Lawyer, Dennis

SUB-491
04003149

From: gfenton <gfenton@fentonartglass.com>
Sent: Tuesday, October 04, 2016 12:03 PM
To: Lawyer, Dennis
Subject: [External_Sender] RE: Fenton Art Glass Company, Control 589275
Attachments: M2929-126126_Cal Cert_due 051317.pdf

Dennis,
Attached is the proper calibration certificate.
Talk with you Thursday.
George

From: Lawyer, Dennis [mailto:Dennis.Lawyer@nrc.gov]
Sent: Tuesday, October 4, 2016 9:23 AM
To: gfenton <gfenton@fentonartglass.com>
Subject: Fenton Art Glass Company, Control 589275

Mr. Fenton,

I have completed reviewing over your letter dated September 6, 2016. The calibration certificate for Instrument model 2929 serial number 126126 and its associated detector model 43-10-1, serial number PR132238 appears to be out of calibration. The date of calibration on the certificate submitted was April 22, 2015, good till April 22, 2016. However the date of the survey appears to be in July 2016. Please submit the current calibration records for instruments model 2929 serial number 126126 and detector model 43-10-1, serial number PR132238 for the time of the survey.

As shown in your final status survey, furnace 8 has detectable radioactivity and thus I may not terminate your license at this time.

Dennis Lawyer
U.S. NRC Region 1
Health Physicist
610-337-5366

GRIFFIN INSTRUMENTS

CALIBRATION CERTIFICATE FOR 2929 SERIAL# 126126

Owner; PLEXUS-IEM

DATE: 05/13/16 LOCATION: Griffin Inst

TECH: E.M. Glenn DATE LAST CAL EXPIRES: 04/22/16

Reason For Calibration: (●) Due For Calibration ( ) Repair (See Remarks)

CABLE LENGTH: 39" ( ) Other (See Remarks) ( ) Due and Repair (See Remarks)

NIST TRACEABLE EQUIPMENT USED DURING CALIBRATION

MODEL: M-500 SERIAL #: 114512 CAL. DUE: 10/19/16

MODEL: SERIAL #: CAL DUE:

Condition: (●) Sat ( ) Unsat

AF Mechanical Zero: 0

AL Mechanical Zero: 0

Scaler Function Check	As Found	As Left		
Beta Channel Window (4-50 mV):	4-48	A.F.		
Alpha Channel Window (175 mV, 120 for 3030):	175	A.F.		
Alpha Counts w/Pulser @ 10,000 CPM:	9,984	A.F.	% Error:	0.2%
Beta Counts w/Pulser @ 10,000 CPM:	9,988	A.F.	% Error:	0.1%
HIGH VOLTAGE POWER SUPLY CAL. (2929 only)				
1 KV Reading (R-5 on HV Board):	1	A.F.		
Max HV (1500 V +):	(●) Sat	( ) Unsat		

REMARKS:

Does Instrument Meet Final Acceptance Criteria?: (●) Yes ( ) No

Calibration Sticker Attached?: (●) Yes ( ) No

Date Instrument is Due For Next Calibration: **05/13/17**

INSTRUMENT MARRIED WITH 43-10-1 #PR132238

Performed/Reviewed by: E.M. Glenn Date: 5/13/2016 Entered by: _____ Initials

Calibrations performed to ANSI N323A-1997 standards.

GRIFFIN INSTRUMENTS

CALIBRATION CERTIFICATE FOR 43-10-1 PROBE # PR132238

Owner: PLEXUS-IEM

DATE: 05/13/16 LOCATION: Griffin Inst

TECH: E.M. Glenn DATE LAST CAL EXPIRES: 04/22/16

REASON FOR CALIBRATION:

(●) Due For Calibration ( ) Repair (See Remarks) ( ) Other (See Remarks) ( ) Due and Repair

CABLE LENGTH: 39" INPUT SENSITIVITY: DUAL

NIST TRACEABLE EQUIPMENT AND STANDARDS USED DURING CALIBRATION

MODEL: 2929 SERIAL #: 126126 CAL. DUE: 05/13/17

NIST TRACEABLE SOURCES USED

Source Number	Isotope	4 pi Activity	Assay Date	2 pi Activity
00TC470-0654	Tc99 SS	17,300 dpm	06/15/09	10,800 cpm
94TH470-1593	Th230	16,672 dpm	05/27/14	7,671 cpm
2696-00	Pu239	18,500 dpm	12/02/09	9,370 cpm
2697-00	Sr90	12,200 dpm	03/01/00	8,530 cpm
PX-726	C14	48,780 dpm	01/21/08	18,660 cpm

Efficiencies from last cal.:

Condition: (●) Sat ( ) Unsat

Pu: | Th: 29.82% | Sr: 35.48%

Tc ss: 21.57% | C14: | Tc Ni:

As Found (AF) Efficiencies:

HV / Vernier:	Tc-99 Source Response Nickel (CPM):			Pu-239 Source Response (CPM):			Background (CPM):		Tc-99 Source Response Stainless Steel (CPM):		
	A ch.	B ch.	Net Eff.	A ch.	B ch.	Net Eff.	A ch.	B ch.	A ch.	B ch.	Net Eff.
700 / 2.85				6551	287	35.41%	0	54	1	3944	22.49%

Net A to B Xtalk: <10%	B to A Xtalk: <1%
3.4%	<1%

	Pu239	Tc99 Ni	Tc99 ss	Th-230	Sr90	C-14
AF CPM:	6551		3944	4832	2947	5028
AF 4 pi eff:	35.41%		22.49%	28.98%	35.00%	10.20%
AF 2 pi eff:	*69.91%*		*36.02%*	*62.99%*	*50.06%*	*26.66%*

Is as found efficiency within 20% of the efficiency from the last cal? (●) Yes ( ) No (See Remarks)

Note: If the as found data is within 10% of the last calibration and the B-A Xtalk is <1% and the A-B Xtalk is <10%, then the technician may N/A the plateau section and go directly to remarks.

GRIFFIN INSTRUMENTS

PROBE #: **PR132238**
Date: 05/13/16

PLATEAU AND SET POINT DATA

HV / Vernier:	Tc-99 Source Response SS (CPM):			Pu-239 Source Response (CPM):			Background (CPM):		Net A to B Xtalk: <10%	B to A Xtalk: <1%
	A ch.	B ch.	Net Eff.	A ch.	B ch.	Net Eff.	A ch.	B ch.		
625 / 2.54	0	2755	15.7%	6317	279	34.1%	0	43	3.6%	<1%
650 / 2.65	0	3152	18.0%	6346	288	34.3%	0	46	3.7%	<1%
675 / 2.75	0	3636	20.7%	6573	297	35.5%	0	48	3.6%	<1%
700 / 2.85	0	3872	22.0%	6744	280	36.5%	0	59	3.2%	<1%
725 / 2.96	1	4216	24.1%	6724	336	36.3%	0	52	4.1%	<1%
750 / 3.07							2	87		

Alpha / Beta Bkg (cpm) 2 54

HV / Vernier		Pu-239	Tc-99 Ni	Tc-99 SS	Th-230	C-14	Sr-90
700 / 2.85	CPM:	6788		3911	4735	5134	2928
4 pi AL Efficiencies:		36.68%		22.29%	28.39%	10.41%	34.77%
2 pi AL Efficiencies:		*72.42%*		*35.71%*	*61.70%*	*27.22%*	*49.73%*

REMARKS:

Does Instrument Meet Final Acceptance Criteria?: (●) Yes ( ) No

Calibration Sticker Attached?: (●) Yes ( ) No

Date Instrument is Due For Next Calibration: **05/13/17**

INSTRUMENT MARRIED WITH **2929** **# 126126**

Performed/Reviewed by: E.M. Glenn Date: 5/13/2016 Entered by: _____ Initials

2 pi efficiencies denoted in italics.

Calibrations performed to ANSI N323A-1997 standards.