



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION I
2100 RENAISSANCE BLVD.
KING OF PRUSSIA, PA 19406-2713

December 20, 2018

Mr. Charlie Essex
Drawn Metal Tube Company
P.O. Box 370
Thomaston, CT 06787

**SUBJECT: PROPERTY AT 219 ELM STREET – RESULTS AND CONCLUSIONS OF THE
U.S. NUCLEAR REGULATORY COMMISSION’S INITIAL SITE VISIT**

Dear Mr. Essex:

I am writing to provide you with the U.S. Nuclear Regulatory Commission’s (NRC) results of its August 29, 2018, site visit to your property 219 Elm Street in Thomaston, Connecticut. As outlined in our letter to the site owner on July 2, 2018,¹ the NRC staff conducted a site visit at your property to determine if there is residual radium contamination from the historic manufacturing of luminous radium watches. The results are summarized below and are discussed in further detail in the enclosed report.

The building at 219 Elm Street was previously used in the manufacturing of luminous radium flush switches, flip switches, and pull-chain pendants. The initial site visit focused on the accessible portions of the facility and the immediate land area surrounding the original building to survey for discrete sources of Ra-226.

As discussed within the enclosed report, the NRC staff performed radiological surveys consisting of gamma radiation scans and exposure rate measurements. During the initial site visit, the staff conducted radiation surveys over approximately 75 percent of the areas inside the building. The staff also surveyed the immediate land area that was accessible surrounding the original building, but did not survey under the driveway or building foundations.

The NRC staff did not identify any discrete sources of Ra-226 during this survey. Based on radiological conditions observed during the initial site visit and review of property history, a follow-up scoping survey is not required as it would be unlikely to yield additional information.

Given the conclusions above, no further actions are needed from you at this time.

**REGISTERED MAIL
RETURN RECEIPT REQUESTED**

¹ Agencywide Documents Access and Management System (ADAMS) Accession No. ML18163A098.

In accordance with Title 10 of the *Code of Federal Regulations*, Part 2.390 of the NRC's "Agency Rules of Practice and Procedure," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions about this letter, please contact Stephen Koenick, Chief, Low-Level Waste and Projects Branch, Division of Decommissioning, Uranium Recovery and Waste Programs, Office of Nuclear Material Safety and Safeguards, at (301) 415-6631, or myself at (610) 337-6967.

Sincerely,

/RA/

Raymond J. Powell, Chief
Decommissioning, ISFSI and
Reactor HP Branch
Division of Nuclear Materials Safety

Docket No. 03039095

Enclosure:
Site Status Report, Seth Thomas
Clock Company (219 Elm Street)

PROPERTY AT 219 ELM STREET – RESULTS AND CONCLUSIONS OF THE U.S.
 NUCLEAR REGULATORY COMMISSION'S INITIAL SITE VISIT DATED December 20, 2018

G:\DIRHP\Non-Military Radium Site Visits\Seth Thomas-3 219 Elm Street\Seth Thomas - Initial Site Visit Letter and Report.docx

DISTRIBUTION:

RidsRgn1MailCenter T. Jackson, RI

ADAMS Accession No.: ML18263A092

*via e-mail

OFFICE	NMSS/DUWP	NMSS/DUWP	NMSS/DUWP	NMSS/DUWP
NAME	JWhited	CHolston	RChang/via email	SKoenick via email
DATE	10/25/18	10/02/18	11/28/18	12/07/18
OFFICE	RI/DNMS	RI/RC	RI/DNMS	
NAME	LKauffman/lk	BKlukan/bk	RPowell/rjp	
DATE	11/28/18	12/03/18	12/20/18	

OFFICIAL RECORD COPY

Enclosure

OAK RIDGE ASSOCIATED UNIVERSITIES:

**SITE STATUS REPORT FOR DRAWN METAL TUBE COMPANY
(FORMERLY SETH THOMAS CLOCK COMPANY) AT
219 ELM STREET IN THOMASTON, CONNECTICUT**

[INSERT DATE AFTER SIGNATURE]

EXECUTIVE SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) requested that Oak Ridge Associated Universities (ORAU) perform a radiation survey of the former Seth Thomas-3 property at 219 Elm Street in Thomaston, Connecticut. In review of historical maps, a Seth Thomas Clock Company Movement Shop was identified on Elm Street in addition to the 135 South Main Street Seth Thomas Clock Company location. It is not certain whether radium was either present or used at the Elm Street Movement Shop; however, possible radium use at the property was suggested by the 1911 Sanborn map that notes "Dial Painting" and the fact that radium contamination was positively identified at the South Main Street facility. The objectives of this survey were to determine if discrete sources of radium-226 and/or distributed radium-226 contamination are present, to identify the areas of highest contamination (if any radium contamination is identified), to determine if there are any current health and safety concerns, and to determine if further action by the NRC is needed.

ORAU performed the radiation surveys in accessible portions of property at 219 Elm Street on August 29, 2018, and did not identify elevated levels of radiation. Because no elevated levels of radiation were identified, ORAU concludes that discrete sources of radium are not present. Based on these results, it is recommended that the NRC not pursue additional action at the 219 Elm Street property.

SITE STATUS REPORT

Property: Seth Thomas-3
219 Elm Street
Thomaston, CT 06787

Docket Number: 03039095

Current Property Name(s): Drawn Metal Tube Company

Current Property Owner(s): Drawn Metal Tube Company

Inspection Dates: August 29, 2018

Inspector(s): Laurie Kauffman/ U.S. Nuclear Regulatory Commission (NRC), supported by Kaitlin Engel/Oak Ridge Associated Universities (ORAU)

1.0 INTRODUCTION

The Energy Policy Act of 2005 amended section 11e.(3) of the Atomic Energy Act of 1954 to place discrete sources of radium-226 (Ra-226) under U.S. Nuclear Regulatory Commission (NRC) regulatory authority as byproduct material. The Seth Thomas Clock Company began making clocks in 1813 until the early 1980s (Master Clock Repair 2017, HBC 2014). Records suggest that the Seth Thomas Clock Company Movement Shop on Elm Street supported operation at the primary Seth Thomas Clock Company facility, located at 135 South Main Street location (ORAU 2017), and a 1911 Sanborn map notes "Dial Painting" at the Elm Street address. Given this reference to dial painting, and because Ra-226 contamination was positively identified at the South Main Street facility, the possibility for Ra-226 contamination at the Elm Street site could not be overlooked (ATSDR 1999, Scientech 2003, ORAU 2017). The objectives of the survey were to confirm previous cleanup activities and determine if discrete sources of radium-226 (Ra-226) and/or distributed Ra-226 contamination are still present, to identify the areas of highest contamination, to determine if there are any current health and safety concerns, and to determine if further action by the NRC is needed. Surveys were performed as described within NRC's procedure, Temporary Instruction (TI) 2800/043, "Inspection of Facilities Potentially Contaminated with Discrete Radium-226 Sources" (NRC 2018).

Data collected during the survey are used to either eliminate the property from future NRC consideration or to plan future actions that may be needed to reduce Ra-226 exposure to current or future site occupants to levels that do not exceed the applicable regulatory requirement. It is important to note that destructive testing is not generally performed, as described within TI 2800/043.

2.0 PROPERTY DESCRIPTION AND INITIAL SITE VISIT CONSIDERATIONS

2.1 Property Description and History

It is not known whether radium was either present or used at the Elm Street facility; though a 1911 Sanborn map (Figure 1) indicates that the building at 219 Elm Street was used for "Storage," "Glass & *Dial Painting*" (emphasis added), and "Assembling." Radium dial painting

did not begin in general until 1917 and not at Seth Thomas until after 1917 (Clark 1997). Therefore, the potential link between Ra-226 contamination and the Elm Street “Movement Shop” is based on the term “Dial Painting” and knowledge that radium dial painting was practiced within the Seth Thomas complex as late as the 1940s (CT DPH 1998). Radium contamination was positively identified at the South Main Street facility (ATSDR 1999, Scientech 2003, ORAU 2017). However, radium use at the Elm Street Movement Shop could not be confirmed through a review of publically available historical records.

The three-story, approximately 30,000-ft² 219 Elm Street building, pictured in Figures 2 and 3, was constructed in 1900 (Thomaston 2017). The 0.97-acre property includes a 2,000-ft² asphalt parking lot to the west of the structure and resides in an area that is developed for both commercial and residential use. The original building, pictured in Figure 3, consists of brick, stone, and concrete. Additional, adjacent structures located to the south of the original structure were added in the 1960s (ORAU 2018). The current owner of the 219 Elm Street property is the Drawn Metal Tube Company (Thomaston, 2017), a company that has manufactured metal tubing since 1937. A comparison of the 1911 Sanborn map and recent photographs shows that the 219 Elm Street building is one of only two original structures that remain from the Seth Thomas Movement Shop era.

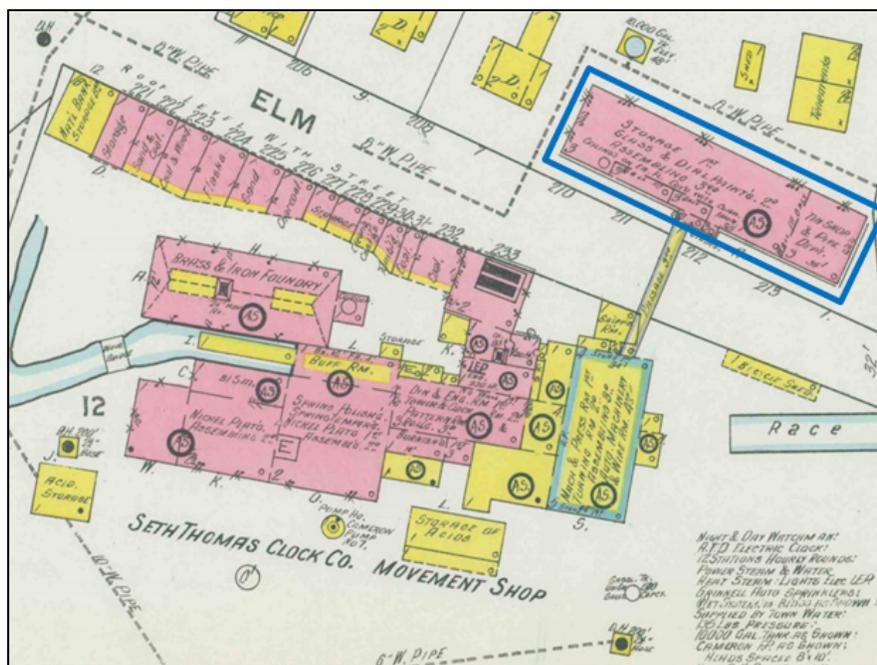


Figure 1. Seth Thomas Clock Company Movement Shop (Sanborn 1911)



**Figure 2. April 2016 Photo of Site at 219 Elm Street (original building outlined in blue)
(Google Earth Pro 2017)**



Figure 3. Street View Photo of 219 Elm Street

2.2 Initial Site Visit Considerations

Prior to commencing survey activities, the general property layout was examined for consistency with historical information and to identify impediments to conducting the survey and/or health and safety considerations. Due to noise levels from operating equipment on the first and second floors, surveys of these areas were postponed until the end of the work day.

3.0 SITE OBSERVATIONS AND FINDINGS

3.1 Summary of Activities

The inspection team conducted a survey at the 219 Elm Street property on August 29, 2018. A pre-inspection meeting was held with Charlie Essex (Drawn Metal Tube general manager), Jeff Moody (Drawn Metal Tube site escort), Laurie Kauffman (NRC) and Kaitlin Engel (ORAU). The inspection team's intention was to perform general area radiation surveys of accessible portions of the facility and delineate discrete sources of Ra-226, if identified.

Radiological surveys performed by the inspection team consisted of gamma radiation scans within the building and over the outdoor land area using a Ludlum model 44-10 2-inch by 2-inch (2x2) sodium iodide detector connected to a Ludlum model 2221 ratemeter/scaler and radiation exposure rate measurements using a Ludlum model 192 sodium iodide-based μ R ratemeter.¹ A Ludlum model 44-142 plastic scintillator connected to a Ludlum model 2221 ratemeter/scaler was available for direct surface activity measurements, if required. A hand-held identiFINDER® model R300-Z was available to confirm the presence of Ra-226 when elevated radiation levels were encountered. Table 1 presents the specific instruments used during the site visit.

Summary of Daily Activities – August 29, 2018:

The inspection team arrived at 9:00 a.m. and met with the Drawn Metal Tube general manager and the site escort. A tour of the facility was provided by the site escort. Surveys were initiated on the third floor. After lunch, surveys continued in the immediate land area that was accessible surrounding the original building. After site operations ceased for the day, surveys were conducted on the first floor in the original building (north end). The team then moved on to the second floor to perform surveys. Surveys were concluded around 4:00 p.m., and the inspection team departed the site at approximately 4:15 p.m.

3.2 Summary of Results

Appendix A presents survey/measurement maps and data tables that show results from the Seth Thomas-3 (219 Elm Street) site visit. Figures A-1 through A-4 present the general layout of the original building with the approximate location of gamma radiation measurements shown. Note that drawings are not to scale and illustrated features are based on the observations of the surveyors during the initial site visit.

¹Roentgen is a unit of exposure (energy absorbed in air), whereas a rem is a unit of dose delivered to a person (resulting from the radiation energy absorbed in that person). While Roentgen and rem are related, these are different units. Because they are similar for gamma ray energies from Ra-226, NRC makes the simplifying assumption in this case that these units are equivalent (1 Roentgen = 1 rem).

Radiation Type (units)	Detector Type	Detector Model (Number)	Ratemeter (Number)
Alpha-plus-beta (cpm)	Plastic Scintillator	44-142 (1033) Calibrated 04/19/2018	2221 (1139) Calibrated 04/06/2018
Gross gamma (cpm)	Sodium Iodide Detector	44-10 (1152) Calibrated 05/15/2018	2221 (1139) Calibrated 04/06/2018
Gross gamma (μ R/h)	Exposure Ratemeter	192 (1127) Calibrated 05/21/2018	N/A
Gamma Spectrum Analyzer (identiFINDER®)	CZT spectroscope	R300-Z (CG0343) ^a	N/A

CZT = cadmium zinc telluride

N/A = not applicable

Number = ORAU equipment barcode

cpm = counts per minute

μ R/h = microRoentgen per hour

^aA known radium source is used to confirm the identiFINDER® will identify Ra-226.

Tables A-1 through A-4 present the radiation survey data associated with each figure. Results include the measurement location, gross 2x2 sodium iodide measurement in counts per minute (cpm), and gross exposure rates in μ R/h collected at 1 meter from the target surface. Figure A-1 and Table A-1 present results from the exterior land area surveyed around the original building. Approximately 2-ft around the accessible original building was surveyed. Access to the original building was prevented on the southern and southwestern sides, thus surveys were not conducted in these areas. The surrounding land area was either asphalt or concrete.

Figures A-2 through A-4 and Tables A-2 through A-4 present the first floor, second floor, and third floor areas surveyed, respectively. Approximately 75 percent of each floor was surveyed. Access to some areas was prevented by manufacturing equipment or stored items. The walls were either exposed original brick or wood paneling over the original brick. The flooring on the first floor appears to be concrete. The flooring on the second and third floors is original wooden slats covered by a plaster-like material or carpet/linoleum.

The 2x2 sodium iodide detector background responses throughout the facility interior ranged from 7,100 to 14,000 cpm. Gamma radiation levels varied based on proximity to materials known to contain naturally occurring radioactive material (NORM) (e.g., bricks). Background exposure rates throughout the facility interior ranged from 6 to 13 μ R/h. No discrete areas of elevated radiation were identified.

3.3 Summary of Dose Assessment Results

Because no radiation levels were detected above background, and no discrete sources of Ra-226 were identified, a dose assessment is not required.

4.0 OBSERVATIONS AND RECOMMENDATIONS

The radiation survey performed during the August 29, 2018 initial site visit of the Seth Thomas-3 (219 Elm Street) property, formerly part of the Seth Thomas Clock Company, identified no discrete sources of Ra-226. This conclusion is based on the following observations:

- Gamma radiation levels were consistent with variation in background.
- The absence of any elevated gamma radiation across accessible portions of each floor (75-percent) suggests there are no discrete sources of Ra-226 present.

Based on these observations, it is recommended that the NRC not perform a more detailed scoping survey at the 219 Elm Street property. The rationale behind this recommendation is that the initial site visit generated a robust dataset that already meets scoping survey objectives. Additionally, the recommendation is that the NRC staff should not pursue additional action at the Seth Thomas-3 (219 Elm Street) property because no elevated radiation levels (relative to background) were identified.

5.0 REFERENCES

ATSDR 1999. *Public Health Implications of Radiation Contamination at Former Clock Factories Located in Bristol (Hartford County), New Haven (New Haven County), Thomaston (Litchfield County), and Waterbury (New Haven County), Connecticut*, prepared by the Connecticut Department of Public Health under Cooperative Agreement with the Agency for Toxic Substances and Disease Registry, U.S. Department of Health and Human Services. January 29. (Agencywide Documents Access and Management System [ADAMS] Accession No. ML 17038A052).

Clark 1997. *Radium Girls: Women and Industrial Health Reform, 1910-1935*, Clark, Claudia, the University of North Carolina Press, Chapel Hill, North Carolina, ISBN 0-8078-4640-6.

CT DHP 1998. Connecticut Department of Public Health, *Former Seth Thomas Clock Factory: Questions and Answers*, <https://portal.ct.gov/>, Internet site accessed October 2017.

Google Earth Pro 2017. Software, Version 7.3.0.3830 (32-bit), accessed October 2017).

HBC 2014. Historic Buildings of Connecticut, <http://historicbuildingsct.com/category/towns/thomaston/>, Internet site accessed October 2017.

Master Clock Repair 2017. "Seth Thomas Clock Company, A Brief History," <http://masterclockrepair.com/seththomas.html>, Internet site accessed October 20.

NRC 2018. *Inspection of Facilities Potentially Contaminated with Discrete Radium-226 Sources*, Temporary Instruction 2800/043, Revision 2, U.S. Nuclear Regulatory Commission, Office of Nuclear Material Safety and Safeguards, Washington, D.C., May. (ADAMS Accession No. ML17297B921).

ORAU 2017. *Site Status Report for the Former Seth Thomas Clock Company at 135 South Main Street, Thomaston, Connecticut*, DCN 5307-SR-19-1, Oak Ridge Associated Universities, Oak Ridge, Tennessee, October 3.

ORAU 2018. Field notes from the August 29, 2018 site visit and survey of the Seth Thomas Clock Company property at 219 Elm Street in Thomaston, Connecticut.

Sanborn 1911. "Thomaston, Litchfield County, Connecticut August 1911."

Sciencetech 2003. *Connecticut Radium Sites Verification Survey*, prepared for: Valley Council of Governments, prepared by: SCIENTECH, Inc., New Milford, Connecticut, October. (ADAMS Accession No. ML17039A514).

Thomaston 2017. "Thomaston, CT: Commercial Property Record Card for 219 Elm Street," City of Thomaston, Connecticut, <http://www.thomaston.univers-ct.com/>, Internet site accessed October 16.

APPENDIX A
SURVEY DATA TABLES AND MAPS FROM THE SETH THOMAS-3 (219 ELM STREET)
INITIAL SITE VISIT

Site: Seth Thomas - 3 (219 Elm St)		Area: Exterior	Date(s): 08/29/18	Time: 1330/1415
Surveyor(s): KME		Purpose: Site Visit		
Radiation Type	Instrument	Detector	Background	
Gamma	2221 No. 1139	44-10 No. 1152	9-17 kcpm ^a	
Gamma	192 No. 1127	NA	9-14 μ R/h ^a	

^aBackground varied depending on naturally occurring radioactive material in the area.



Figure A-1. Seth Thomas-3, Exterior Land Area Survey

Table A-1. Seth Thomas-3 Exterior

Location No.	Gamma		Comments
	cpm	$\mu\text{R/h}$ at 1 meter	
1	10,000	9	—
2	10,300	10	—
3	9,100	9	—
4	15,400	13	Ditch around building
5	13,000	11	Ditch around building
6	14,000	12	Ditch around building
7	17,000	14	Ditch around building
8	10,300	9	—
9	11,900	11	—
10	11,700	11	—
11	10,800	11	—
12	10,200	10	—
13	11,500	11	—
14	10,300	10	—
15	11,500	12	—
16	11,100	10	—
17	10,400	10	—
18	10,600	10	—
19	11,100	10	—
20	11,800	11	—

Site: Seth Thomas - 3 (219 Elm St)		Area: 1st Floor	Date(s): 08/29/18	Time: 1430/1500
Surveyor(s): KME		Purpose: Site Visit		
Radiation Type	Instrument	Detector	Background	
Gamma	2221 No. 1139	44-10 No. 1152	8-14 kcpm ^a	
Gamma	192 No. 1127	NA	9-13 μ R/h ^a	

^aBackground varied depending on naturally occurring radioactive material in the area.

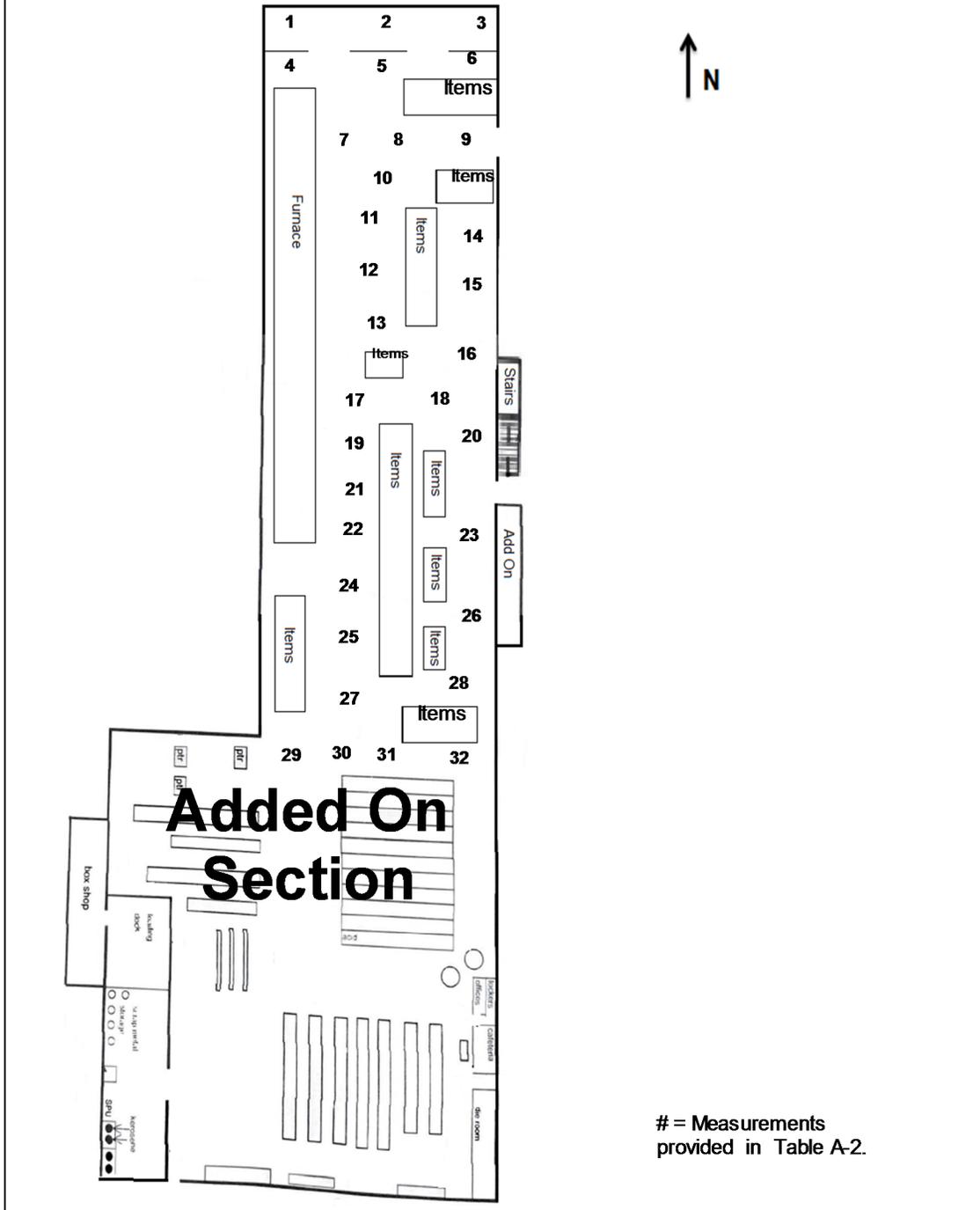


Figure A-2. Seth Thomas-3, First Floor Survey

Table A-2. Seth Thomas-3 First Floor			
Location No.	Gamma		Comments
	cpm	μR/h at 1 meter	
1	13,700	12	—
2	12,800	12	—
3	13,200	12	—
4	13,700	13	—
5	11,600	11	—
6	12,000	11	—
7	11,700	11	—
8	11,500	11	—
9	10,900	11	—
10	8,700	10	Drain
11	10,200	10	—
12	11,100	9	—
13	11,800	10	—
14	11,500	11	—
15	12,800	10	—
16	11,300	10	—
17	12,000	11	—
18	12,300	11	—
19	9,800	10	—
20	12,400	12	—
21	10,500	11	—
22	12,600	12	—
23	12,200	12	—
24	11,200	9	—
25	10,700	10	—
26	11,500	11	—
27	10,000	9	—
28	10,300	11	—
29	10,600	10	—
30	11,700	11	—
31	11,600	11	—
32	11,100	9	—

Site: Seth Thomas - 3 (219 Elm St)	Area: 2nd Floor	Date(s): 08/29/18	Time: 1500/1600
Surveyor(s): KME		Purpose: Site Visit	
Radiation Type	Instrument	Detector	Background
Gamma	2221 No. 1139	44-10 No. 1152	8-14 kcpm ³
Gamma	192 No. 1127	NA	8-12 μ R/h ³

³Background varied depending on naturally occurring radioactive material in the area.

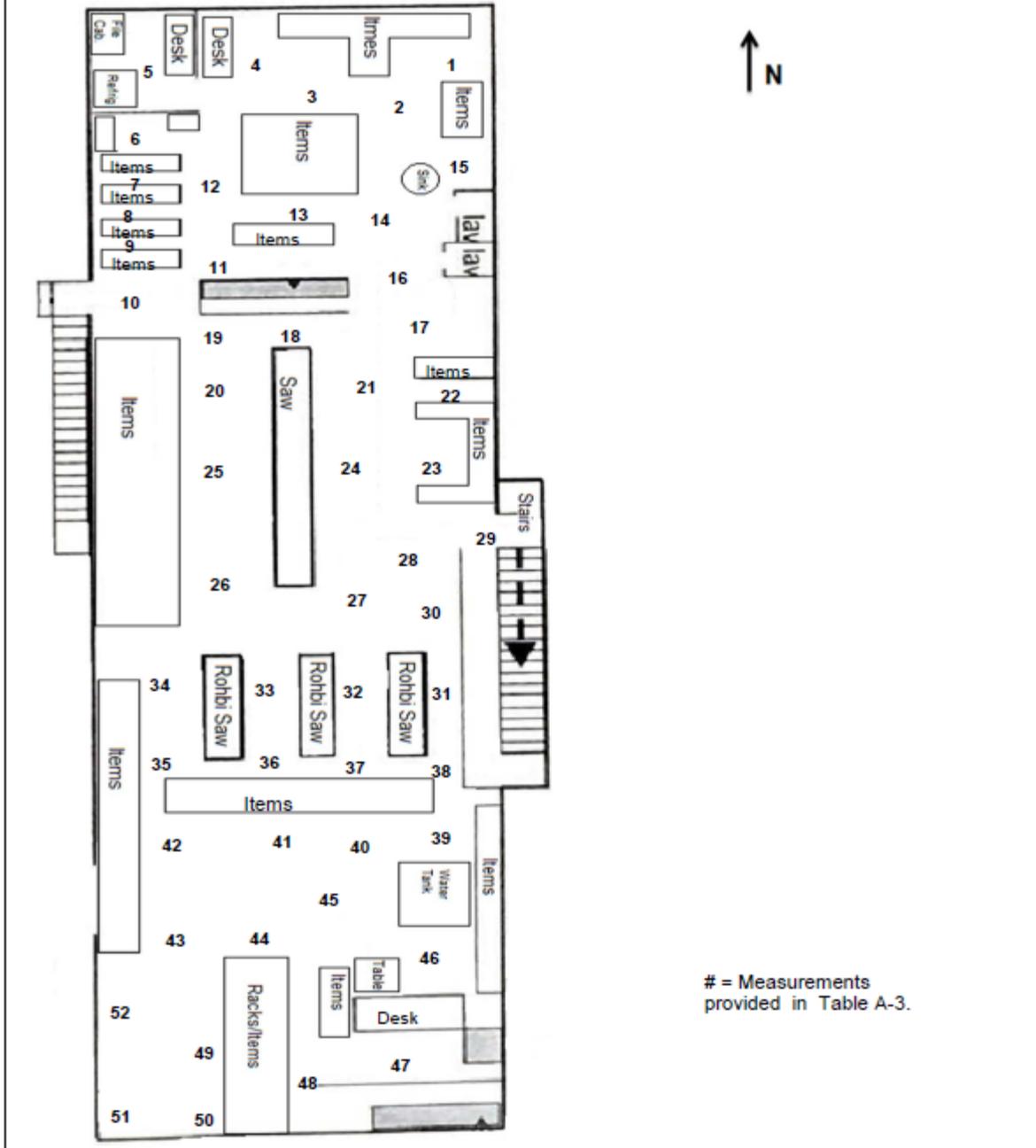


Figure A-3. Seth Thomas-3, Second Floor Survey

Table A-3. Seth Thomas-3 Second Floor

Location No.	Gamma		Comments
	cpm	$\mu\text{R/h}$ at 1 meter	
1	10,800	11	—
2	10,000	10	—
3	10,600	9	—
4	10,500	10	—
5	10,800	10	—
6	9,800	9	—
7	8,800	8	—
8	9,600	9	—
9	8,700	8	—
10	10,500	10	—
11	9,400	9	—
12	10,100	8	—
13	9,200	9	—
14	9,500	9	—
15	8,800	9	—
16	9,900	9	—
17	9,500	8	—
18	9,200	8	—
19	10,200	8	—
20	10,800	9	—
21	9,600	9	—
22	8,800	8	—
23	9,000	9	—
24	10,200	10	—
25	11,700	10	—
26	11,400	9	—
27	10,500	10	—
28	12,500	11	—
29	13,900	12	—
30	11,500	10	—
31	9,500	9	—
32	10,000	9	—
33	9,600	10	—
34	11,600	11	—
35	11,900	11	—
36	10,400	10	—
37	10,300	9	—
38	12,300	10	—

Table A-3. Seth Thomas-3 Second Floor

Location No.	Gamma		Comments
	cpm	$\mu\text{R/h}$ at 1 meter	
39	10,400	9	—
40	10,600	10	—
41	9,900	9	—
42	11,000	11	—
43	10,700	9	—
44	11,800	10	—
45	10,600	9	—
46	11,900	11	—
47	11,300	9	—
48	10,400	9	—
49	11,100	9	—
50	11,500	11	—
51	14,000	12	—
52	12,000	11	—

Site: Seth Thomas - 3 (219 Elm St)	Area: 3rd Floor	Date(s): 08/29/18	Time: 1000/1200
Surveyor(s): KME		Purpose: Site Visit	
Radiation Type	Instrument	Detector	Background
Gamma	2221 No. 1139	44-10 No. 1152	7-14 kcpm ³
Gamma	192 No. 1127	NA	6-12 μ R/h ³

³Background varied depending on naturally occurring radioactive material in the area.

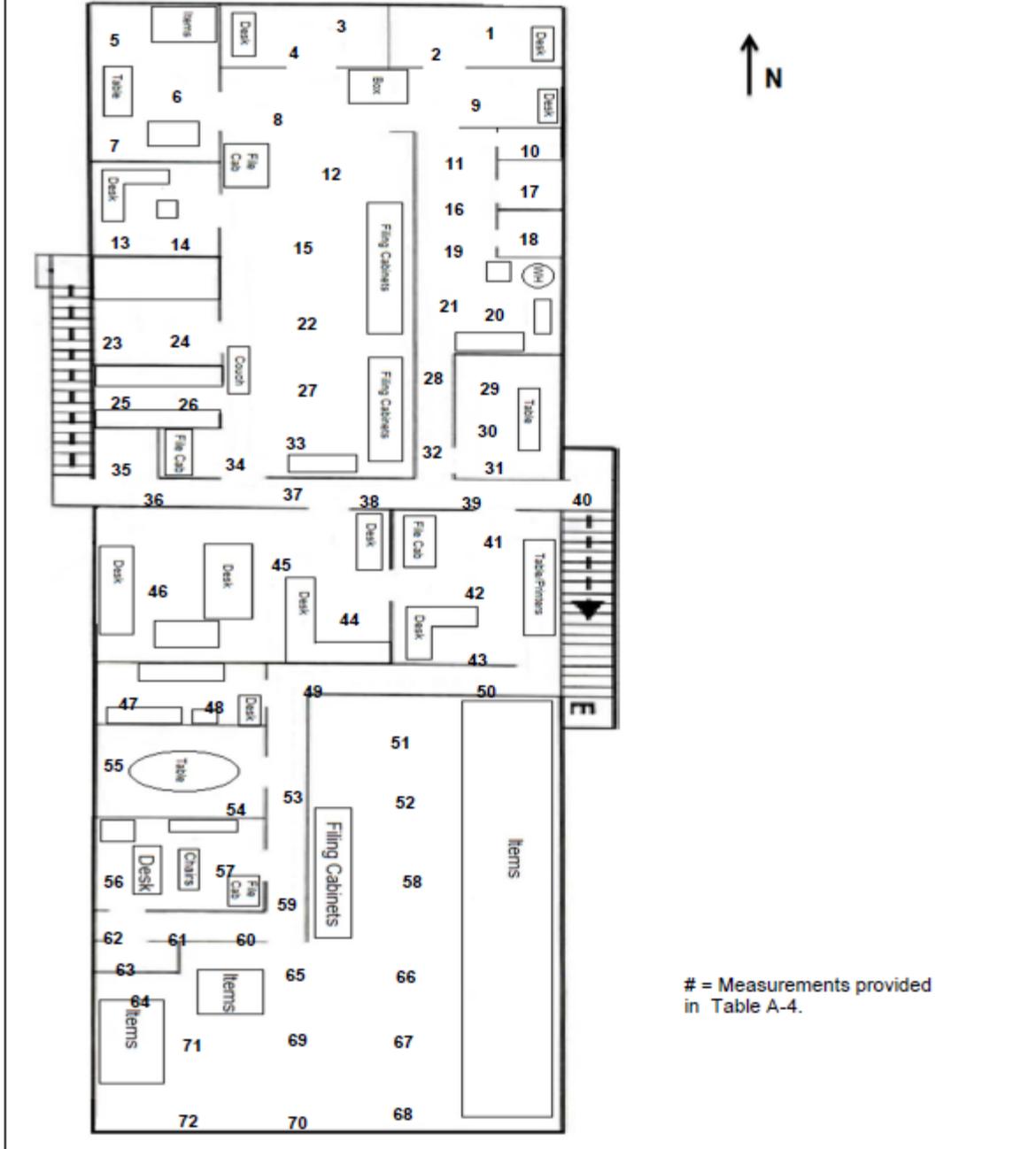


Figure A-4. Seth Thomas-3, Third Floor Survey

Table A-4. Seth Thomas-3 Third Floor

Location No.	Gamma		Comments
	cpm	$\mu\text{R/h}$ at 1 meter	
1	12,200	11	—
2	10,800	10	—
3	10,400	10	—
4	8,900	10	—
5	13,400	10	—
6	9,900	10	—
7	10,600	10	—
8	9,300	8	—
9	10,500	10	—
10	10,800	9	—
11	10,100	8	—
12	8,800	8	—
13	10,700	9	—
14	10,000	9	—
15	7,100	7	—
16	8,900	8	—
17	11,800	9	—
18	12,300	9	—
19	9,200	8	—
20	10,400	9	—
21	9,400	7	—
22	8,800	7	—
23	11,100	11	—
24	10,800	8	—
25	10,400	8	—
26	9,300	8	—
27	8,000	7	—
28	8,600	7	—
29	10,200	9	—
30	9,300	9	—
31	10,100	9	—
32	9,000	8	—
33	7,200	6	—
34	7,900	7	—
35	9,000	11	—
36	10,100	9	—
37	9,000	7	—
38	8,800	8	—

Table A-4. Seth Thomas-3 Third Floor

Location No.	Gamma		Comments
	cpm	$\mu\text{R/h}$ at 1 meter	
39	9,500	9	—
40	14,000	12	—
41	10,700	10	—
42	9,600	8	—
43	9,700	8	—
44	8,800	8	—
45	10,100	8	—
46	9,900	8	—
47	10,500	9	—
48	8,300	9	—
49	8,900	9	—
50	11,400	10	—
51	10,900	11	—
52	10,300	9	—
53	9,600	9	—
54	9,300	8	—
55	10,900	11	—
56	10,900	10	—
57	9,700	8	—
58	10,400	9	—
59	9,500	9	—
60	9,100	8	—
61	9,400	8	—
62	11,300	10	—
63	11,200	10	—
64	11,200	9	—
65	8,900	9	—
66	11,100	11	—
67	10,900	10	—
68	13,200	11	—
69	10,100	9	—
70	11,300	11	—
71	10,500	10	—
72	12,800	11	—