< 5.000E-03	< 3.340E-07	< 1.670E-05	59(PAPER, PLASTIC)	0.0600	100	SOLID OXIDES / NP	NP	I-125	2.9600E+00	8.000E-02	AU										
		2.1188	5.000	< 5.000E-01	< 2.000E+01	< 1.000E+03																			
								Sub Total				2.9600E+00	8.000E-02												
						Package Total	2.9600E+00	8.000E-02																	
15-000024 (KVCC-02) 3058	19 Fiber Box DI O	0.0600	4.536	< 5.000E-03	< 3.340E-07	< 1.670E-05	59(PAPER, PLASTIC)	0.0600	100	SOLID OXIDES / NP	NP	H-3	3.8539E+01	1.0416E+00	AU										
		2.1188	10.000	< 5.000E-01	< 2.000E+01	< 1.000E+03																			
								Sub Total				3.8539E+01	1.0416E+00												
						Package Total	3.8539E+01	1.0416E+00																	
15-000025 (KVCC-03) 3058	19 Fiber Box DI O	0.0600	4.536	< 5.000E-03	< 3.340E-07	< 1.670E-05	59(PAPER, PLASTIC)	0.0600	100	SOLID OXIDES / NP	NP	H-3	3.8539E+01	1.0416E+00	AU										
		2.1188	10.000	< 5.000E-01	< 2.000E+01	< 1.000E+03																			
								Sub Total				3.8539E+01	1.0416E+00												
						Package Total	3.8539E+01	1.0416E+00																	
15-000026 (KVCC-04) 3058	19 Fiber Box DI O	0.0600	4.536	< 5.000E-03	< 3.340E-07	< 1.670E-05	59(PAPER, PLASTIC)	0.0600	100	SOLID OXIDES / NP	NP	H-3	3.8539E+01	1.0416E+00	AU										
		2.1188	10.000	< 5.000E-01	< 2.000E+01	< 1.000E+03																			
								Sub Total				3.8539E+01	1.0416E+00												
						Package Total	3.8539E+01	1.0416E+00																	

**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	8. Demineralizer
2. Metal Box	10. Gas Cylinder
3. Plastic Drum or Pail	11. Bulk, 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: Process Requested**

C. Compaction
SR. Steam Reforming
DI. Direct Incineration
SI. Sort & Incinerate
D. Decon
C. Green is Clean
M. Metal Melt
T. Trans-Ship
L. Liquid for Incineration
OI. Oil for Incineration
O. Other (describe)

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

20. Charcoal	28. Demolition Rubble	36. Evaporator Bottoms/Sludges/ Concentrates
21. Incinerator Ash	30. Cation Ion-exchange Media	38. Compactible Trash
22. Soil	31. Anion Ion-exchange Media	40. Noncompactible Trash
23. Gas	32. Mixed Bed Ion-exchange Media	41. Animal Carcass
24. Oil	33. Contaminated Equipment	42. Biological Material (except animal carcass)
25. Aqueous Liquid	34. Organic Liquid (except oil)	43. Activated Material
26. Filter Media	35. Glassware or Labware	50. Other. Describe in item 11, or additional page
27. Mechanical Filter	38. Sealed Source/Device	
28. EPA or State Hazardous	37. Paint or Plating	

**NOTE 2A: Burial/Disposition Site**

B. Barnwell Waste Management Facility
E. Envirocare
R. Richland, WA
PR. Process and Return
O. Other

**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

Solidification	84. Vinyl Ester Styrene
90. Cement	99. Other. Describe in item 13, or additional page
91. Concrete (encapsulation)	
92. Bitumen	100. None Required
93. Vinyl Chloride	

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FORM 541A										EnergySolutions, Bear Creek Processing Operations				2. MANIFEST NUMBER KVCC1142015					
UNIFORM LOW-LEVEL RADIOACTIVE WASTE MANIFEST														3. PAGE 2 OF 2 PAGE(S)					
CONTAINER AND WASTE DESCRIPTION (CONTINUATION)										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER									
DISPOSAL CONTAINER DESCRIPTION										WASTE DESCRIPTION FOR EACH WASTE TYPE IN CONTAINER									
5. CONTAINER IDENTIFICATION NUMBER/ GENERATOR NUMBER	6. CONTAINER DESCRIPTION (See Note 1) PROCESS REQUESTED (See Note 1A) BURIAL/DISPOSITION (See Note 2A)	7. VOLUME m³ ft³	8. WASTE AND CONTAINER WEIGHT kg lb	9. SURFACE RADIATION LEVEL mSv/hr mrem/hr	10. SURFACE CONTAMINATION MBq/100 cm² dpm/100 cm²		11. WASTE DESCRIPTOR (See Note 2)	12. PHYSICAL DESCRIPTION APPROXIMATE WASTE VOLUME(S) IN CONTAINER m³ ft³		13. SOLIDIFICATION OR STABILIZATION MEDIA (See Note 3)	14. CHEMICAL DESCRIPTION CHEMICAL FORM/ CHELATING AGENT	WEIGHT % CHELATING AGENT IF > 0.1%	15. RADIOLOGICAL DESCRIPTION INDIVIDUAL RADIONUCLIDES AND ACTIVITY AND CONTAINER TOTAL; OR CONTAINER TOTAL ACTIVITY AND RADIONUCLIDE PERCENT			16. WASTE CLASSIFI- CATION AS - Class A Stable AU - Class A Unstable B - Class B C - Class C			
					ALPHA	BETA- GAMMA		RADIONUCLIDES	MBq				mCi						
8 - Innerpack Container																			
Shipment Total																			
		0.2400	15.878											1.1858E+02	3.2048E+00				
		8.4752	35.000																

**ATTACHMENT 1 – PELLET RETURN INFORMATION SHEET**

*Instructions: Please enter the information requested on this sheet using a black or blue ink pen. Please print legibly unless otherwise specified. If more than one pellet is being returned in the kit, then please make a copy of the blank sheet and complete it for each pellet. Once complete, attach this sheet on top of the inner box so that it is visible upon opening the outer box.*

1. Name (Print) Robert Kilkuskie, Ph.D.
2. Institution Serviced Kalamazoo Valley Community College
3. Date of Service (mm/dd/yyyy) 02-19-2015
4. Instrument Make and Model Number A2100
5. Instrument Serial Number 406336
6. Pellet Serial Number (if unknown, write "unknown") unknown
7. Pellet Reference Date (mm/dd/yyyy) 10-01-1994  
*If reference date is unknown, then please enter the date of service.*
8. Please place a checkmark below to identify the radioisotope that is being returned and its activity.

<u>129</u> I	<u>0.03</u> $\mu$ Ci	<u>x</u>	Quantity	
<input checked="" type="checkbox"/> <u>133</u> Ba	<u>1</u> $\mu$ Ci		<u>8</u> $\mu$ Ci	<input checked="" type="checkbox"/> <u>18.8</u> $\mu$ Ci
<u>137</u> Cs	<u>30</u> $\mu$ Ci		<u>40</u> $\mu$ Ci	
<u>152</u> Eu	<u>1</u> $\mu$ Ci		<u>12</u> $\mu$ Ci	<u>20</u> $\mu$ Ci
<u>226</u> Ra	<u>10</u> $\mu$ Ci		<u>20</u> $\mu$ Ci	
<u>241</u> Am	<u>130</u> $\mu$ Ci			

I certified that the radioactive material contained in this kit has been prepared and packaged according to the attached procedure.

Signature Dale L. FayDate (mm/dd/yyyy) 02-19-2015

## CONSIGNOR (Shipper)

Name Dale L. FayAddress 14324 Deering  
Livonia, MI 48154Phone 734 272 3166

## COSIGNEE

Caliper, A PerkinElmer Company

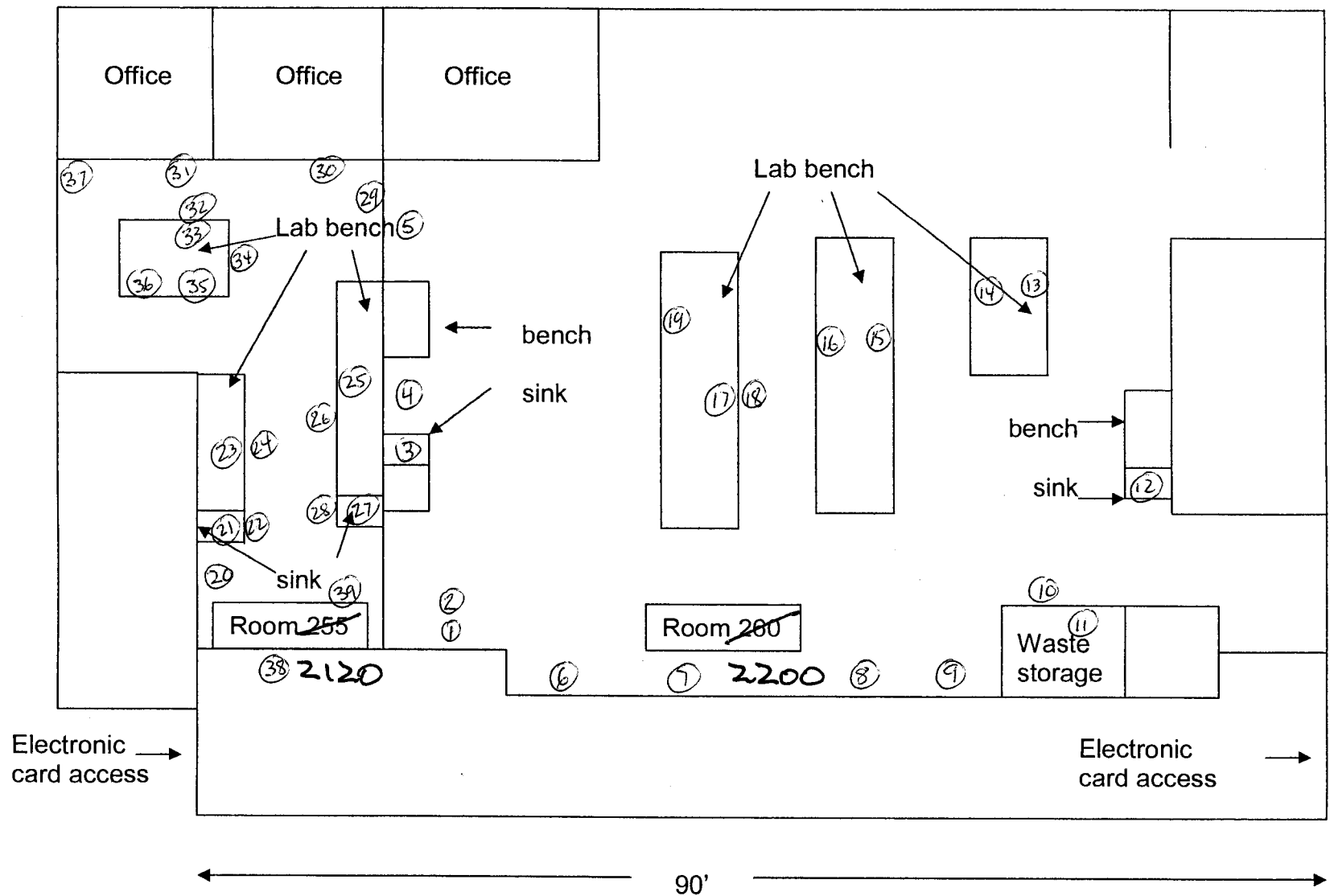
68 Elm Street

Hopkinton, MA 01748

508-435-9500

This package conforms to the conditions and limitations specified in 49 CFR 173.421 and the ICAO/IATA Dangerous Goods Regulations for RADIOACTIVE MATERIAL, EXCEPTED-PACKAGE, LIMITED QUANTITY OF MATERIAL (UN2910).

1-19-15  
wipe tests  
PACARD Tri-CALB  
2100 TR  
ser. 406336






1-19-15

Lab#	Location	Results
1	2200 Main door	no radioactivity detected
2	2200 Floor by door	no radioactivity detected
3	2200 Sink	no radioactivity detected
4	2200 Fume hood	no radioactivity detected
5	2200 passage door	no radioactivity detected
6	2200 -80 freezer	no radioactivity detected
7	2200 -20 freezer	no radioactivity detected
8	2200 -20 freezer	no radioactivity detected
9	2200 refrigerator	no radioactivity detected
10	2200 door to storage area	no radioactivity detected
11	2200 floor in storage area	no radioactivity detected
12	2200 sink	no radioactivity detected
13	2200 bench	no radioactivity detected
14	2200 bench	no radioactivity detected
15	2200 bench	no radioactivity detected
16	2200 bench	no radioactivity detected
17	2200 bench	no radioactivity detected
18	2200 floor	no radioactivity detected
19	2200 bench	no radioactivity detected
20	2120 fume hood	no radioactivity detected
21	2120 sink	no radioactivity detected
22	2120 floor	no radioactivity detected
23	2120 bench	no radioactivity detected
24	2120 floor	no radioactivity detected
25	2120 bench	no radioactivity detected
26	2120 floor	no radioactivity detected
27	2120 sink	no radioactivity detected
28	2120 floor	no radioactivity detected
29	2120 passage door	no radioactivity detected
30	2120 floor	no radioactivity detected
31	2120 floor	no radioactivity detected
32	2120 floor	no radioactivity detected
33	2120 bench	no radioactivity detected
34	2120 topcount	no radioactivity detected
35	2120 centrifuge	no radioactivity detected
36	2120 refrigerator	no radioactivity detected
37	2120 -20 freezer	no radioactivity detected
38	2120 main door	no radioactivity detected
39	2120 floor by door	no radioactivity detected

Kalamazoo**VALLEY™**  
**GROVESCENTER**

**The Groves Campus**  
7107 Elm Valley Drive, PO Box 4070  
Kalamazoo, MI 49003-4070



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Sara Forster  
Materials Licensing Branch  
United States Nuclear Regulatory Commission  
Region III  
2443 Warrenville Road, Suite 210  
Lisle IL 60532



RECEIVED JUL 13 2015