CAMMENGA AND ASSOCIATES

2011 Bailey St.
Dearborn, MI 48124
Phone: (313) 914-7160
Fax: (313) 914-7153

January 12, 2011

ATTN: MATERIALS LICENSING BRANCH
U. S. Nuclear Regulatory Commission, Region III
2443 Warrenville Road
Lisle, IL 60532-4352

License No. 21-26460-01

To Whom It May Concern:

Enclosed in this package is an amendment request for our possession license #21-26460-01. Cammenga & Associates is requesting an expedited review of this decommissioning amendment due to some unique circumstances.

Sincerely,

CAMMENGA AND ASSOCIATES

Deborah Spykerman

Deborah Spykerman
Radiation Safety Officer
debbi@cammenga.com

RECEIVED JAN 1 3 2011

CAMMENGA AND ASSOCIATES
2011 Bailey Street
Dearborn, MI 498124
Ph. (313) 914-7160
Fax (313)914-7153

January 10, 2011

MATERIALS LICENSING SECTION
U. S. Nuclear Regulatory Commission, Region III
2443 WARRENVILLE ROAD, SUITE 210
Lisle, IL 60532-4352

License No. 21-26460-01

Katie Streit,:

Enclosed is our Decommissioning Packet pertaining to the Material License for Manufacturing and Distribution – Self Luminous Products. Cammenga and Associates proposes to amend License #21-26460-01 as stated within the Significant Changes page.

Any questions you may have can be directed to me at the above phone number or e-mail below.

Sincerely,

CAMMENGA AND ASSOCIATES
Deborah Spykerman
Deborah Spykerman
Radiation Safety Officer
debbi@cammenga.com

Enclosures:

- Application for Material License, NRC FORM 313
- Enclosure 1 –Submission of items 5 – 11 of Amendment Application NRC FORM 313
- Attachment 1 – Current Possession License # 21-26460-01
- Notice of Significant Changes
- Enclosure 1- Decommission Plan
- Attachment 2–Layout and drawings of facility
- Attachment 3– Cammenga Survey Procedures
- Attachment 4 - Decommissioning Survey Test results
- Attachment 5– Cammenga Survey History

NRC FORM 374

U.S. NUCLEAR REGULATORY COMMISSION

Amendment No. 15

MATERIALS LICENSE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter I, Parts 30, 31, 32, 33, 34, 35, 36, 39, 40, and 70, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer byproduct, source, and special nuclear material designated below; to use such material for the purpose(s) and at the place(s) designated below; to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified below.

Licensee	In accordance with dated **August 27, 2010,**
1. Cammenga and Associates, LLC.	3. License number 21-26460-01 is amended in its entirety to read as follows:
2. 100 Aniline Avenue Holland, MI 49424	4. Expiration date April 30, 2013
	5. Docket No. 030-33009 Reference No.

6. Byproduct, source, and/or special nuclear material	7. Chemical and/or physical form	8. Maximum amount that licensee may possess at any one time under this license
A. Hydrogen-3	A. Sealed sources (Mb-Microtec AG Model Number 400/1)	A. 480,000 sources not to exceed 5 millicuries each
B. Hydrogen-3	B. Sealed sources (Mb Microtec AG Model Number 400/3)	B. 360,000 sources not to exceed 100 millicuries each
C. Hydrogen-3	C. Sealed sources (Mb Microtec AG Model Number 400/3)	C. 6 sources not to exceed 250 millicuries each

9. Authorized Use:

A. For installation in compasses and knives in accordance with NRC Registration No. 21-26460-02E, and applications dated September 11, 2006, July 18, 2008 and June 18, 2009. Also, for the receipt of compasses and watches incident to the removal of tritium sources for shipment to Mb-Microtec as described in application dated September 11, 2006.

B. For installation in compasses and knives in accordance with NRC Registration No. 21-26460-02E, and applications dated September 11, 2006, July 18, 2008 and June 18, 2009. Also, for the receipt of compasses incident to the removal of tritium sources for shipment to Mb-Microtec as described in application dated September 11, 2006.

C. For installation in compasses in accordance with NRC Registration No. 21-26460-02E. Also, for the receipt of compasses incident to the removal of tritium sources for shipment to Mb-Microtec or SRB Technologies, Inc.

MATERIALS LICENSE
SUPPLEMENTARY SHEET

License Number
21-26460-01

Docket or Reference Number
030-33009

Amendment No. 15

CONDITIONS

10. Licensed material shall be used only at the licensee's facilities located at 100 Aniline Avenue, Holland, Michigan **and 2011 Bailey Street, Dearborn, Michigan.**

11. Licensed material shall be used by, or under the supervision of Deborah Spykerman or Judy Emery.

12. The Radiation Safety Officer for this license is Deborah Spykerman.

13. This license does ot authorize commercial distribution of licensed material.

14. Licensed material shall not be used in or on human beings.

15. The licensee shall conduct a physical inventory every 6 months to account for all sources and/or devices received and possessed under the license.

16. The licensee may transport licensed material in accordance with the provisions of 10 CFR Part 71, "Packaging and Transportation of Radioactive Material."

17. Except as specifically provided otherwise in this license, the licensee shall conduct its program in accordance with the statements, representations, and procedures contained in the documents, including any enclosures, listed below. The U.S. Nuclear Regulatory Commission's regulations shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

    A. Applications dated January 24, 2003, June 27, 2004 , June 9, 2006, September 11, 2006, and July 18, 2008, June 18, 2009; and

    B. Letters dated June 27, 2005 (with enclosures), August 9, 2005 (with enclosures) and September 14, 2005, August 16, 2006, October 6, 2006, June 26, 2008, August 21, 2008, October 17, 2008, May 22, 2009, August 12, 2009 ,September 28, 2009 and **August 27, 2010**.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Date SEP 9 2010

By
James R. Mullauer, M.H.S.
Materials Licensing Branch
Region III

Enclosure 1

CAMMENGA AND ASSOCIATES, LLC
2011 Bailey Street
Dearborn, MI 48124
Ph. (313) 914-7160
Fax (313) 914-7153

January 11,2011

Subject: NRC FORM 313, items numbered 5 - 11. Items numbered **5 - 11** are not applicable, as there is no change to radioactive material, to the use of licensed material, to individuals responsible for the radiation program, to equipment, or to the safety program and guidelines. All policies previously in place will remain the same for the added facility.

NRC FORM 313 **U.S. NUCLEAR REGULATORY COMMISSION**
(10-2005)
10 CFR 30, 32, 33, 34, 35, 36, 39, and 40

APPLICATION FOR MATERIAL LICENSE

APPROVED BY OMB: NO. 3150-0120 **EXPIRES: 10/31/2008**

Estimated burden per response to comply with this mandatory collection request: 4.4 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), 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.

INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.

APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:

DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, DC 20555-0001

ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:

IF YOU ARE LOCATED IN:

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

LICENSING ASSISTANCE TEAM
DIVISION OF NUCLEAR MATERIALS SAFETY
U.S. NUCLEAR REGULATORY COMMISSION, REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

IF YOU ARE LOCATED IN:

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

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

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

NUCLEAR MATERIALS LICENSING BRANCH
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TX 76011-4005

PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S.NUCLEAR REGULATORY COMMISSION JURISDICTIONS.

1. THIS IS AN APPLICATION FOR *(Check appropriate item)*

- [ ] A. NEW LICENSE
- [x] B. AMENDMENT TO LICENSE NUMBER 21-26-460-01
- [ ] C. RENEWAL OF LICENSE NUMBER

2. NAME AND MAILING ADDRESS OF APPLICANT *(Include ZIP code)*

Cammenga & associates, LLC
100 Aniline Avenue
Holland, MI 49424

3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED

Cammenga & Associates, LLC
2011 Bailey Street
Dearborn, MI 48124

4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION

Deborah Spykerman

TELEPHONE NUMBER

(313) 914-7160

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

5. RADIOACTIVE MATERIAL
a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.

7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.

8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.

9. FACILITIES AND EQUIPMENT.

10. RADIATION SAFETY PROGRAM.

11. WASTE MANAGEMENT.

12. LICENSE FEES *(See 10 CFR 170 and Section 170.31)*
FEE CATEGORY NA AMOUNT ENCLOSED $ 0.00

13. CERTIFICATION. *(Must be completed by applicant)* THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTANED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 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.

CERTIFYING OFFICER -- TYPED/PRINTED NAME AND TITLE	SIGNATURE	DATE
Deborah Spykerman, Radiation Safety Officer	Deborah Spykerman	01/11/2011

FOR NRC USE ONLY

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			$		
APPROVED BY				DATE	

PRINTED ON RECYCLED PAPER

Enclosure 2

CAMMENGA AND ASSOCIATES, LLC
2011 Bailey Street
Dearborn, MI 48124
Ph. (313) 914-7160
Fax (313) 914-7153

Notice of Significant Changes

January 11, 2011

Cammenga and Associates, LLC requests license #21-26460-01 be amended to Remove the facility located at:

100 aniline Avenue

Holland, MI 49424

CAMMENGA AND ASSOCIATES
2011 Bailey St.
Dearborn, MI 48124
Phone: (313) 914-7160
Fax: (313) 914-7153

January 12, 2011

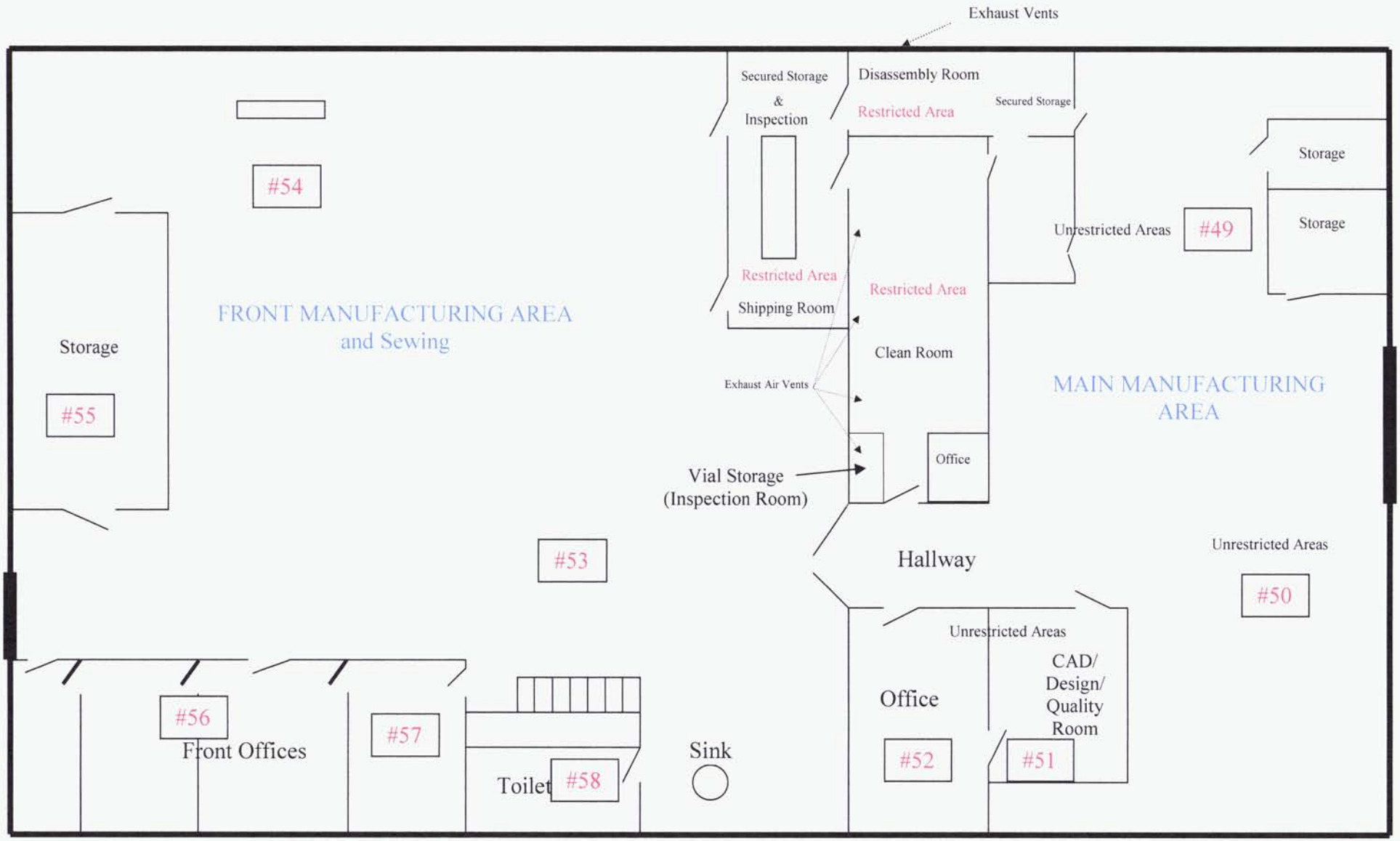
GENERAL DISCUSSION

Cammenga & Associates requests the approval for the decommissioning of its old facility located: 100 Aniline Ave. Suite 258, Holland, MI 49424. Our current possession license 21-26460-01 should be amended to show our only location as: 2011 Bailey St. Dearborn, MI 48124.

We request that this process be expedited because the owner of the 100 Aniline Ave. building is unable to use his facility until we have properly completed the decommissioning process. All physical testing has been successfully performed and the results are included in this package. An accelerated review will greatly relieve Cammenga & Associates of the financial burden of a facility that is no longer being utilized by its operations. Our financial wherewithal is paramount as we prepare to satisfy a new military contract.

CAMMENGA & ASSOC.

100 ANILINE AVE.
HOLLAND, MI 49424



OVERALL LAYOUT

Samples Selected For Surveys

Total Square Footage = 16,385

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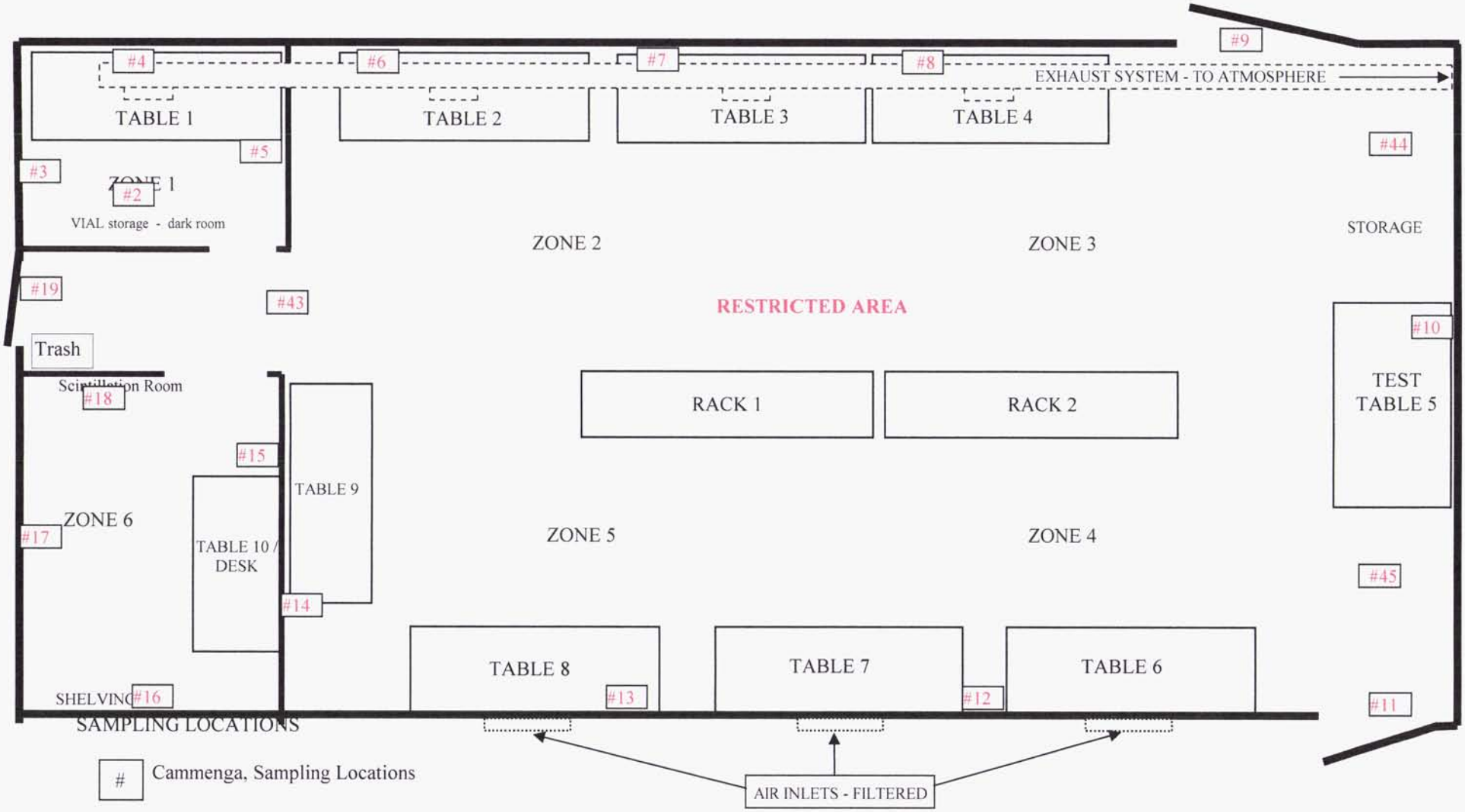
January 11, 2011

CAMMENGA & ASSOC.

100 ANILINE AVE.
HOLLAND, MI 49424



Cammenga, Sampling Locations

Samples Selected for Radiological Surveys

CLEAN ROOM

January 6, 2011

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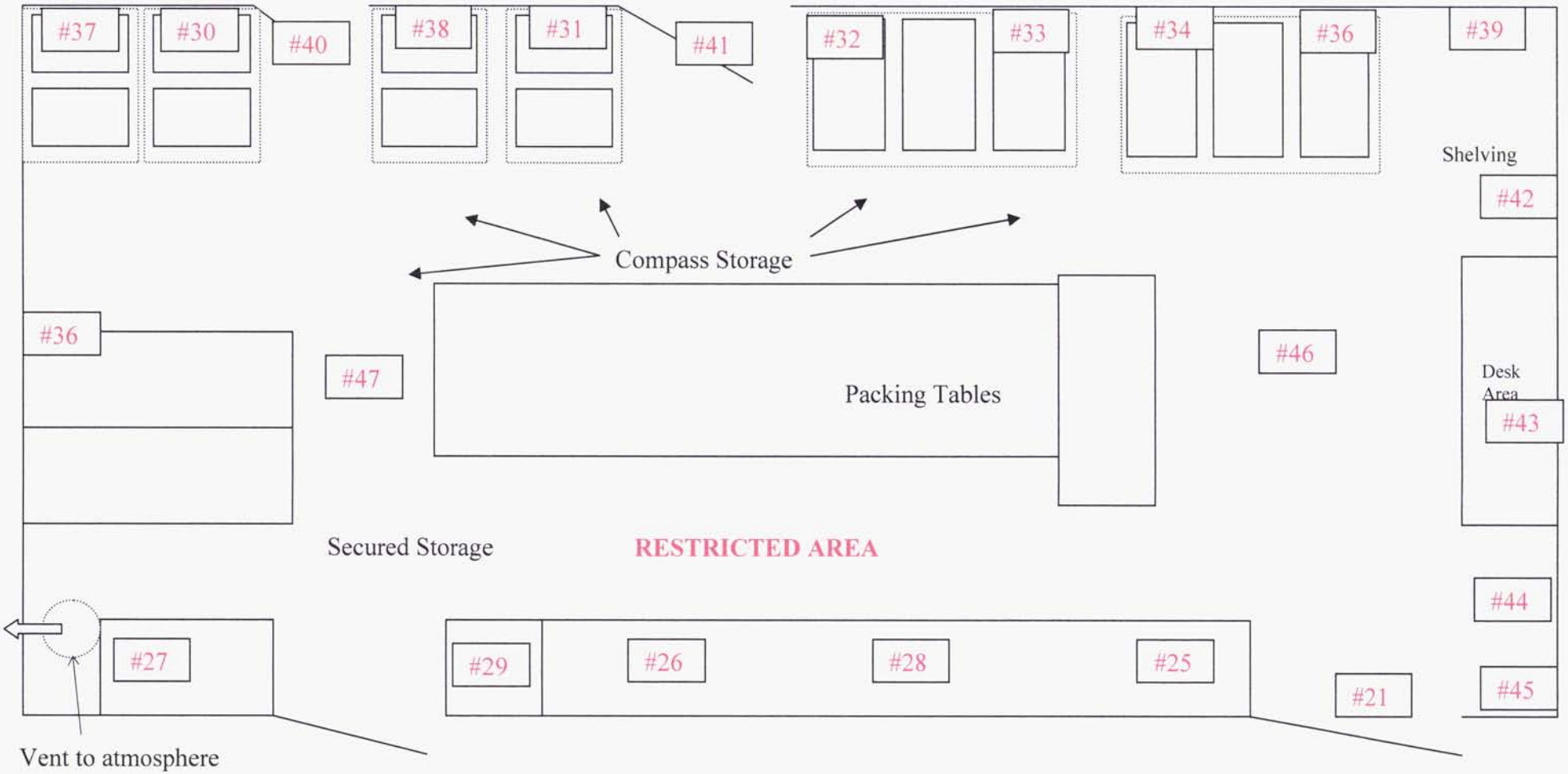
CAMMENGA & ASSOC.

100 ANILINE AVE.
HOLLAND, MI 49424



Cammenga Sampling Locations

Samplings Selected for Radiological Surveys

SHIPPING ROOM

January 11, 2011

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CAMMENGA & ASSOC.

100 ANILINE AVE.
HOLLAND, MI 49424

Exhaust Air From Cleanroom
Exhaust Air
Exhaust Air
#40
Vented to Outside
Table 3
#39
Rack
Table 4
Floor Area # 4
#7
Shelves
#6
Trash
Table 2
Floor Area # 3
Floor Area # 2
#5
#40
Shelves
Table 5
#20
Secured Door
#4
RESTRICTED AREA
STORAGE
#2
Shelves
#3
Floor Area # 1
Table 1
#21
Secured Door
Table 6
#41
Freezer
#37
Oven
#38
To Cleanroom
#42
Shelves

RECYCLING / RECLAIMING ROOM AND PRODUCT STORAGE AREA

FRONT VIEW

Exhaust Fans / Pipes (Direct to Atmosphere)
Vented hood
Table

SIDE VIEW - Table 4

2 vents to outside

January 11,2011

ENLARGEMENT, RECYCLING / RECLAIMING WORK TABLE WITH VENTED HOOD

C:\Users\debbi\Desktop\LayoutDisAssembly.doc

Cammenga Sampling Locations

Samples selected for radiological surveys

Cammerga Sample Location
Wipe Test Month end
November 2010

Protocol #: 2 Name:3H DPM U-G 02-Dec-2010 14:24
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

dpm 1,000 limit

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
8	1	10.00	15.05			178.	46	B	
8	2	5.00	0.00	0.00	0.00	193.	98		
8	3	5.00	20.33	104.94	104.94	195.	70		Zones 1-6
8	4	5.00	0.00	0.00	0.00	223.	97		
8	5	5.00	0.00	0.00	0.00	168.	82		
8	6	5.00	0.00	0.00	0.00	235.	82		
8	7	5.00	18.60	69.32	69.32	264.	45		
8	8	5.00	0.00	0.00	0.00	207.	89		
8	9	5.00	0.00	0.00	0.00	197.	79		
8	10	5.00	11.50	44.66	44.66	254.	65		Tables 1-9
8	11	5.00	0.03	0.20	0.20	171.	82		
8	12	5.00	0.00	0.00	0.00	206.	90		
18	13	5.00	0.55	2.47	2.47	220.	89		
18	14	5.00	0.00	0.00	0.00	227.	100		
18	15	5.00	0.00	0.00	0.00	190.	100		
18	16	5.00	12.38	43.29	43.29	282.	70		
18	17	5.00	5.13	18.94	18.94	267.	85		Racks 1+2
18	18	5.00	3.50	12.57	12.57	274.	83		Disassembly
18	19	5.00	0.00	0.00	0.00	186.	68		
18	20	5.00	0.00	0.00	0.00	208.	97		
18	21	5.00	13.68	66.60	66.60	205.	66		Tables 1-6
18	22	5.00	16.87	75.06	75.06	223.	72		
18	23	5.00	11.14	49.17	49.17	224.	55		
18	24	5.00	0.00	0.00	0.00	215.	89		
10	25	5.00	11.65	55.56	55.56	209.	61		
10	26	5.00	15.79	51.05	51.05	306.	55		Floor 1-6
10	27	5.00	2.79	12.46	12.46	222.	82		
10	28	5.00	0.00	0.00	0.00	195.	85		
10	29	5.00	12.72	60.22	60.22	210.	58		
10	30	5.00	0.00	0.00	0.00	181.	96		Racks 1-4
10	31	5.00	1.27	4.66	4.66	268.	68		
10	32	5.00	0.00	0.00	0.00	195.	77		
10	33	5.00	15.56	66.17	66.17	232.	78		
10	34	5.00	5.27	31.23	31.23	175.	74		Floor Area 1-4
10	35	5.00	0.00	0.00	0.00	230.	87		
10	36	5.00	0.00	0.00	0.00	198.	87		Disassembly Room
13	37	5.00	82.06	409.73	409.73	201.	85		Freezer
13	38	5.00	95.42	531.91	531.91	183.	43		Oven
13	39	5.00	76.18	447.94	447.94	176.	58		DIS-HOOD
13	40	5.00	145.95	540.38	540.38	266.	28		TRASHCAN
13	41	5.00	134.82	507.08	507.08	262.	41		Wall-EAST #1
13	42	5.00	121.49	505.18	505.18	237.	21		Wall-EAST #2
13	43	5.00	88.18	523.81	523.81	174.	28		Clean-additional #1
13	44	5.00	100.86	415.21	415.21	240.	24		#2
13	45	5.00	110.57	516.36	516.36	213.	47		#3
13	46	5.00	109.60	608.59	608.59	184.	27		SHop #1
13	47	5.00	138.73	762.22	762.22	185.	20		#2

for DECOMMISSION

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG
13	48	5.00	106.93	613.11	613.11	179.	35	#3
4	49	5.00	38.18	203.00	203.00	190.	65	SHOP FLOOR #1
4	50	5.00	32.91	177.08	177.08	188.	52	#2
4	51	5.00	53.00	226.44	226.44	231.	65	Quality Room
4	52	5.00	26.09	171.66	171.66	161.	66	Office
4	53	5.00	67.45	310.14	310.14	216.	86	Lunch area
4	54	5.00	232.83	1248.22	1248.22	189.	24	Shelf - South Wall (retest needed) Dis
4	55	5.00	45.48	266.49	266.49	176.	58	MANUFACTING AREA
4	56	5.00	53.00	298.15	298.15	182.	68	STORAGE
4	57	5.00	20.95	101.31	101.31	206.	72	FRONT OFFICE #1
4	58	5.00	22.64	153.50	153.50	158.	78	#2
4	59	5.00	20.27	94.43	94.43	213.	82	BATH AREA
4	60	5.00	99.06	580.84	580.84	176.	35	Rack -

Protocol #: 2 Name:3H DPM U-G 02-Dec-2010 20:25
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
14	1	10.00	7.23			185.	79	B	
14	2	5.00	3.29	22.09	22.09	159.	89	r	retest for 02 Dec. 2010 (shelf) Passed
14	3	5.00	12.29	56.42	56.42	216.	75	DiS	TRASH } misc. test
14	4	5.00	25.58	136.72	136.72	190.	49	SHSD	TRASH } misc. test

Decommissing Survey

Protocol #: 2 Name:3H DPM U-G 19-Dec-2010 16:15
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
21	1	10.00	13.09			190.	61	B	
21	2	5.00	218.33	682.89	682.89	317.	5	Wall #1	Dark Room N. Wall
21	3	5.00	124.53	417.61	417.61	294.	4	#2	E. wall
21	4	5.00	105.93	440.70	440.70	237.	6	#3	S. wall
21	5	5.00	130.93	602.24	602.24	216.	6	#4	W. wall
21	6	5.00	96.81	449.97	449.97	214.	23	Wall #1	Clean Room South
21	7	5.00	75.59	261.14	261.14	286.	63	#2	
21	8	5.00	89.77	313.93	313.93	282.	18	#3	
21	9	5.00	68.58	259.87	259.87	260.	40	# Door - shipping	
21	10	5.00	224.02	715.32	715.32	310.	5	West Wall	
21	11	5.00	61.58	332.56	332.56	188.	7	Door - North	
21	12	5.00	93.37	359.47	359.47	256.	13	Wall - North	
8	13	5.00	15.59	74.39	74.39	209.	53	#2	
8	14	5.00	1.83	8.60	8.60	212.	84	East wall	
8	15	5.00	32.56	198.11	198.11	171.	53	Office Walls #1	
8	16	5.00	17.17	87.13	87.13	198.	75	#2	
8	17	5.00	9.71	68.23	68.23	154.	67	#3	
8	18	5.00	29.65	145.30	145.30	204.	60	#4	
8	19	5.00	36.40	174.47	174.47	208.	13	EAST Door	
8	20	5.00	20.28	114.32	114.32	181.	49	Door #1 Disassembly	
8	21	5.00	15.25	87.74	87.74	179.	59	#2 Dis	
(3 missing vials)								Shipping	
18	25	5.00	0.00	0.00	0.00	214.	100	North wall #1	
18	26	5.00	2.18	9.30	9.30	232.	96	#2	
18	27	5.00	0.00	0.00	0.00	173.	100	#3	
18	28	5.00	15.99	73.37	73.37	216.	74	Shelf NWall #1	
18	29	5.00	1.13	4.34	4.34	256.	92	#2	
18	30	5.00	17.24	71.95	71.95	237.	78	Shelf South wall #1	
18	31	5.00	12.38	77.63	77.63	167.	48	2	
18	32	5.00	6.11	31.14	31.14	197.	80	3	
18	33	5.00	18.94	91.06	91.06	207.	88	4	
18	34	5.00	18.70	82.38	82.38	225.	87	5	
18	35	5.00	16.12	66.09	66.09	241.	66	6	
18	36	5.00	0.00	0.00	0.00	192.	87	Wall EAST	
10	37	5.00	17.34	82.18	82.18	210.	77	" SOUTH #1	
10	38	5.00	5.11	18.77	18.77	268.	84	#2	
10	39	5.00	0.00	0.00	0.00	233.	100	#3	
10	40	5.00	4.24	23.64	23.64	183.	77	Door - #1	
10	41	5.00	21.95	112.56	112.56	196.	64	#2	
10	42	5.00	28.62	144.58	144.58	199.	42	Wall - West #1	
10	43	5.00	7.06	41.59	41.59	175.	85	#2	
10	44	5.00	17.28	79.01	79.01	217.	50	#3	
10	45	5.00	2.18	11.85	11.85	187.	80	Shelf West wall	
10	46	5.00	18.42	77.92	77.92	233.	86	Floor area #1	

Disassembly Room
Decommissioning
Contamination testing 1000 dpm

Protocol #: 2 Name:3H DPM U-G 24-Dec-2010 15:01
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG
24	1	10.00	9.72			180.	46	B
24	2	5.00	0.00	0.00	0.00	225.	98	Floor - area (Center)
24	3	5.00	125.12	270.15	270.15	526.	9	Shelf - South wall
24	4	5.00	69.24	185.14	185.14	382.	17	Floor area # 1 (South)
24	5	5.00	56.38	169.98	169.98	330.	53	Floor area # 2 (West)
24	6	5.00	0.00	0.00	0.00	430.	100	Wall - South
24	7	5.00	81.00	201.73	201.73	423.	10	Wall - West

Very Brief Summary of the CAMMENGA Radiation Safety Concern

- CAMMENGA'S insert small glass "vials" that have a Phosphor coating on the inside and tiny amount of Tritium gas sealed inside. The Tritium gas "excites" the Phosphor and makes it glow, thus giving luminosity to certain areas of the compass.

- 100% of all vials are tested upon arrival.
- All vials are soaked in water and a sample of the water is analyzed. Any leaking vials are identified immediately, contained, and sent back to the manufacturer.
- All employees are tested monthly (through urine samples) or more often if a vial breaks.
- All tables, floors, tools, etc. within restricted areas are tested weekly or more often if exposed.
- Every shipment containing Tritium is wipe tested before leaving the building.
- Samples from every batch of compasses are tested by soaking the entire compass in water for 24 hours and by analyzing with a wipe test.
- CAMMENGA'S self-imposed safety levels surpass the government mandated safety levels typically by being 10 times safer.
- A $30,000 Scintillation machine analyzes all samples of urine, wipe tests, soak tests, etc.
- Every 6 months we re-train and re-test all employees.
- We log every incident; we keep a log of every vial and what it was installed into, we perform a vial inventory every month.

After we sell the compasses, they are exempt from all NRC regulations and control and are treated the same as any other product within any retail store.

CAMMENGA & ASSOCIATES, INC.

WIPE TEST PROGRAM

SUMMARY

1. Add cocktail (10ml) to bottles (2 pumps)
2. Wet Watman Paper with distilled water and wipe test in an 18" "S" formation.
3. Put paper in bottles and add distilled water to top rim (10ml)
4. Tighten caps and label as necessary.

TEST IN SAME ORDER EACH TIME

1. Cleanroom Zones - ***6 total***
2. Cleanroom Tables (one is desk) - ***9 total***
3. Cleanroom Racks - **2 total**
4. Disassembly room: Tables 1 - 6
   Floor areas 1 - 4
   RACK – top shelf, then 2nd, then 3rd, then bottom.
   Floor outside door leading to shipping
   Floor outside door, in Unrestricted Cleanroom
   Floor outside exit door to shop
5. Shipping floor near clean room door

Level limit is 1,000 dpm
35 BOTTLES TOTAL

TRASH / DRY WASTE

1. Clean Room
2. Disassembly
3. Shipping

Level limit is 220 dpm
38 BOTTLES TOTAL

END OF QUARTER

Must wipe test 5 additional areas.

1. Factory – machine shop
2. Factory - sewing
3. Unrestricted Cleanroom
4. Hallway
5. Office desk
6. Sink
7. Toilet floor.

Level limit is 220 dpm
45 BOTTLES TOTAL

WEEKLY RESTRICTED AREA CONTAMINATION TESTING
Printout Limit: 1000 dpm/Sample

MONTHLY UNRESTRICTED AREA CONTAMINATION TESTING
Printout Limit: 220 dpm/Sample

COMPASS CONTAMINATION TESTING
Printout Limit: 900 dpm/Sample

COMPASS DIFFUSION TESTING
Printout Limit: 3700 dpm/Sample

SHIPPING REQUIREMENTS
Printout Limit: 220 dpm/Shipment

VIAL DIFFUSION TESTING
Printout Limit: 11,100 dpm/Sample

DRY WASTE DISPOSAL TESTING
Printout Limit: 220 dpm/Sample

INCOMING/OUTGOING CONTAMINATION TESTING
- RECEIPT OF NEW VIALS
Printout Limit: 2200 dpm/Package

CAMMENGA & ASSOCIATES

DETAILED INSTRUCTIONS

WASTE DISPOSAL TESTING

1. LIQUID WASTE DISPOSAL

REQUIREMENT

All liquid wastewater that has been used in the testing and cleaning processes, as described in these testing procedures must be accounted for in both quantity and concentration prior to disposal.

Limit: **Monthly Concentration Limit = 1 E-2 uCi/ml**
Yearly Quantity Limit = 5Ci

STEPS:

a. Remove 10 ml of wastewater from container.
(determine total volume in ml units)
b. Add 10 ml cocktail.
c. Count using protocol #2.

Printout Limit: **Concentration in uCi/ml will be calculated from dpm level of each sample and totaled for each month to ensure < 1E-2 uCi/ml.**

Quantity in Ci will be calculated from monthly concentration total and monitored to ensure total yearly quantity will be < 5 Ci.

2. DRY WASTE DISPOSAL

STEPS:

a. Take a wet smear of at least 100 sq cm (or complete a sampling) of waste.
b. Place smear into testing bottle
c. Add 10 ml of distilled water
d. Add 10 ml of cocktail
e. Count using protocol #2

Printout Limit: **220 dpm/Sample**

(Rinse or clean and retest until sample is < 220 dpm prior to disposal)

CAMMENGA & ASSOCIATES

SCHEDULED LICENSE REQUIREMENTS

IMMEDIATE ACTION

Immediately notify the NRC via telephone if vials/compasses are determined to be lost, stolen, or missing in quantities greater than or equal to 1000 mCi (approximately 8 compasses).

Internal incident report if any vial is broken.

3-HOUR STORAGE OF VIAL RECEIPTS

Vial shipments shall be placed in the darkroom (locked) within 3 hours of receipt. Crushed, wet, or damaged packages shall be checked for contamination. (See "Receipt Of New Vials" procedure attached.)

An inventory of the number of vials in the shipment should be performed the day of the shipment to ensure that the number of vials received is equal to (or greater than) the number listed on the invoice.

100% of vials are soaked in water and a water sample is analyzed. Any leaking vials are identified immediately, contained, and sent back to the manufacturer.

DAILY

Outgoing packages containing 3H products shall have contamination test performed on exterior of package.

Wash work stations and equipment at the end of the work day using soap and water.

Perform contamination test of recycling/reclaiming area and tools <u>when in use.</u>

WEEKLY

Perform contamination test of restricted areas (darkroom, assembly area, shipping, and storage areas). This includes all tables, floors, tools, etc.

MONTHLY

INVENTORY ALL VIALS -- Final Working Day of Each Month. (This do not include any vials that are already placed in compasses or partial compasses, only individual vial sources.)

URINALYSIS TESTING – All personnel who have worked in the restricted areas (darkroom, assembly area, storage areas) or have handled vials or compasses containing vials.)

MONTHLY (Con't)

CONTAMINATION TESTING -- Unrestricted Areas (vestibule, machine shop, office, sink, and bathroom areas) as well as high traffic floor areas and equipment.

WASTE DISPOSAL TESTING – Total concentration levels for the month.

30-DAY NOTIFICATION

NOTIFY THE NRC in writing within 30 days if any vials/compasses are determined to be lost, stolen, or missing.

SPECIFIC / ROUTINE TESTING

Sample diffusion and wipe testing of commercial compasses. Each government compass lot shall receive diffusion and wipe testing as per sampling schedule.

YEARLY

PERIODIC REPORT OF TRANSFER - quantity of product and vials transferred to other persons.

YEARLY EXPOSURE REPORT -- PROVIDE TO –

All restricted area workers who are likely to receive > 10% of all ALI in 1 year. (10CFR19.13a)

NRC – if required by the NRC (10CFR20.2206)

WORKER TERMINATION

URINALYSIS RESULTS -- PROVIDE TO –

Any worker who has/has been terminated if requested by that worker. (10CFR19.13e)

CAMMENGA & ASSOCIATES

DETAILED PROCEDURES

COMPASS DIFFUSION TESTING

REQUIREMENT

125 compasses must meet requirements out of a lot of 3,200

Limit: .05 uCi/Day/Each Compass Tested

STEPS:

a. Soak 1 compass in 300 ml of distilled water for 24 hours.
   (Temperature should be 23.5 +/- 5 degrees C)
b. Remove 10 ml of soak water
c. Add 10 ml of cocktail
d. Count using protocol #2.

Printout Limit: 3700 dpm/Sample

CAMMENGA & ASSOCIATES

CONTAMINATION LIMITS/EXPOSURE LEVELS

ALI (Annual Limit Of Intake) 10CFR20 – Appendix B

Adults	80,000 uCi
Minors/Fetuses	8,000 uCi – 10% Of Adults

$2.22E^6$ dpm = 1 uCi

(2,220,000 dpm = 1 uCi)

or

$$1 \text{ dpm} = \frac{1}{2.22\,E^6} \text{ uCi} = 0.00000222 \text{ uCi}$$

1900 dpm = 0.004218 uCi

100 dpm = 0.000222 uCi

500 dpm = 0.00111 uCi Cammenga's Self-Imposed Limit

NOTE: If Above This Level, Testing Is Completed Again Until Level Is Below 500 dpm

ADD'L INFORMATION:

1 Picocuri = 2.2 dpm
1 Curi = 2.2×10^{12}

CAMMENGA & ASSOCIATES

DETAILED PROCEDURES

AREA CONTAMINATION TESTING

1. WEEKLY RESTRICTED AREA CONTAMINATION TESTING

STEPS:

a. Take a wet smear of at least 100 sq. cm. (approximately an 18 in. "S").
b. Place smear into test bottle.
c. Add 10 ml. of distilled water.
d. Add 10 ml. of cocktail.
e. Count using protocol #2 (with flag pushed, Pres F2 to start report. Background must be < 20).

Printout Limit: 1000 dpm/Sample

2. MONTHLY UNRESTRICTED AREA CONTAMINATION TESTING

Use same procedure as above, "Weekly Restricted Area Contamination Survey".

Printout Limit: 220 dpm/Sample

CAMMENGA & ASSOCIATES

DETAILED PROCEDURES

COMPASS CONTAMINATION TESTING

REQUIREMENT

125 compasses must meet requirements out of a lot of 3,200.

Limit: **900 dpm/Compass**

STEPS:

a. Take a wet smear of all exterior surfaces of completed compasses.
b. Place smear into test bottle.
c. Add 10 ml distilled water
d. Add 10 ml cocktail
e. Count using protocol #2

Printout Limit: **900 dpm/Sample**

Restricted Area
Wipe Test/Weekly
Wk Ending 11/13/10
< 1,000 dpm

Protocol #: 2 Name:3H DPM U-G 13-Nov-2010 13:56
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
18	1	10.00	8.09			179.	76	B	Clean Room
18	2	5.00	9.60	41.00	41.00	231.	90		Zone 1-6
18	3	5.00	0.00	0.00	0.00	272.	100		
18	4	5.00	3.56	13.11	13.11	267.	96		
18	5	5.00	0.00	0.00	0.00	252.	100		
18	6	5.00	21.24	79.96	79.96	262.	73		
18	7	5.00	0.00	0.00	0.00	197.	100		
18	8	5.00	0.00	0.00	0.00	232.	92		Tables 1-9
18	9	5.00	48.31	178.14	178.14	267.	61		
18	10	5.00	0.00	0.00	0.00	255.	100		
18	11	5.00	18.74	64.63	64.63	286.	76		
18	12	5.00	0.00	0.00	0.00	239.	100		
16	13	5.00	0.00	0.00	0.00	256.	96		
16	14	5.00	0.00	0.00	0.00	265.	97		
16	15	5.00	72.14	228.09	228.09	313.	62		
16	16	5.00	0.00	0.00	0.00	290.	100		
16	17	5.00	0.00	0.00	0.00	298.	100		Racks 1+2 Disassembly Room
16	18	5.00	3.20	10.09	10.09	314.	91		
16	19	5.00	12.07	45.13	45.13	263.	56		Tables 1-6
16	20	5.00	4.05	14.20	14.20	281.	79		
16	21	5.00	251.32	842.98	842.98	294.	24		
16	22	5.00	21.13	71.49	71.49	292.	82		
16	23	5.00	14.13	60.51	60.51	231.	50		
16	24	5.00	0.76	2.56	2.56	294.	87		
4	25	5.00	0.00	0.00	0.00	215.	100		Floor Areas 1-4
4	26	5.00	0.00	0.00	0.00	213.	96		
4	27	5.00	9.04	44.86	44.86	202.	65		
4	28	5.00	3.91	14.17	14.17	272.	84		
4	29	5.00	0.00	0.00	0.00	244.	92		Racks 1-4
4	30	5.00	0.00	0.00	0.00	243.	91		
4	31	5.00	0.00	0.00	0.00	214.	100		
4	32	5.00	15.86	70.69	70.69	222.	73		
4	33	5.00	0.00	0.00	0.00	217.	100		Floors/Doors Areas 1-4
4	34	5.00	7.88	36.92	36.92	212.	73		
4	35	5.00	0.00	0.00	0.00	251.	100		
4	36	5.00	0.00	0.00	0.00	184.	100		

RESTRICTED AREA

Dry Waste/Weekly

Week Ending 11-6-2010

< 220 dpm

Protocol #: 2 Name:3H DPM U-G 08-Nov-2010 14:23

Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00

Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00

Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00

Time = 5.00 QIP = tSIE/AEC ES Terminator = Count

Conventional DPM

Nuclide 1 = 241400

Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG
21	1	10.00	11.54			181.	61	B
21	2	5.00	0.00	0.00	0.00	266.	100	Clean Room
21	3	5.00	10.20	35.42	35.42	284.	91	Disassembly
21	4	5.00	0.00	0.00	0.00	254.	100	Shipping

Restricted Area
Wipe Test/Weekly
Wk Ending 11 / 6 / 2010
< 1,000 dpm

Protocol #: 2 Name:3H DPM U-G 08-Nov-2010 16:20
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
16	1	10.00	11.86			204.	71	B	Clean Room
16	2	5.00	0.00	0.00	0.00	241.	100		
16	3	5.00	0.76	2.60	2.60	289.	86		
16	4	5.00	0.21	0.78	0.78	259.	79		Zone 1-6
16	5	5.00	0.00	0.00	0.00	267.	98		
16	6	5.00	0.00	0.00	0.00	193.	98		
16	7	5.00	0.00	0.00	0.00	228.	100		
16	8	5.00	0.00	0.00	0.00	227.	100		
16	9	5.00	0.00	0.00	0.00	229.	96		
16	10	5.00	0.00	0.00	0.00	186.	91		Tables 1-9
16	11	5.00	0.00	0.00	0.00	233.	100		
16	12	5.00	0.00	0.00	0.00	177.	100		
24	13	5.00	21.63	68.66	68.66	312.	63		
24	14	5.00	0.00	0.00	0.00	256.	100		
24	15	5.00	2.68	11.64	11.64	228.	67		
24	16	5.00	0.00	0.00	0.00	267.	97		
24	17	5.00	0.00	0.00	0.00	297.	92		Racks 1+2
24	18	5.00	0.00	0.00	0.00	211.	90		Disassembly Room
24	19	5.00	0.00	0.00	0.00	235.	87		
24	20	5.00	39.97	157.92	157.92	249.	44		
24	21	5.00	0.00	0.00	0.00	239.	95		Tables 1-6
24	22	5.00	0.00	0.00	0.00	207.	100		
24	23	5.00	0.00	0.00	0.00	277.	98		
24	24	5.00	0.00	0.00	0.00	237.	89		
18	25	5.00	5.10	20.44	20.44	246.	86		
18	26	5.00	41.53	171.71	171.71	239.	52		Floor Areas 1-4
18	27	5.00	7.67	28.06	28.06	269.	86		
18	28	5.00	39.55	165.68	165.68	236.	65		
18	29	5.00	268.06	1465.40	1465.40	186.	19		Retest Rack #1
18	30	5.00	312.31	1587.20	1587.20	198.	23		Retest Rack #2 Racks 1-4
18	31	5.00	20.68	98.71	98.71	209.	75		
18	32	5.00	29.05	128.64	128.64	224.	68		
18	33	5.00	109.99	484.88	484.88	225.	41		
18	34	5.00	35.86	146.50	146.50	241.	76		Floors/Doors 1-4
18	35	5.00	13.50	60.11	60.11	222.	88		
18	36	5.00	19.00	88.86	88.86	213.	81		

Restricted Area
Wipe Test/Weekly
Wk Ending 11/6/2010
< 1,000 dpm

Protocol #: 2 Name:3H DPM U-G 09-Nov-2010 09:23
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
80	1	10.00	15.21			205.	40	B	
80	2	5.00	12.18	61.27	61.27	199.	72		RACK #1
80	3	5.00	0.00	0.00	0.00	212.	92		RACK #2

RESTRICTED AREA
Dry Waste/Weekly
Week Ending 11-13-10
< 220 dpm

Protocol #: 2 Name:3H DPM U-G 13-Nov-2010 13:26
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
14	1	10.00	19.16			203.	28	B	
14	2	5.00	0.00	0.00	0.00	241.	96		Clean Room
14	3	5.00	0.00	0.00	0.00	206.	100		Disassembly
14	4	5.00	0.00	0.00	0.00	299.	93		Shipping

Protocol #: 2 Name:3H DPM U-G 22-Nov-2010 17:28
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG
10	1	10.00	9.28			181.	45	B
10	2	5.00	102.87	272.67	272.67	387.	43	
10	3	5.00	41.24	122.21	122.21	336.	64	
10	4	5.00	62.92	170.92	170.92	374.	41	
10	5	5.00	54.76	171.25	171.25	317.	59	
10	6	5.00	46.84	137.21	137.21	341.	40	
10	7	5.00	48.26	114.29	114.29	457.	24	
10	8	5.00	52.32	183.65	183.65	281.	27	
10	9	5.00	79.38	234.35	234.35	338.	29	
10	10	5.00	61.93	215.19	215.19	284.	63	
(1 missing vial)								
10	12	5.00	0.00	0.00	0.00	297.	91	
18	13	5.00	1.97	6.15	6.15	316.	84	
18	14	5.00	0.56	1.52	1.52	377.	60	
18	15	5.00	4.59	12.57	12.57	370.	72	
18	16	5.00	5.38	15.27	15.27	353.	77	
18	17	5.00	1.53	4.06	4.06	387.	85	
18	18	5.00	6.78	16.43	16.43	441.	81	
18	19	5.00	0.00	0.00	0.00	391.	72	
18	20	5.00	0.00	0.00	0.00	326.	100	
18	21	5.00	0.00	0.00	0.00	376.	84	
18	22	5.00	0.00	0.00	0.00	351.	85	
18	23	5.00	0.00	0.00	0.00	328.	81	
18	24	5.00	28.95	113.52	113.52	251.	36	
21	25	5.00	4.84	14.63	14.63	329.	89	
21	26	5.00	11.61	37.71	37.71	304.	67	
21	27	5.00	21.78	70.58	70.58	305.	67	
21	28	5.00	5.57	14.84	14.84	383.	66	
21	29	5.00	30.00	114.38	114.38	258.	47	
21	30	5.00	6.70	21.31	21.31	311.	79	
21	31	5.00	12.25	33.41	33.41	371.	42	
21	32	5.00	8.17	27.20	27.20	297.	81	
21	33	5.00	13.70	42.04	42.04	323.	72	
21	34	5.00	0.00	0.00	0.00	238.	100	
21	35	5.00	9.49	50.96	50.96	189.	77	
21	36	5.00	19.08	65.33	65.33	288.	66	
(1 missing vial)								
16	38	5.00	63.79	176.13	176.13	365.	23	
16	39	5.00	133.18	385.29	385.29	345.	14	
16	40	5.00	123.80	362.91	362.91	340.	17	
16	41	5.00	70.47	217.31	217.31	322.	26	
16	42	5.00	85.77	294.65	294.65	287.	20	
16	43	5.00	143.48	481.51	481.51	294.	34	
16	44	5.00	111.53	328.55	328.55	338.	8	
16	45	5.00	83.45	227.58	227.58	372.	14	
16	46	5.00	111.64	335.88	335.88	330.	21	
16	47	5.00	107.68	437.70	437.70	243.	20	

Lot# 11 / 10 / 2010
Lg # 2
Soak 900
Diffusion < 11,100 dpm

Lot # 11 / 10 / 2010
Smalls # 3
Soak 2500
Diffusion < 11,100 dpm

Lot# 11 / 10 / 2010
Mediums # 2
Soak 2500
Diffusion < 11,100 dpm

22 Nov - 2010
MD continued

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG
16	48	5.00	157.81	438.50	438.50	362.	15	
4	49	5.00	87.34	247.61	247.61	354.	28	
4	50	5.00	120.98	325.10	325.10	379.	10	
4	51	5.00	103.80	311.85	311.85	331.	34	
4	52	5.00	197.08	567.32	567.32	347.	10	
4	53	5.00	109.69	308.17	308.17	357.	22	
4	54	5.00	75.50	198.78	198.78	390.	12	
4	55	5.00	90.41	255.36	255.36	355.	15	
4	56	5.00	96.26	265.39	265.39	366.	51	
4	57	5.00	106.54	368.94	368.94	285.	17	
4	58	5.00	88.08	260.49	260.49	337.	23	
4	59	5.00	76.75	205.34	205.34	382.	24	
4	60	5.00	116.31	368.32	368.32	312.	16	
8	61	5.00	143.00	600.44	600.44	235.	31	
8	62	5.00	153.83	581.53	581.53	261.	8	

Shipping 220 dpm

Protocol #: 2 Name:3H DPM U-G 24-Nov-2010 16:37
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG
14	1	10.00	11.34			176.	27	B
14	2	5.00	21.98	63.11	63.11	349.	82	

RESTRICTED AREA
Dry Waste/Weekly
Week Ending 11.27.2010
< 220 dpm

Protocol #: 2 Name:3H DPM U-G 26-Nov-2010 10:02
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
4	1	10.00	3.80			180.	85	B	
4	2	5.00	0.00	0.00	0.00	188.	100		Clean Room
4	3	5.00	0.00	0.00	0.00	194.	100		DisAssembly Room
4	4	5.00	0.00	0.00	0.00	181.	100		Shipping Room

Restricted Area
Wipe Test/Weekly
Wk Ending 11/27/2010
< 1,000 dpm

Protocol #: 2 Name:3H DPM U-G 26-Nov-2010 10:31
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG	
10	1	10.00	5.15			177.	84	B	Clean Room
10	2	5.00	0.00	0.00	0.00	232.	100		
10	3	5.00	0.00	0.00	0.00	216.	93		
10	4	5.00	0.00	0.00	0.00	202.	96		Zone 1-6
10	5	5.00	0.00	0.00	0.00	222.	96		
10	6	5.00	6.95	33.32	33.32	208.	93		
10	7	5.00	0.00	0.00	0.00	155.	99		
10	8	5.00	12.13	58.13	58.13	208.	90		
10	9	5.00	0.00	0.00	0.00	233.	100		
10	10	5.00	0.00	0.00	0.00	233.	100		
10	11	5.00	4.56	18.58	18.58	242.	87		Tables 1-9
10	12	5.00	0.00	0.00	0.00	222.	100		
24	13	5.00	17.37	58.79	58.79	292.	52		
24	14	5.00	0.00	0.00	0.00	238.	100		
24	15	5.00	4.22	15.25	15.25	273.	92		
24	16	5.00	2.73	14.05	14.05	195.	86		
24	17	5.00	0.00	0.00	0.00	230.	100		Racks 1+2
24	18	5.00	0.00	0.00	0.00	229.	100		Disassembly Room
24	19	5.00	0.00	0.00	0.00	200.	99		
24	20	5.00	0.00	0.00	0.00	225.	100		
24	21	5.00	5.20	31.88	31.88	170.	81		Tables 1-6
24	22	5.00	2.85	15.38	15.38	188.	70		
24	23	5.00	3.14	12.53	12.53	247.	86		
24	24	5.00	5.84	23.62	23.62	244.	67		
7	25	5.00	0.00	0.00	0.00	238.	100		
7	26	5.00	0.00	0.00	0.00	151.	100		Floor Areas 1-4
7	27	5.00	0.00	0.00	0.00	239.	84		
7	28	5.00	1.46	7.59	7.59	194.	92		
7	29	5.00	0.00	0.00	0.00	150.	100		
7	30	5.00	2.16	10.99	10.99	198.	83		Racks 1-4
7	31	5.00	0.04	0.17	0.17	228.	94		
7	32	5.00	0.00	0.00	0.00	197.	100		
7	33	5.00	0.00	0.00	0.00	192.	93		
7	34	5.00	0.00	0.00	0.00	191.	100		Floors/Door Areas 1-4
7	35	5.00	0.00	0.00	0.00	182.	100		
7	36	5.00	0.00	0.00	0.00	172.	100		

Shipping 220 dpm

Protocol #: 2 Name:3H DPM U-G 29-Nov-2010 16:53
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG
4	1	10.00	3.41			185.	90	B
4	2	5.00	8.18	49.86	49.86	171.	95	

Shipping 220 dpm

Protocol #: 2 Name:3H DPM U-G 30-Nov-2010 17:55
Region A: LL-UL= 0.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region B: LL-UL= 2.0-18.6 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Region C: LL-UL= 0.0- 0.0 Lcr= 0 Bkg= 0.00 %2 Sigma=0.00
Time = 5.00 QIP = tSIE/AEC ES Terminator = Count
Conventional DPM
Nuclide 1 = 241400
Luminescence Correction On

PID	S#	TIME	CPMA	DPM1	DPM1	tSIE	LUM	FLAG
4	1	10.00	3.84			188.	88	B
4	2	5.00	0.00	0.00	0.00	259.	100	

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