F E N T O N

Handcrafted American Glass Artistry

Date: October 26, 2015

Br. 2

04003149

Licensing Assistant Section
Nuclear Materials Safety Branch
U.S. Nuclear Regulatory Commission, Region 1
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713

RECD 11 02:15 AM 0853

Re: Retirement of License #SUB-491. Fenton Art Glass Company

Dear Sir/Madam:

All processes using radioactive material were ceased in November 2011 and all remaining material was transferred to Nuclear Fuel Services on October 13, 2014. The Fenton Art Glass Company discontinued melting glass in 2011 and does not anticipate restarting. Thus we are requesting that our license be terminated.

If you have any questions please contact me at 304 375 6122 ext 233.

Best regards,

George W Fenton

George W. Fenton
President
Fenton Art Glass Company

589275

NMSS/RGN1 MATERIALS-002

NRC FORM 314
(02-2014)
10 CFR 30.36(j)(1); 40.42(j)(1); 70.38(j)(1); and 72.54(k)(5)(1)(1)

U.S. NUCLEAR REGULATORY COMMISSION

CERTIFICATE OF DISPOSITION OF MATERIALS

APPROVED BY OMB: NO. 3150-0028 EXPIRES: 02/28/2017

LICENSEE NAME AND ADDRESS	LICENSE NUMBER	DOCKET NUMBER
FENTON ART GLASS COMPANY 700 ELIZABETH ST. WILLIAMSTOWN WV 26187	SUB-491	04003149
	LICENSE EXPIRATION DATE: NOVEMBER 30, 2015	

A. LICENSE STATUS (Check the appropriate box)

☐ This license has expired. ☒ This license has not yet expired; please terminate it.

B. DISPOSAL OF RADIOACTIVE MATERIAL

(Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)

The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

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

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

☒ a. Transfer of radioactive materials to the licensee listed below: NUCLEAR FUEL SERVICES, INC
PO BOX 337 MS 123
ERWIN TN 37650
OCTOBER 13, 2014
SEE ATTACHED TRANSACTION REPORT AND RADIOLOGICAL SURVEY OF SHIPPING CONTAINER

☐ b. Disposal of radioactive materials:

☐ 1. Directly by the licensee: ALL MATERIAL TRANSFERRED PER 2A

☐ 2. By licensed disposal site:

☐ 3. By waste contractor:

☐ c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA. ALL RADIOACTIVE RAW MATERIAL & PROCESSED MATERIAL REMOVED PER 2A

C. SURVEYS PERFORMED AND REPORTED

☐ 1. A radiation survey was conducted by the licensee. The survey confirms: RADIATION LEVELS WITHIN

☐ a. the absence of licensed radioactive materials STORAGE AND PROCESS AREAS HAVE BEEN REVIEWED - SEE ATTACHED REPORT. 10-17-14

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

☒ 2. A copy of the radiation survey results:

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

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

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

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

NAME	TITLE	TELEPHONE (Include Area Code)	E-MAIL ADDRESS
GEORGE FENTON	PRESIDENT	304 375 6122 EXT 233	gfenton@fentonartglass.com

Mail all future correspondence regarding this license to:

GEORGE FENTON, FENTON ART GLASS, 700 ELIZABETH ST, WILLIAMSTOWN WV 26187

C. CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE	SIGNATURE	DATE
GEORGE FENTON, President	George W Fenton	10-23-15

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 RESPECT. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

30G-14- 0352

DOE/NRC F 741
(5-2002) Previous editions are obsolete
MANDATORY DATA COLLECTION
AUTHORIZED BY 10 CFR 30, 40, 50, 70, 72, 74
75 150 Public Laws 83-703, 93-438, 95-91

U.S. DEPARTMENT OF ENERGY AND U.S. NUCLEAR REGULATORY COMMISSION

NUCLEAR MATERIAL TRANSACTION REPORT

Approved By OMB No 3150-0003

SNM-03-01

Estimated burden per response to comply with this mandatory collection request 45 minutes. This information is required for IAEA accounting reports that show changes in inventory of nuclear materials. Send comments regarding burden estimate to the Records Management Branch (T-6 E6) U.S. Nuclear Regulatory Commission, Washington DC 20555-0001 or by internet e-mail infocollects@nrc.gov, and to the Desk Officer of Information and Regulatory Affairs NEOB-10202 (3150-0003), 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.

1 Shipper's RIS	2 Receiver's RIS	3 Transaction No	4 Correction No	5. Processing Code	6 Action Code	7 Documentation (Only if document is classified SECRET)
XJL	ZQM	2		A Shipper A / B Receiver A	A Shipper A / B Receiver B	Copy of Copies Series

8 A Name and Address of Shipper / B License No	9 A Name and Address of Receiver / B License No.	10 Number of Data Lines	11 Nature of Transaction
Fenton Art Glass Company **420 Caroline Avenue** **Williamstown, WV 26187** C Attention **Mike Fenton** D Telephone **304-375-6122**	**Nuclear Fuel Services, Inc.** **P.O. BOX 337 MS 123** **Erwin, TN 37650** C Attention **Clayton Brown** D Telephone **423-735-5535**	1	

12 A Shipped For Acct Of / B RIS	13 A Shipped To Acct Of / B RIS

No	Distribution of Copies
1	XJL
2	ZQM
3	ZQM-XJL
4	
5	
6	
7	

14 Transfer Authority Contract, NM Draft, or Order Number

15 Export or Import Transfers a License No

16 Material Type and Description

Depleted Uranium Powder

17 Line Number	18 Country of Obligation	19 Material Type	20 Obligated Element Weight	21 Obligated Isotope Weight	22 Action Date	Month	Day	Year
					A. Shipment	**10**	**13**	**2014**
					B Shipper's Corr			
					C Receipt	**10**	**15**	**2014**
					D Receiver's Meas			
					E Receiver's Corr			

23 A Miscellaneous — B Concise Note Attached ☐ Yes ☐ Yes ☐ No

Sales Order 1566Y
Bill of Lading P27952
Tranfer # 41319

24 Total Gross Weight **10.9**

25 Total Volume (Waste Transfers Only)

	Back Reference Number A	Line No B	Type of Inv Chang C	Identification (Item/Batch Name) D	No of Items E	Project Number F	Material Type G	Comp Facility Code H	Owner Code I	Key Meas Point J	Meas Ident K 1 Basis	2 OMP	3 Method	Gross Weight L	Net Weight M	Element Weight N	Element Limit of Error O	Weight % Isotope P	Isotope Weight Q	Isotope Limit of Error R
26. Shipper's Data		1			1		10	455	J							7		0.22		

26 **Shipper's** Data — T. Signature of Authorized Official and Date Signed

27 **Receiver's** Data — T. Signature of Authorized Official and Date Signed: Clayton Brown 10-20-14

27. Receiver's Data		1			1		10	455	J							7		0.22		

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. S18 U.S.C. Section 1001 makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

MSES consultants, inc.

609 West Main Street • P.O. Drawer 190 • Clarksburg, WV 26302-0190
304.624.9700 • 304.622.0981 • 304.842.3325 • http://www.msesinc.com
Office Fax 24 Hour World Wide Web

October 16, 2014
Project No. 14-511

Mr. George Fenton
President
Fenton Art Glass Company
700 Elizabeth St.
Williamstown, WV 26187

LETTER REPORT
RADIOLOGICAL SURVEY
SHIPPING CONTAINER
UN2912, RADIOACTIVE MATERIAL
WILLIAMSTOWN, WEST VIRGINIA

Dear Mr. Fenton:

INTRODUCTION

On October 9, 2014 Fenton Art Glass Company (Fenton) requested assistance from MSES consultants inc. (MSES) with a Radiological Survey of a shipping container to be used in the transport of Radioactive Material (UN2912 – Low specific activity (LSA-1) fissile excepted) from the 700 Elizabeth Street, Williamstown, WV location to Nuclear Fuel Services, Inc, (NFS) 1205 Banner Hill Road, Erwin, TN 37650.

MSES (Daniel Arnold) met with the NFS representative at Fenton's facility on October 13, 2014 and conducted a radiological survey of the shipping container.

IDENTIFIED CONTAINER

The shipping container surveyed was provided by NFS and delivered to the Fenton facility by NFS employee Annette K. Reynolds. Ms. Reynolds packaged the material to be shipped in the new container and deployed sealing devices and placed tamper evident seals on the container. The container was a black, metal, cylindrical container with a white lid and a capacity of approximately 5 gallons.

RADIOLOGICAL SURVEY EQUIPMENT

MSES placed a Ludlum Measurements, Inc. Model 3 Survey Meter (S/N 305787) and Ludlum Model 44-9 (S/N PR333692) Alpha, Beta, Gamma Detector (GM) into operation in order to

conduct the radiological survey of the subject container. This system was calibrated by the manufacturer on January 15, 2014. The calibration certificates are attached to this Letter Report. MSES conducted a reference check of the survey meter and detector prior to conducting any measurements at the site. A pre-survey and post survey reference check was performed using a Cs-137 Check Source with Serial Number 1811. The results of the reference check are depicted in *Table 1*. According to the operating instructions, the detector should read within ±20% of the target readings for the Check Source. The Model 3 and GM system was demonstrated to be working correctly prior to the survey and at the conclusion of the survey.

TABLE 1
Reference Check Results (Cs-137 S/N 1811)

Date	Time	GM(Target)	GM (Reading)
10/13/14	1043	≈22μR/hr	≈22μR/hr
10/13/14	1115	≈22μR/hr	≈22μR/hr

μR/hr – micro Roentgen per hour

Prior to conducting any survey of the container a background reading was established. The background reading was obtained on the laboratory counter in the room adjacent to where the shipping container was located. The background reading obtained is depicted in *Table 2*.

TABLE 2
Background Readings (GM detector)

Location ID	Description	μR/hr	μSv/hr
BM-1	Lab counter in adjacent room	0.4	0.00424

μR/hr – micro Roentgen per hour
μSv/hr – micro Sieverts per hour
BM – Background Measurement Location

CONTAINER SURVEY

MSES conducted the 'Exposure Rate Measurement' survey by recording a 'contact' reading and a 1 meter distance reading. The 'contact' survey was conducted by placing the GM Detector in contact with the shipping container and recording the meter reading. The GM detector was placed at approximately 1 meter from the shipping container and the meter reading was recorded. MSES also conducted a wipe test of the container. A 'Kimwipe' was used to swab a 10 cm by 10 cm area (100 cm^2). The GM detector was then used to survey the 'Kimwipe'. All readings obtained during the survey of the shipping container are depicted in *Table 3*.

TABLE 3
Survey Readings (GM detector)

Location ID	Description	μR/hr	μSv/hr
Contact	GM Detector in contact with container	10	0.106
1-meter	GM Detector 1 meter from container	0.8	0.0085
Wipe test	100 cm^2 area of container	0.2	0.0021

μR/hr – micro Roentgen per hour
μSv/hr – micro Sieverts per hour
BM – Background Measurement Location

SUMMARY

The procedures and practices employed by MSES during the conduct of this survey are commensurate with the procedures and practices recognized by governmental and other agencies. The readings observed during this 'Exposure Rate Measurement' survey fall within the acceptable range for commercial shipping when appropriate labeling is applied to the container. The appropriate labels were applied to container by NFS prior to their representative departing the facility.

In your review of this Letter Report, should you have questions or need additional information, please do not hesitate to contact us.

Sincerely,

Daniel T. Arnold, CES, MLS
Senior Environmental Scientist

Lawrence M. Rine, MSEE, RSO
Senior Project Manager

Enclosed:
Certificate of Calibration

CERTIFICATE OF CALIBRATION

Ludlum Measurements, Inc.

MSES

Designer and Manufacturer of Scientific and Industrial Instruments

CERTIFICATE OF CALIBRATION

LUDLUM MEASUREMENTS, INC.
601 Oak Street, 325-235-5494, Sweetwater, TX 79556, U.S.A.
10744 Dutchtown Road, 865-392-4601, Knoxville, TN 37932, U.S.A.

CUSTOMER MSES CONSULTANTS INC ORDER NO. 20237079

Mfg. Ludlum Measurements, Inc. Model 3 Serial No. 305787

Mfg. Ludlum Measurements, Inc. Model 44-2 Serial No. PR335157

Cal. Date 15-Jan-14 Cal Due Date 15-Jan-15 Cal. Interval 1 Year Meterface 202-654

Check mark ☑ applies to applicable instr. and/or detector IAW mfg. spec. T. 75 °F RH 17 % Alt 710.8 mm Hg

☑ New Instrument Instrument Received ☐ Within Toler. +-10% ☐ 10-20% ☐ Out of Tol. ☐ Requiring Repair ☐ Other-See comments

☑ Mechanical ck. ☑ Meter Zeroed ☐ Background Subtract ☐ Input Sens. Linearity
☑ F/S Resp. ck ☑ Reset ck. ☐ Window Operation ☑ Geotropism
☑ Audio ck. ☐ Alarm Setting ck. ☑ Batt. ck. (Min. Volt) 2.2 VDC
☐ Calibrated in accordance with LMI SOP 14.8 rev 12/05/89. ☑ Calibrated in accordance with LMI SOP 14.9 rev 02/07/97.

Instrument Volt Set 900 V Input Sens. 29 mV Det. Oper. 900 V at 29 mV Threshold Dial Ratio N/A = N/A mV

☐ HV Readout (2 points) Ref./Inst. N/A / N/A V Ref./Inst. N/A / N/A V

COMMENTS:

Cs-137 ≈ 1 µCi check source SN 1811 reads ≈ 6 µR/hr @ x 100 (≈ 600 µR/hr)
with label side of check source placed against detector end (crystal end) of 44-2.

Cs-137 ≈ 1 µCi check source SN 1811 reads ≈ 4 kcpm @ x 1 (≈ 4 kcpm)
with label side of check source placed against protective screen of 44-9.

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

RANGE/MULTIPLIER	REFERENCE CAL. POINT	INSTRUMENT REC'D "AS FOUND READING"	INSTRUMENT METER READING*
X 100	4000 µR/hr	N/A	40
X 100	1000 µR/hr		10
X 10	400 µR/hr = 71000 cpm		40
X 10	100 µR/hr		10
X 1	7100 cpm		40
X 1	1770 cpm		10
X 0.1	710 cpm		40
X 0.1	177 cpm		10
N/A	N/A		N/A
N/A	N/A		5

*Uncertainty within ± 10% C.F. within ± 20%

X1,XO.1 Range(s) Calibrated Electronically

	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*
Digital Readout	N/A		
Log Scale	N/A		

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques.
The calibration system conforms to the requirements of ANSI/NCSL Z540-1-1994 and ANSI N323-1978 State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: Cs-137 S/N: ☐ 059 ☐ 280 ☑ 720 ☐ 734 ☐ 781 ☐ 1131 ☑ 1616 ☐ 1696 ☐ 1909 ☐ 1916CP ☐ 5105 ☐ 5717CO ☐ 5719CO
☐ 60646 ☐ 70697 ☐ 73410 ☐ E552 ☐ G112 ☐ M565 ☐ S-394 ☐ S-1054 ☐ T879 ☐ T10081 ☐ T10082 Neutron Am-241 Be S/N: ☐ T-304 Ra-226 S/N: ☐ Y982

☐ Alpha S/N ☐ Beta S/N ☐ Other

☑ m 500 S/N 266728 ☐ Oscilloscope S/N ☑ Multimeter S/N 15090142

Calibrated By: Frank Young Date 15-Jan.-14

Reviewed By: Dana O'Hara Date 15 Jan 14

AC Inst. Only ☐ Passed Dielectric (Hi-Pot) and Continuity Test ☐ Failed:

Designer and Manufacturer
of
Scientific and Industrial
Instruments

LUDLUM MEASUREMENTS, INC.
501 Oak Street
325-235-5494
Sweetwater, TX 79556, U.S.A.

☐ 10744 Dutchtown Road
865-392-4601
Knoxville, TN 37932, U.S.A.

Bench Test Data For Detector

Detector 44-2 Serial No. PR335157

Customer MSES CONSULTANTS INC Order #. 20237079

Counter 2200 Serial No. 272915 Counter Input Sensitivity 29 mV

Count Time 6 Second Distance Source to Detector Surface

Other N/A

High Voltage	Background	Isotope Am241 Size ≈0.73 µCi	Isotope N/A Size N/A	Isotope N/A Size N/A	Isotope N/A Size N/A
700	109	7915	N/A	N/A	N/A
750	107	8886			
800	101	9705			
850	105	9747			
→ 900	114	9764			
950	96	9770			
1000	116	9772			
1050	134	10000			
1100	158	10096			
1150	350	11406			
N/A	N/A	N/A			

Signature Frank Young Date 15-Jan-14

Designer and Manufacturer
of
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LUDLUM MEASUREMENTS, INC.
501 Oak Street
325-235-5494
Sweetwater, TX 79556, U.S.A.

10744 Dutchtown Road
865-392-4601
Knoxville, TN 37932, U.S.A.

CONVERSION CHART

Customer MSES CONSULTANTS INC Date 15-Jan-14 Order #. 20237079

Model 3 Serial No. 305787 Detector Model 44-9 Serial No. PR333692

Source Cs137; SN-1616; 42.4 mCi

High Voltage 900 V

Input Sensitivity 29 mV

Reference Point	"As Found" Readings (CPM): Meter Reading	Range/Scale	After Adjustment Readings (CPM): Meter Reading	Range/Scale
150 mR/hr	N/A	N/A	3 K	X 100
50 mR/hr			1.25 K	X 100
15 mR/hr			4.5 K	X 10
5 mR/hr			1.5 K	X 10
1.5 mR/hr			5 K	X 1
1.0 mR/hr			3.25 K	X 1
N/A			N/A	N/A

Signature: Frank Young Date 15-Jan-14

MSES consultants, inc.

609 West Main Street • P.O. Drawer 190 • Clarksburg, WV 26302-0190
304.624.9700 • 304.622.0981 • 304.842.3325 • http://www.msesinc.com
Office Fax 24 Hour World Wide Web

October 17, 2014
Project No. 14-511

Mr. George Fenton
President
Fenton Art Glass Company
700 Elizabeth St.
Williamstown, WV 26187

LETTER REPORT
RADIOLOGICAL SURVEY
RADIOACTIVE MATERIAL STORAGE AREA
AND SITE SURVEY OF THE FENTON ART GLASS FACILITY
WILLIAMSTOWN, WEST VIRGINIA

Dear Mr. Fenton:

INTRODUCTION

On October 9, 2014 Fenton Art Glass (Fenton) requested assistance from MSES consultants, inc. (MSES) with a Radiological Survey of the 700 Elizabeth Street, Williamstown, WV location. The purpose of the survey is to measure exposure to radioactive material previously used in the production of certain glass merchandise for sale to the public. Areas where glass was produced using the radioactive material, areas where the radioactive material has been stored and glass merchandise were assessed during the survey.

MSES (Daniel Arnold) traveled to Fenton's facility on October 13, 2014 and conducted a radiological survey of the areas of interest at the facility.

IDENTIFIED AREAS

The locked cabinet used for storage of the radioactive material, furnaces (tank #1, #8, and multi-pot) where the radioactive material was used, a silo which had been used for material storage in the past, possible routes taken by workers to transport the material from storage to production furnace/s and loading docks used for transfer of cullet were surveyed. Finished glassware, ready for sale to the public was also surveyed.

RADIOLOGICAL SURVEY EQUIPMENT

MSES placed a Ludlum Measurements, Inc. Model 3 Survey Meter (S/N 305787) and Ludlum Model 44-9 (S/N PR333692) Alpha, Beta, Gamma Detector (GM) into operation in order to

conduct the radiological survey of the areas of interest. This system was calibrated by the manufacturer on January 15, 2014. The calibration certificates are attached to this Letter Report. MSES conducted a reference check of the survey meter and detector prior to conducting any measurements at the site. A pre-survey and post survey reference check was performed using a Cs-137 Check Source with Serial Number 1811. The results of the reference check are recorded in *Table 1*. According to the operating instructions, the detector should read within ±20% of the target readings for the Check Source. The Model 3 and GM system was demonstrated to be working correctly prior to the survey and at the conclusion of the survey.

TABLE 1
Reference Check Results (Cs-137 S/N 1811)

Date	Time	GM(Target)	GM (Reading)
10/13/14	1043	≈4000cpm	≈4000cpm
10/13/14	1115	≈4000cpm	≈4000cpm

cpm – counts per minute

Prior to conducting the survey of the areas of interest a background reading was established. The background reading was obtained by recording the observed meter readings at the counter near the sink in the laboratory. The background reading obtained is recorded in *Table 2*.

TABLE 2
Background Readings (GM detector)

Location ID	Description	cpm
BM-1	Lab counter in adjacent room	50

cpm – counts per minute
BM – Background Measurement Location

SITE SURVEY

MSES conducted the 'Exposure Rate Measurement' survey by recording meter readings at Tank #1, Tank # 8, multi-pot furnace, silo, storage area, loading docks, transport containers (plastic bag lined pails) and along the most probable routes taken by employees, formerly moving radioactive material from the storage area to the tanks or furnaces for producing the glass products. At each of the tanks a meter reading was taken at the charging location and the gathering location as well as a 1 meter distance from the tank. Screw feeders, mold presses, individual work stations, and other random areas were surveyed. Other locations were surveyed by slowing moving through or over the area and observing meter readings. Glass products located in a room adjacent to the gift shop were also surveyed. All point readings obtained during the performance of the survey are recorded in *Table 3*. Except as recorded in *Table 3*, all meter readings observed during the site survey were less than three (3) times the background reading of 50 cpm. A floor diagram showing the location of each Site Survey Point (SP) is included as *Figure 1*.

TABLE 3
Survey Readings (GM detector)

Location ID	Description	cpm
SP-1	Sulfur cullet in mixing area	100
SP-2	Tank #8	600
SP-2*	1 meter from Tank #8	50
SP-3	Multi-pot furnace	350
SP-3*	1 meter from Multi-pot furnace	50
SP-4	Tank #1	1500
SP-4*	1 meter from Tank #1	50
SP-5	Silo	50
SP-6	Transport pail	7500
SP-6*	1 meter from Transport pail	50
SP-7	Finished glass products	1500-1800

cpm – counts per minute
SP – Site Survey Point
* - Readings taken at a distance of approximately 1 meter from surveyed point

SUMMARY

The procedures and practices employed by MSES during the conduct of this survey are commensurate with the procedures and practices recognized by governmental and other agencies. Generally, practicing Health Physicists (professionals in the field of physics who work primarily in the field of radiation and its use and management) indicate that anytime area readings are less than 3-10 times the value of the background levels for exposure, the area under survey is considered to be within normal range of the surroundings.

In your review of this Letter Report, should you have questions or need additional information, please do not hesitate to contact us.

Sincerely,

Daniel T. Arnold, CES, MLS
Senior Environmental Scientist

Lawrence M. Rine, MSEE, RSO
Senior Project Manager

Enclosed:
Certificate of Calibration
Figures

MSES

CERTIFICATE OF CALIBRATION

Ludlum Measurements, Inc.

MSES

Designer and Manufacturer of Scientific and Industrial Instruments

CERTIFICATE OF CALIBRATION

LUDLUM MEASUREMENTS, INC.
501 Oak Street
325-235-5494
Sweetwater, TX 79556, U.S.A.
☐ 10744 Dutchtown Road
865-392-4601
Knoxville, TN 37932, U.S.A.

CUSTOMER MSES CONSULTANTS INC ORDER NO. 20237079

Mfg. Ludlum Measurements, Inc. Model 3 Serial No. 305787

Mfg. Ludlum Measurements, Inc. Model 44-2 Serial No. PR335157

Cal. Date 15-Jan-14 Cal Due Date 15-Jan-15 Cal. Interval 1 Year Meterface 202-654

Check mark ☑ applies to applicable instr. and/or detector IAW mfg. spec. T. 75 °F RH 17 % Alt 710.8 mm Hg

☑ New Instrument Instrument Received ☐ Within Toler. +-10% ☐ 10-20% ☐ Out of Tol. ☐ Requiring Repair ☐ Other-See comments

☑ Mechanical ck. ☑ Meter Zeroed ☐ Background Subtract ☐ Input Sens. Linearity
☑ F/S Resp. ck ☑ Reset ck. ☐ Window Operation ☑ Geotropism
☑ Audio ck. ☐ Alarm Setting ck. ☑ Batt. ck. (Min. Volt) 2.2 VDC

☐ Calibrated in accordance with LMI SOP 14.8 rev 12/05/89. ☑ Calibrated in accordance with LMI SOP 14.9 rev 02/07/97.

Instrument Volt Set 900 V Input Sens. 29 mV Det. Oper. 900 V at 29 mV Threshold Dial Ratio N/A = N/A mV

☐ HV Readout (2 points) Ref./Inst. N/A / N/A V Ref./Inst. N/A / N/A V

COMMENTS:

Cs-137 ≈ 1 µCi check source SN 1811 reads ≈ 6 µR/hr @ x 100 (≈ 600 µR/hr)
with label side of check source placed against detector end (crystal end) of 44-2.

Cs-137 ≈ 1 µCi check source SN 1811 reads ≈ 4 kcpm @ x 1 (≈ 4 kcpm)
with label side of check source placed against protective screen of 44-9.

Gamma Calibration: GM detectors positioned perpendicular to source except for M 44-9 in which the front of probe faces source.

RANGE/MULTIPLIER	REFERENCE CAL. POINT	INSTRUMENT REC'D "AS FOUND READING"	INSTRUMENT METER READING*
X 100	4000 µR/hr	N/A	40
X 100	1000 µR/hr		10
X 10	400 µR/hr = 71000 cpm		40
X 10	100 µR/hr		10
X 1	7100 cpm		40
X 1	1770 cpm		10
X 0.1	710 cpm		40
X 0.1	177 cpm		10
N/A	N/A		N/A
N/A	N/A		5

*Uncertainty within ± 10% C.F. within ± 20%

X1,XO.1 Range(s) Calibrated Electronically

Digital Readout	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*
	N/A		

Log Scale	REFERENCE CAL. POINT	INSTRUMENT RECEIVED	INSTRUMENT METER READING*
	N/A		

Ludlum Measurements, Inc. certifies that the above instrument has been calibrated by standards traceable to the National Institute of Standards and Technology, or to the calibration facilities of other International Standards Organization members, or have been derived from accepted values of natural physical constants or have been derived by the ratio type of calibration techniques.
The calibration system conforms to the requirements of ANSI/NCSL Z540-1-1994 and ANSI N323-1978 State of Texas Calibration License No. LO-1963

Reference Instruments and/or Sources: Cs-137 S/N: ☐ 059 ☐ 260 ☑ 720 ☐ 734 ☐ 781 ☐ 1131 ☑ 1616 ☐ 1696 ☐ 1909 ☐ 1916CP ☐ 5105 ☐ 5717CO ☐ 5719CO
☐ 60646 ☐ 70897 ☐ 73410 ☐ E552 ☐ G112 ☐ M565 ☐ S-394 ☐ S-1054 ☐ T879 ☐ T10081 ☐ T10082 Neutron Am-241 Be S/N: ☐ T-304 Ra-226 S/N: ☐ Y982

☐ Alpha S/N ☐ Beta S/N ☐ Other

☑ m 500 S/N 266728 ☐ Oscilloscope S/N ☑ Multimeter S/N 15090142

Calibrated By: Frank Young Date 15-Jan.-14

Reviewed By: Dana Ahara Date 15 Jan 14

AC Inst. Only ☐ Passed Dielectric (Hi-Pot) and Continuity Test ☐ Failed:

Designer and Manufacturer
of
Scientific and Industrial
Instruments

LUDLUM MEASUREMENTS, INC.
501 Oak Street
325-235-5494
Sweetwater, TX 79556, U.S.A.

☐ 10744 Dutchtown Road
865-392-4601
Knoxville, TN 37932, U.S.A.

Bench Test Data For Detector

Detector 44-2 Serial No. PR335157

Customer MSES CONSULTANTS INC Order #. 20237079

Counter 2200 Serial No. 272915 Counter Input Sensitivity 29 mV

Count Time 6 Second Distance Source to Detector Surface

Other N/A

High Voltage	Background	Isotope Am241 Size ≈0.73uCi	Isotope N/A Size N/A	Isotope N/A Size N/A	Isotope N/A Size N/A
700	109	7915	N/A	N/A	N/A
750	107	8886			
800	101	9705			
850	105	9747			
→ 900	114	9764			
950	96	9770			
1000	116	9772			
1050	134	10000			
1100	158	10096			
1150	350	11406			
N/A	N/A	N/A			

Signature Frank Young Date 15-Jan-14

• *Serving The Nuclear Industry Since 1962* •

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10744 Dutchtown Road
865-392-4601
Knoxville, TN 37932, U.S.A.

CONVERSION CHART

Customer MSES CONSULTANTS INC Date 15-Jan-14 Order #. 20237079

Model 3 Serial No. 305787 Detector Model 44-9 Serial No. PR333692

Source Cs137; Sn-1616; 42.4 mCi

High Voltage 900 V

Input Sensitivity 29 mV

Reference Point	"As Found" Readings (CPM): Meter Reading	Range/Scale	After Adjustment Readings (CPM): Meter Reading	Range/Scale
150 mR/hr	N/A	N/A	3 K	X 100
50 mR/hr			1.25 K	X 100
15 mR/hr			4.5 K	X 10
5 mR/hr			1.5 K	X 10
1.5 mR/hr			5 K	X 1
1.0 mR/hr			3.25 K	X 1
N/A			N/A	N/A

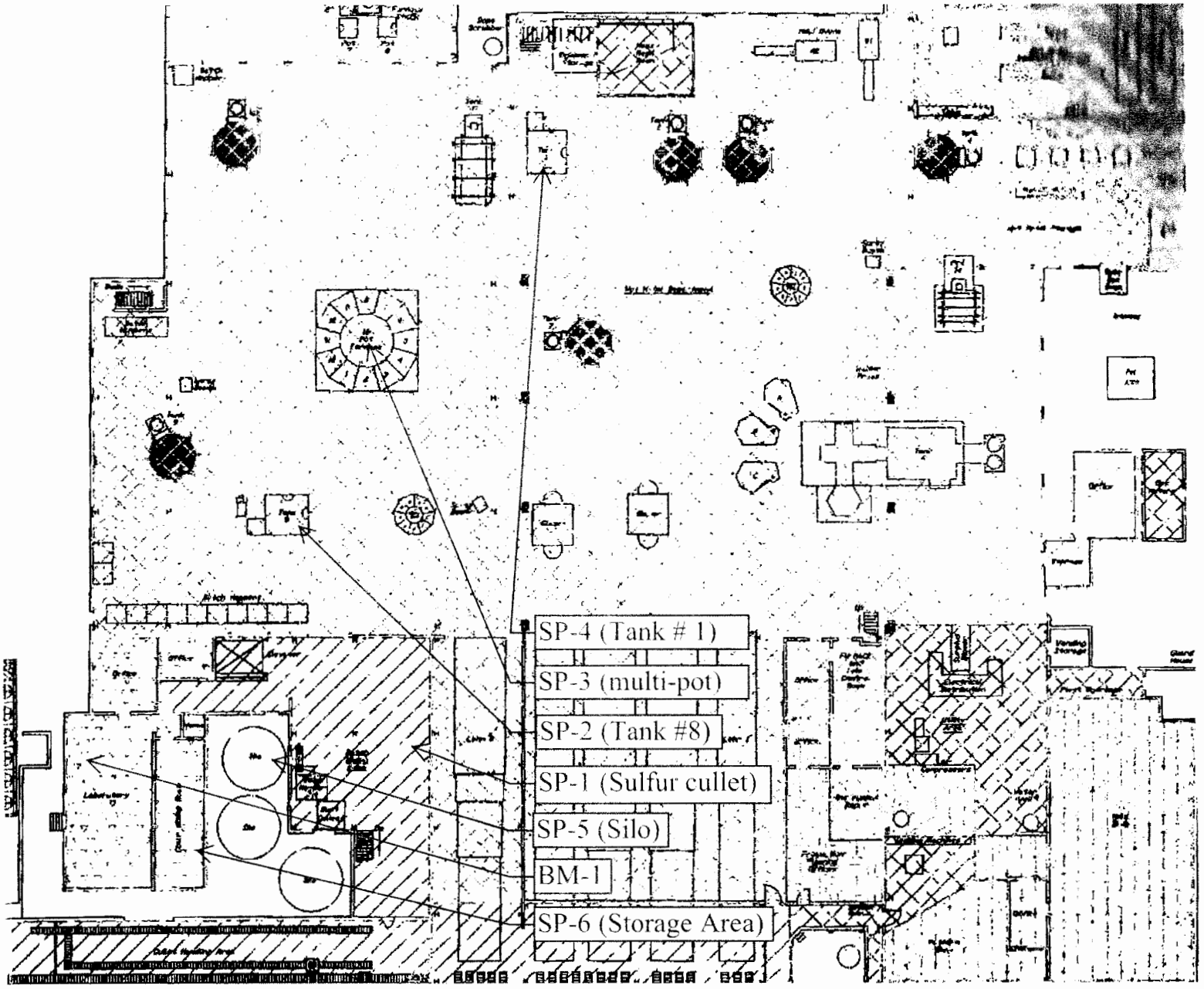
Signature: Frank Young Date 15-Jan-14

FIGURE

Floor Plan for area surveyed
Fenton Art Glass Company
Williamstown, WV

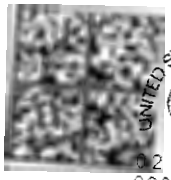
MSES

FIGURE 1
Fenton Art Glass Company
Site Survey Points (SP)



Floor plan image provided by Fenton Art Glass Company on 10/13/14

MSES



UNITED STATES POSTAGE
PITNEY BOWES
02 1A $ 01.64⁰
0004614573 OCT 26 2015
MAILED FROM ZIP CODE 26187

The Fenton Art Glass Company
700 Elizabeth St., Williamstown, WV 26187

Return Service Requested

LICENSING ASSISTANT SECTION
NUCLEAR MATERIALS SAFETY BRANCH
U.S. NUCLEAR REGULATORY
COMMISSION, REGION 1
2100 RENAISSANCE BLVD, SUITE 100
KING OF PRUSSIA PA 19406-2713

This is to acknowledge the receipt of your letter/application dated

10-26-15, and to inform you that the initial processing which includes an administrative review has been performed.

✓ Terminate : SUB-491

☑ There were no administrative omissions. Your application was assigned to a technical reviewer. Please note that the technical review may identify additional omissions or require additional information.

☐ Please provide to this office within 30 days of your receipt of this card

---

A copy of your action has been forwarded to our License Fee & Accounts Receivable Branch, who will contact you separately if there is a fee issue involved.

Your action has been assigned **Mail Control Number** 589275
When calling to inquire about this action, please refer to this control number.
You may call us on (610) 337-5398, or 337-5260.

NRC FORM 532 (RI)
(6-96)

Sincerely,
Licensing Assistance Team Leader