SANBORN HEAD
Building Trust. Engineering Success.

187 Saint Paul Street, Suite 4-C
Burlington, VT 05401

Mr. Leonardo Wardrobe
Health Physicist
Division of Nuclear Materials Safety
U.S. Nuclear Regulatory Commission, Region I
2100 Renaissance Boulevard, Suite 100
King of Prussia, Pennsylvania 19406-2713

August 22, 2018
File No. 9020.00

Re: Request for Additional Information Dated July 31, 2018
Amendment to Material License #44-30994-01
Sanborn, Head & Associates, Inc. (Sanborn Head)
Burlington, Vermont

Dear Leo:

This letter is being provided in response to your July 31, 2018 email correspondence requesting additional information regarding our June 7, 2018 material license amendment request. Below are your questions in underlined italicized font followed by our responses.

1. *Please send a copy of the latest leak check(s) for the portable gauge(s) stored at 2 South Main Street, Suite 2, Burlington, VT.*

   Please find attached copies of the most recent leak test certificates for Sanborn Head's portable gauges. The gauges owned by Sanborn Head, which could be stored at our Burlington, VT office, and the corresponding latest leak test report are summarized below.
   - Gauge 25998 (Analyzed on March 14, 2018)
   - Gauge 26184 (Analyzed on June 12, 2018)
   - Gauge 28898 (Analyzed on August 17, 2018)
   - Gauge 34643 (Analyzed on August 17, 2018)
   - Gauge 35086 (Analyzed on May 25, 2018)
   - Gauge 38176 (Analyzed on April 16, 2018)

   We will not exceed the maximum amount of radiation source permitted under our Materials License for our Vermont office, which equates to possessing no more than 4 gauges at one time.

   Also, please note that our new address is 187 Saint Paul Street, Suite 4-C, Burlington, Vermont 05401.

2. *Please send a copy of the Agreement State license and location of storage of the portable gauge(s) during your transition to your new office location/storage*.

   Attached is a copy of Sanborn Head's Massachusetts Radiation Control Program Materials License. The portable gauge (#38176) that we had in our former Randolph, Vermont office was sent to our office located at 1 Technology Park Drive in Westford,

Massachusetts for storage and/or use during our move to our new Burlington, Vermont location.

3. *In your amendment request you sent a diagram of your new office layout including the proposed storage location for your portable gauges. Please state in writing what is located on the outside of the adjacent exterior and what type of space is above and below where your proposed location of storage is.*

   Our Burlington, Vermont office is on the second floor of a two-story office building; therefore, no office space will be located above the gauge storage location. A beauty salon is located below the space where our gauges will be stored.

   The gauge storage location will be in the northeast corner of the building along the exterior wall. Because our office space is on the second floor, there are no buildings immediately abutting our office space or the proposed gauge storage location. There is a one-story commercial building located directly to the north of the exterior wall (the right side of the diagram) of the Equipment Storage Room where the gauge will be stored. There is a ground level playground (one story below our office space) located to the west of the exterior wall (the top of the diagram).

If you have any questions regarding the enclosed information, please give me a call at (802) 391-8501.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.

Brian J. Beaudoin
Vice President/Senior Associate

RSW/TLP/BJB:rsw

Encl. Leak Test Certificates
Massachusetts Radiation Control Program Materials License

cc: Vern Kokosa, Sanborn Head

P:\TroxlerRad\General\RSO - VT\2018 NRC Address Change\20180822-Wardrobe Letter.docx

The Commonwealth of Massachusetts

Executive Office of Health and Human Services
Department of Public Health
Bureau of Environmental Health
Radiation Control Program
Schrafft Center, Suite 1M2A
529 Main Street, Charlestown, MA 02129
Phone: 617-242-3035 Fax: 617-242-3457
www.mass.gov/dph/rcp

CHARLES D. BAKER
Governor

KARYN E. POLITO
Lieutenant Governor

MARYLOU SUDDERS
Secretary

MONICA BHAREL, MD, MPH
Commissioner

Tel: 617-624-6000
www.mass.gov/dph

April 27, 2018

Vernon R. Kokosa, P.E.
Principal/Vice President
Sanborn, Head & Associates, Inc.
1 Technology Park Drive
Westford, Massachusetts 01886

RE: **Amendment No.: 07 Corrected Copy**
License Number: 48-0390
Docket Number: 16-3214

Dear Mr. Kokosa:

Enclosed is the above referenced corrected license as requested in your email dated April 4, 2018.

Given full consideration of your request we corrected the condition 10 on your license to use and store your devices at temporary job sites.

Please review the document carefully and if you have any further questions or comments, please contact this office at the number above.

Thank you for your patience in this matter.

Sincerely,

For John M. Priest, Jr., Director
Radiation Control Program

JMP: zr
Enclosure: (1)

THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM
MATERIALS LICENSE

CORRECTED COPY

Pursuant to Massachusetts General Laws Chapter 111, Sections 3, 5M, 5N, 5O and 5P and Massachusetts Regulations for the Control of Radiation, Section 120.100, Licensing of Radioactive Material, and in reliance on statements and representation heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, possess, and transfer radioactive materials 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 105 CMR 120.000. This license shall be deemed to contain the conditions specified in 105 CMR 120.000 and is subjected to all applicable rules, regulations of the Department of Public Health, Commonwealth of Massachusetts, now or hereafter in effect and to any conditions specified below.

Licensee	
1. Sanborn, Head & Associates, Inc.	3. License Number: 48-0390 **is amended in its entirety, in accordance with the letter dated June 17, 2016 to read as follows:** Amendment No: 07
2. 1 Technology Park Drive Westford, Massachusetts 01886	4. Expiration Date: January 31, 2023
	5. Docket No: 04-3316

6.	Radioactive Material	7.	Chemical/Physical Form	8.	Maximum Possession Limit
A.	Cesium-137	A.	Sealed source	A.	Not to exceed 9 millicuries per source; 81 millicuries total
B.	Americium-241:Be	B.	Sealed source	B.	Not to exceed 44 millicuries per source; 396 millicuries total

9. Authorized use:

A. and B. For possession and use in Troxler Electronic Laboratories, Incorporated Model 3430 devices described by Sealed Source and Device Registration No. NC-0646-D-130-S which have been evaluated and approved for licensing purposes under a license issued by an Agreement State or the U.S. Nuclear Regulatory Commission.

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM	LICENSE NUMBER: 48-0390 **CORRECTED COPY**
MATERIALS LICENSE SUPPLEMENTARY SHEET	DOCKET NUMBER: 04-3316
	AMENDMENT NUMBER: 07

CONDITIONS

10. Radioactive materials may be stored at the licensee's facilities located at 1 Technology Park Drive, Westford, Massachusetts, and used and stored at temporary job sites of the licensee anywhere in the Commonwealth of Massachusetts except areas under exclusive Federal jurisdiction. Authorization for use of radioactive materials at job sites under exclusive Federal Jurisdiction or in other states may be obtained from the U.S. Nuclear Regulatory Commission or the appropriate state regulatory agency.

11. This license is subject to an annual fee as determined by the Executive Office for Administration and Finance.

12. A. Licensed material shall only be used by or under the supervision and in the physical presence of, Seth Whitcomb, or individuals who have received the training described in the licensee's application dated July 3, 2012 and have been designated in writing by the Radiation Safety Officer. The licensee shall maintain records of individuals designated as users for five years following the last use of licensed material by the individual.

    B. The Radiation Safety Officer for this license is Seth Whitcomb.

13. A. Sealed sources and detector cells containing licensed material shall be tested for leakage and/or contamination at intervals not to exceed six months or at such other intervals as are specified by the certificate of registration referred to in 105 CMR 120.128(N). In the absence of a certificate from a transferor indicating that a leak test has been made within six (6) months prior to the transfer, a sealed source received from another person shall not be put into use until tested.

    B. Sealed sources need not be tested if they are in storage and are not being used. However, when they are removed from storage for use or transferred to another person, and have not been tested within the required leak test interval, they shall be tested before use or transfer.

    C. The leak test shall be capable of detecting the presence of 185 becquerel (0.005 microcurie) of radioactive material on the test sample. Records of leak test results shall be kept in units of bequerel or microcurie and shall be maintained for inspection by the Agency. If the test reveals the presence of 185 becquerel (0.005 microcurie) or more of

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM	LICENSE NUMBER: 48-0390 **CORRECTED COPY**
MATERIALS LICENSE SUPPLEMENTARY SHEET	DOCKET NUMBER: 04-3316
	AMENDMENT NUMBER: 07

removable contamination, a report shall be filed with the Agency and the source shall be removed from service and decontaminated, repaired, or disposed of in accordance with Agency regulations. The report shall be filed within 5 days of the date the leak test result is known with the Massachusetts Department of Public Health, ATTN: Director, Radiation Control Program. The report shall specify the source involved, the test results, and the corrective action taken.

D. The licensee is authorized to collect leak test samples for analysis. Alternatively, tests for leakage and/or contamination may be performed by persons specifically licensed by the Agency, the U.S. Nuclear Regulatory Commission, or an Agreement State, to perform such services.

14. Sealed sources or detector cells containing licensed material shall not be opened or sources removed from source holders by the licensee.

15. The licensee shall conduct a physical inventory every six months to account for all sealed sources and/or devices containing licensed material received and possessed under the license. Records of inventories shall be maintained for five years from the date of each inventory and shall include the quantities and kinds of radioactive material, manufacturer names and model numbers, locations of sources and/or devices, and the dates of the inventories.

16. The licensee shall not acquire licensed material in a sealed source or in a device that contains a sealed source unless the source or device has been registered with the U.S. Nuclear Regulatory Commission under 10 CFR 32.210 or the equivalent regulations of the Agency, or an Agreement State.

17. Each portable nuclear gauge shall have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The gauge or its container shall be locked when in transport, storage, or when not under the direct surveillance of an authorized user.

18. Any cleaning, maintenance, or repair of the gauge(s) that requires removal of the source rod shall be performed only by the manufacturer or by other persons specifically licensed by an Agreement State or by the U.S. Nuclear Regulatory Commission to perform such services.

COMMONWEALTH OF MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH RADIATION CONTROL PROGRAM	LICENSE NUMBER: 48-0390 **CORRECTED COPY**
MATERIALS LICENSE SUPPLEMENTARY SHEET	DOCKET NUMBER: 04-3316
	AMENDMENT NUMBER: 07

19. The licensee shall only transport radioactive material or deliver radioactive material to a carrier for transport in accordance with the provisions of 49 CFR Parts 170 through 189, 10 CFR Part 71, and 105 CMR 120.770, "Transportation of Radioactive Material".

20. Except as specifically provided otherwise by 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 Massachusetts Regulations for the Control of Radiation (105 CMR 120.000) shall govern unless the statements, representations, and procedures in the licensee's application and correspondence are more restrictive than the regulations.

A. Renewal Application dated July 3, 2012
B. Letter dated June 17, 2016

FOR THE COMMONWEALTH OF MASSACHUSETTS
DEPARTMENT OF PUBLIC HEALTH
RADIATION CONTROL PROGRAM

Date 4/27/2018

By _____
For John M. Priest, Jr., Director

Troxler Electronic Laboratories, Inc.
3008 Cornwallis Rd., P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (877) 876-9537 Fax: (866) 391-2759
License: NC 032-0182-1

SETH WHITCOMB
SANDBORN, HEAD AND ASSOCIATES
1 TECHNOLOGY PARK DRIVE
WESTFORD, MA 01886

Cust ID: 12506

LEAK TEST CERTIFICATE

DEVICE:

Model: 3430 **Serial No:** 25998

SEALED SOURCES:

Serial No.	Measure Date	Nuclide	GBq	mCi
47-22377	03/05/1996	Am-241:Be	1.48	40
75-8994	02/06/1996	Cs-137	0.296	8

LEAK TEST ANALYSIS:

Sample collected on: 03/05/2018

Sample analyzed on: 03/14/2018 8:13:32 AM **Position:** 1

Analyzed by: HEB

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.21E+01	2.02E+01
Background measurement (cpm)	0	25
Sample measurement (cpm)	0	26
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	4.2E-01	1.3E+00

This certifies that the leak test results are:

☑ **Less than 185 Bq (0.005 uCi)** ☐ **Greater than 185 Bq (0.005 uCi)**

Rev. 9/2006

Troxler Electronic Laboratories, Inc.
3008 Cornwallis Rd., P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (877) 876-9537 Fax: (919) 485-2250
License: NC 032-0182-1

SETH WHITCOMB
SANDBORN, HEAD AND ASSOCIATES
1 TECHNOLOGY PARK DRIVE
WESTFORD, MA 01886

LEAK TEST CERTIFICATE

DEVICE:

Model: 3430 **Serial No:** 26184

SEALED SOURCES:

Serial No.	Measure Date	Nuclide	GBq	mCi
47-22580	3/29/1996	Am-241:Be	1.48	40
75-9243	2/12/1996	Cs-137	0.296	8

LEAK TEST ANALYSIS:

Sample collected on: 06/07/2018

Sample analyzed on: 06/12/2018 at 1:42:00 PM

Analyzed by: HEB

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.21E+01	2.02E+01
Background measurement (cpm)	0	25
Sample measurement (cpm)	0	22
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	4.2E-01	1.3E+00

This certifies that the leak test results are:

☑ **Less than 185 Bq (0.005 uCi)** ☐ **Greater than 185 Bq (0.005 uCi)**

Rev. 9/2006

Troxler Electronic Laboratories, Inc.
3008 Cornwallis Rd., P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (877) 876-9537 Fax: (919) 485-2250
License: NC 032-0182-1

SETH WHITCOMB
SANBORN HEAD & ASSOCIATES
1 TECHNOLOGY PARK DR.
WESTFORD, MA 01886

LEAK TEST CERTIFICATE

DEVICE:

Model: 3430 **Serial No:** 28898

SEALED SOURCES:

Serial No.	Measure Date	Nuclide	GBq	mCi
47-26022	2/17/1998	Am-241:Be	1.48	40
750-3187	12/8/1997	Cs-137	0.296	8

LEAK TEST ANALYSIS:

Sample collected on: 08/10/2018

Sample analyzed on: 08/17/2018 at 12:42:00 PM

Analyzed by: HEB

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.23E+01	2.05E+01
Background measurement (cpm)	0	25
Sample measurement (cpm)	0	28
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	3.6E-01	1.3E+00

This certifies that the leak test results are:

☑ **Less than 185 Bq (0.005 uCi)** ☐ **Greater than 185 Bq (0.005 uCi)**

Rev. 9/2006

Troxler Electronic Laboratories, Inc.
3008 Cornwallis Rd., P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (877) 876-9537 Fax: (919) 485-2250
License: NC 032-0182-1

SETH WHITCOMB
SANDBORN, HEAD AND ASSOCIATES
1 TECHNOLOGY PARK DRIVE
WESTFORD, MA 01886

LEAK TEST CERTIFICATE

DEVICE:

Model: 3430 **Serial No:** 34643

SEALED SOURCES:

Serial No.	Measure Date	Nuclide	GBq	mCi
77-1649	7/1/2003	Cs-137	0.296	8
47-6860	7/8/1984	Am-241:Be	1.48	40

LEAK TEST ANALYSIS:

Sample collected on: 08/10/2018

Sample analyzed on: 08/17/2018 at 12:41:00 PM

Analyzed by: HEB

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.23E+01	2.05E+01
Background measurement (cpm)	0	25
Sample measurement (cpm)	1	29
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	3.6E-01	1.3E+00

This certifies that the leak test results are:

☑ **Less than 185 Bq (0.005 uCi)** ☐ **Greater than 185 Bq (0.005 uCi)**

Rev. 9/2006

Troxler Electronic Laboratories, Inc.
3008 Cornwallis Rd., P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (877) 876-9537 Fax: (866) 391-2759
License: NC 032-0182-1

SETH WHITCOMB
SANDBORN, HEAD AND ASSOCIATES
1 TECHNOLOGY PARK DRIVE
WESTFORD, MA 01886

Cust ID: 12506

LEAK TEST CERTIFICATE

DEVICE:

Model: 3430 **Serial No:** 35086

SEALED SOURCES:

Serial No.	Measure Date	Nuclide	GBq	mCi
77-2193	01/30/2004	Cs-137	0.296	8
47-30470	02/28/2002	Am-241:Be	1.48	40

LEAK TEST ANALYSIS:

Sample collected on: 05/19/2018

Sample analyzed on: 05/25/2018 12:51:38 P **Position:** 6

Analyzed by: HEB

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.21E+01	2.02E+01
Background measurement (cpm)	0	25
Sample measurement (cpm)	0	22
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	4.2E-01	1.3E+00

This certifies that the leak test results are:

☑ **Less than 185 Bq (0.005 uCi)** ☐ **Greater than 185 Bq (0.005 uCi)**

Rev. 9/2006

Troxler Electronic Laboratories, Inc.
3008 Cornwallis Rd., P.O. Box 12057
Research Triangle Park, NC 27709
Tel: (877) 876-9537 Fax: (919) 485-2250
License: NC 032-0182-1

SETH WHITCOMB
SANBORN HEAD & ASSOCIATES
1 TECHNOLOGY PARK DR.
WESTFORD, MA 01886

LEAK TEST CERTIFICATE

DEVICE:

Model: 3430 **Serial No:** 38176

SEALED SOURCES:

Serial No.	Measure Date	Nuclide	GBq	mCi
77-5529	8/17/2006	Cs-137	0.296	8
78-2981	7/24/2006	Am-241:Be	1.48	40

LEAK TEST ANALYSIS:

Sample collected on: 04/07/2018

Sample analyzed on: 04/16/2018 at 7:54:00 AM

Analyzed by: STW

	ALPHA	BETA-GAMMA
Conversion factor (cpm/Bq)	1.21E+01	2.02E+01
Background measurement (cpm)	0	25
Sample measurement (cpm)	1	27
Activity (Bq)	< MDA	< MDA
Min. Detectable Activity (Bq)	4.2E-01	1.3E+00

This certifies that the leak test results are:

☑ **Less than 185 Bq (0.005 uCi)** ☐ **Greater than 185 Bq (0.005 uCi)**

Rev. 9/2006